

DOCUMENT RESUME

ED 316 541

SP 032 177

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 TITLE Using Research Knowledge To Improve Teacher Education. A Problem Solving Approach. Final Report--Project Portrayal.
 INSTITUTION Catholic Univ. of America, Washington, D.C. School of Education.
 SPONS AGENCY Office of Educational Research and Improvement (ED), Washington, DC.
 PUB DATE Nov 88
 CONTRACT 400-85-1062
 NOTE 195p.
 PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC08 Plus Postage.
 DESCRIPTORS *College School Cooperation; *Elementary School Teachers; Field Experience Programs; Higher Education; Preservice Teacher Education; Problem Solving; *Professional Development; *Research Utilization; Self Actualization; *Student Teaching; *Teacher Effectiveness; Theory Practice Relationship
 IDENTIFIERS *Catholic University of America DC

ABSTRACT

A report is given of a collaborative 3-year teacher education improvement project which was begun in 1986. Project participants included the Catholic University Department of Education, District of Columbia and Montgomery County (Maryland) public schools, Washington, D.C. parochial schools, and a private school. The aim of the project was to improve the process of teacher preparation by helping elementary education students become more reflective about their work, become better able to use professional knowledge to improve their teaching, and become more self-directed. Drawing on the research base of effective teaching and effective schools, the project focused on practice, coaching, and development of self-critical attitudes and skills. Task force teams, comprised of education students, cooperating teachers, and university supervisors and faculty worked cooperatively to identify issues which concern neophyte teachers in their initial field experiences. Team members, using observation/data gathering techniques such as journal keeping and audio and videotaping, developed and tried out improvement activities. This report describes the activities conducted during the project and summarizes the project's impact. The report includes a final project report, a practice profile, and the program assessment report. Literature relevant to some of the salient features of the project is contained in the six appendices. An extensive bibliography is included. (JD)

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THE CATHOLIC UNIVERSITY OF AMERICA

DEPARTMENT OF EDUCATION

USING RESEARCH KNOWLEDGE TO IMPROVE TEACHER EDUCATION
A PROBLEM SOLVING APPROACH

FINAL REPORT--PROJECT PORTRAYAL

NOVEMBER, 1988

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PRINCIPAL INVESTIGATOR: LINDA VALLI, PH.D.

OERI/NIE CONTRACT NO. 400-85-1062

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THE CATHOLIC UNIVERSITY OF AMERICA
USING RESEARCH KNOWLEDGE TO IMPROVE TEACHER EDUCATION
FINAL REPORT--NOVEMBER, 1988

I. PROJECT DESCRIPTION AND EVOLUTION

Project Purpose

The Catholic University of America in collaboration with the District of Columbia Public Schools, The Montgomery County Public Schools, The Archdiocese of Washington Schools, and The Sidwell Friends School began work on a teacher education improvement project supported by OERI/NIE on October 1, 1986. The aim of this project was to improve the process of teacher preparation by helping elementary education students become more reflective about their work, better able to use professional knowledge to improve their teaching, and to become more self directed.

Project Goals

The specific goals of the improvement project were:

- to facilitate students' transfer of learning from the university to the classroom (i.e., link theory and practice)
- to establish a conceptual framework wherein pre-service teachers are urged to reflect about both technical and normative aspects of schooling
- to create the types of school environments which will facilitate student teachers' professional growth

Project Strategy

Typical teacher education programs rely extensively on a knowledge dissemination model of professional development. College classroom coursework and field experiences seldom focus on the importance of reflectivity, problem solving, and decision making.

Drawing on the research base of effective teaching and effective schools, this project aimed to focus on practice, coaching, and development of self-critical attitude and skills. We hoped to do so throughout the Teacher Education Program, both in university coursework and in field experiences. We realized the effort would require examination and modification of both elements and hoped to involve university faculty, teachers, and administrators in the field, and students in a collaborative attempt to do so.

Our plan was to establish task force teams, including elementary education students, cooperating teachers, university supervisors, and university faculty who would work cooperatively on tasks such as identifying issues which concern neophyte teachers in their initial field experiences. We hoped to develop a practical model for problem identification and problem resolution by task force teams at school based sites. The task force teams were established and functioned during the first two years of the project. During this time, team members participated in trying out observation/data gathering techniques such as journal keeping and audio and video taping, then developed and tried out improvement activities. In the final year of the project, members of the teams continued to work actively on project activities such as refining the problem solving/action research activity and in developing the supervision model; however, the task force teams as such were disbanded.

Project Participants/Roles and Responsibilities

- A. Project Director: Dr. Linda Valli, Assistant Professor and Director of the Teacher Education Program was the director of this project. She was responsible for overall conduct, administration, and quality of the project and for all project deliverables and reporting requirements. Dr. Valli chaired the advisory council and steering committee meetings and maintained a close working relationship with all task forces and project schools.
- B. Project Coordinator: Dr. Irene Blum, Field Placement Coordinator in the Department of Education, was the project coordinator. Throughout the project, Dr. Blum worked closely with Dr. Valli. She was responsible for coordinating and maintaining close contact with school system personnel and others involved in the project. With Dr. Valli, she planned and monitored major project activities and project administration.
- C. Advisory Council: The advisory council was comprised of Teacher Education faculty members at CUA, faculty members from the departments of English and mathematics, representatives from the Montgomery County Public Schools, the District of Columbia Public Schools, the Washington DC Catholic Archdiocesan Schools, and Sidwell Friends Lower School. This group of educators represent a broad range of perspectives on teacher education. Members agreed to review, discuss and refine project goals with the project consultant and review and respond to additional correspondence and reports as requested.
- D. Steering Committee: The steering committee included the project director, project coordinator, and other Depart-

ment of Education faculty: Dr. Nancy Taylor, Associate Professor has been an active participant during the three years of the project; Dr. Patricia Bauch, Assistant Professor and Dr. Henry Johnson, visiting Associate Professor were most active during the first year of the project; and Dr. Maria Ciriello, Assistant Professor joined the steering committee during the second project year and worked actively as a member of the steering committee for the second and third years. During the first year of the project, the steering committee assumed responsibility for refining the project purpose and planning for task force orientation and operation. During the second and third years, the steering committee helped to plan, monitor, and evaluate project activities and products.

E. Task Force Teams: Task force teams included students (3 to 12 each semester), university supervisors (1 to 4 each semester), cooperating teachers, school administrators, and Teacher Education faculty. During the first two years, these task force teams worked on project activities (e.g., identifying issues which concern neophyte teachers in their initial field experiences, trying out observation and data gathering techniques such as journal keeping and audio and video taping) at school based sites. During the third year of the project, members of the teams continued to develop, try out, and refine project activities (e.g., developing, trying and refining an action research/problem-solving activity, developing a supervision model). The teams as such were disbanded.

F. Project Evaluators: Two faculty members in the Department of Education served as project evaluators. Dr. John Convey, Associate Professor of Education, and Dr. Carol Walker, Assistant Professor, Curriculum, Instruction and Technology, worked with Dr. Valli to design and implement the formative and summative evaluation plans for the project.

G. Project Consultant: Dr. Gary A. Griffin agreed to be a consultant to this project. Dr. Griffin attended our advisory council meeting and through correspondence during the first year of the project assisted us in refining project goals and procedures, conceptualizing and synthesizing the research base, identifying problems in research applications, and developing evaluation and implementation procedures.

Project Activities--Year One

Project activities in the planning phase focused on refining the project purpose, planning project operations and procedures, and creating the collaborative structure for project operation. This work was guided by the project

director and project coordinator working closely with the other steering committee members. Shortly after notification that we had been awarded this project, The Teacher Education faculty met to plan. Three faculty members volunteered to work with the project director and project coordinator as members of a steering committee. Steering committee members met regularly, at least once a week, to plan project organization and operating procedures. By the end of October, we agreed that this project would work from the assumption that one way to improve teacher education is for teacher educators, practitioners, and researchers to work collaboratively on problems identified in the school setting. We further assumed that this collaborative effort would improve the quality of the relationship of the participants.

The steering committee proposed that the emphasis in this project would be on practical problems or issues which emerge from the field since their solution should provide real benefits to teachers and participation in problem definition and resolution would enhance their growth as professionals. Therefore, we decided that in this project we would use a school site model. We hoped to identify three or four schools to work with us on an on-going basis as task force centers and to serve as primary sites for student teacher placements. We agreed that task forces would be composed of classroom teachers, the school principal, CUA faculty, student teachers, and university supervisors and specified a commitment of time and participation schools would need to make.

Another major activity during the first months of the project was to recruit advisory council members from the university and metropolitan area school systems. On November 13, 1985, the advisory council was convened. At this meeting the advisory council met with the project consultant to review goals and procedures. Following this meeting and with encouragement from the advisory council, the project director and project coordinator identified and recruited the four school participants.

From February through May, 1986, a series of four orientation sessions was scheduled with the task forces. We used the orientation sessions as an opportunity to model the problem solving process that we planned to use with the student teachers during the next year. The four participating schools were Watkins School, DCPS; Wyngate School, MCPS; Our Lady of Lourdes School; and The Sidwell Friends Lower School. Participants received a stipend of \$50 per session and could register for one graduate credit, given upon completion of the four sessions.

In preparation for the first orientation session, we asked participants to read two articles. The first, "Alter-

native Paradigms of Teacher Education" by Kenneth Zeichner (1983) describes four approaches to teacher preparation: behavioristic, personalistic, traditional-craft, and inquiry-oriented. Members of the project's steering committee agreed that while a good teacher education program must include aspects of all these models, the inquiry approach is the most professional and comprehensive. The improvement effort of this project reflects that approach.

The second article was written by Gary Griffin (1984), our project consultant. Entitled "Why Use Research in Preservice Teacher Education?" the article proposes five reasons, a number of which overlap with our interest in promoting pre-service teachers' reflectivity and problem-solving abilities, particularly Griffin's suggestion that research based knowledge be used to do research in the schools. We see this approach closely linked to Zeichner's inquiry model.

The first orientation session was held at the University on February 13, 1986. The purpose of the meeting was to introduce task force team members to one another, to present an overview of the project, to familiarize participants with the current Teacher Education Program, and to describe improvement project problem-solving groups and problem types.

In preparation for the second meeting, everyone was asked to read the article, "Questioning at Home and at School" by Shirley Brice Heath (1982). This case study is an example of the type of research we hoped to engage in with students and teachers in this project since it provides a model of a collaborative problem-solving effort. Participants were provided with an outline of Heath's research proposal.

The second orientation meeting was held at the University on March 13, 1986. At that meeting we reviewed the Brice Heath article from the perspective of the research technique as a model for us to use. In addition, examples of school-oriented problems and a problem-solving strategy were presented. This particular strategy had been developed by Sue Jeweler, one of the teacher participants from Wyngate School. She met with the project director to develop the presentation for the orientation meeting. At the meeting, the group as a whole brainstormed school problems. Each participant was then asked to select three priority problems. The group then broke into school-based task forces with two responsibilities: to agree upon a mutual problem they would like to address, and to begin preliminary application of the problem-solving procedure.

The third orientation meeting was scheduled at individual schools during the month of April. The purpose of these school-based meetings was to refine the groups' problem identification and problem-solving strategies. The project director, project coordinator and one other steering committee member met with each group. A graduate student who would be serving as a university supervisor attended two of the meetings.

The final orientation meeting was scheduled as a total group meeting at the University campus, May 15, 1986. At that time, participants reported on their problem-solving progress. The task force team from Watkins School identified a problem related to student behavior. Students seemed unable to take responsibility for their own actions and behave appropriately at school. The task force had already observed a number of classrooms to document their general impressions, had introduced the problem at team meetings, and had brought the problem to the Faculty Planning Team. They also presented a chart they had developed during a group brainstorming session for solution strategies for immediate activities.

The task force team from Our Lady of Lourdes described their problem as one of morale. Their problem solving was linked to a larger effort they were engaged in with an Archdiocesan consultant. They had identified two areas of concern: communication and curriculum. With the consultant they had explored these issues in some depth and had begun to plan for solution strategies, but had not yet taken any action.

Wyngate's task force saw themselves as still defining their problem. They wanted to work on an issue related to time management, but felt they needed to clarify their thinking further. The problem seemed to revolve around a two-pronged issue, a tremendous volume of demands from the county/highly conscientious teachers who wanted to "do it all."

The Sidwell Friends task force had identified improving the practicum as its problem-solving activity. Their goal was to use a problem-solving method to establish better coordination among junior year experiences and to identify critical content and skill areas for practicum teachers to focus on.

At the final orientation session, participants also made suggestions for project operation the following year and evaluated the orientation sessions. The task forces planned to meet regularly at individual schools the next year, however, participants asked to meet as a total group

at least twice. All participants were given an article on qualities of good cooperating teachers (Barnes & Edwards, 1984). Sidwell Friends participants were given three articles on early field experiences (Applegate, 1985; Erdman, 1983; Goodman, 1985).

Project Activities--Year Two

Beginning September 17, 1986, Drs. Valli, Taylor, and Blum scheduled a weekly staff meeting. These members of the steering committee took responsibility for planning, scheduling, and monitoring project activities. These included: collaborative activities such as school based problem-solving meetings, the total group meeting and redesign of the comprehensive examination, including students' individual problem-solving activities and reports. These meetings also provided an opportunity to engage in formative evaluation of improvement project activities and to continue developing the evaluation plan and locating or designing evaluation tools. During November, Dr. Bauch and Dr. Johnson joined the weekly meeting to help plan the December 3 total group meeting.

Six types of improvement project activities were undertaken during the second year: activities related to coursework, to the junior practicum, to the senior comprehensive examination, to developing a conceptual framework, to school based problem-solving groups, and to student teacher supervision.

A. Professional Education Course Activities: During the second year of the project, reflective inquiry or problem-solving activities were systematically incorporated into six of the pre-service professional education courses. The main purpose of these activities was to help students think in a reflective, problem-solving way about the technical and normative aspects of schooling. The activities also functioned to model and give students practice with reflective problem solving so that they would be more apt to transfer this mode of thinking to their teaching practice.

ED 251: Foundations of Education was taught socratically and constructed around four broad questions: What is education? What does it mean to teach? What is the social impact of schooling? What difference does a Catholic education make? On the first day of class students wrote an essay on the question, what is the basic problem of schools today? They were not told that the same question would be given as their final examination. Students also conducted

three problem projects in small groups. Using controversial issues from the Noll/Kelly book, they analyzed five aspects:

- 1) the precipitating situation (why does the issue arise now?)
- 2) the historical context
- 3) the philosophical issues (with emphasis on human nature, knowledge, and the nature of the good society)
- 4) the social impact
- 5) the impact on the teaching profession

In ED 261: Human Growth and Development, reflection was encouraged through the seminar times of each class where students discussed controversial issues related to the unit theme (e.g., theories of development, stages of development, normal/abnormal development). Readings containing conflicting points of view were the basis of the discussion. For example, when the topic of Social Interaction and Personality in Later Childhood was presented, the seminar discussion focused on Peers, Siblings and Social Adjustment. Students read "Aggression" by Maya Pines, which looks at childrearing practices and brain chemistry, and "Violence and Aggression" by David Pearl, which explores the effects of televised violence. To facilitate reflective thinking in these seminars the instructor taught the students through modeling and coaching how to differentiate between fact and opinion, recognize and evaluate author bias and rhetoric, determine cause/effect relationships, judge accuracy and adequacy of information, recognize faulty reasoning, and draw logical conclusions.

Students also conducted two observations of individual children of different ages/types or in different settings. They spent the first 10 minutes of observation writing detailed descriptive notes of the physical setting, the next 10 minutes selecting a child of interest, and the last 40 recording, in 3 minute intervals, notes on what the child was doing. This column of notes was to contain only objective behaviors. A second column analyzed patterns in the behavior, and a third column stated some conclusions from those patterns. In a summary paragraph students had to reflect on whether or not there was a developmental problem. In analyzing the observation papers, the course instructor concluded that students jumped to unwarranted conclusions. Stress must be placed on considering environmental factors in behavior explanations.

A final reflective activity was a problem-solving examination where students analyzed case studies about language development, cognitive development, and social-emotional development. In the language development section,

for example, case studies involved analyzing syntax errors, parental directions, early childhood utterances, and peer communication problems. Guiding analytic questions were provided for each case analysis.

In ED 361: Psychology of Education, problem solving was taught as part of the information processing unit. In addition, a reflective activity was linked to the tutoring component of the course. Students kept a journal of reflections on each session (two hours per week), linking their experience with the course content. Their journal entry had three parts: the objectives of the tutoring session, applications to course content, and personal reactions. Toward the end of the semester, they were given a problem-solving activity based on these journal entries. One of the project schools, Watkins Elementary, was the sight of the tutoring program.

In ED 462: Introduction to Elementary Education, reflective activities were incorporated throughout the semester and closely linked to the junior practicum. The course instructors primarily used a discovery mode of teaching. Two examples follow. For the topic of safety procedures, the interns were sent in pairs to different parts of the school to decide on three safety rules for that area. The following discussion included what they read, patterns they saw in the rules, an evaluation of their rules, and an evaluation of Sidwell's rules. For the class on Quaker philosophy, students drew upon an earlier assignment where they had to interview someone employed at Sidwell and develop three strong reasons to prove that person was the most important in the school. The interns collated these reasons to discover whether there was anything specifically Quaker about them as a whole or as individuals. Students then discussed what is Quakerly about Sidwell, what is not Quakerly, and what is common to all good schools and teachers.

In ED 555: Classroom Management, the main problem-solving activity was the final examination. The students' task was to explain how five basic principles of classroom management, which had been the basis of the entire course, could be used better in two classroom problem cases they were given. One case was a verbatim transcript from Good and Brophy's Looking in Classrooms. Students were asked to focus on teacher behaviors, explaining why they were not the best choice, what principles were violated, and what better alternatives could have been chosen. The other case was a summary paragraph of impulsive students from Evertson et al. Classroom Management for Elementary Teachers. Students were asked to describe how they would go about changing unproductive behavior, presuming all preventative measures had been taken.

An analysis of the students' exams indicated, in most cases, the ability to apply appropriately principles to hypothetical situations under highly structured conditions when there were no real world constraints on interactional decision making. The assumption is that practice in reflective problem solving in guided hypothetical situations will be helpful in students analyzing their own classroom behavior.

ED 576/77: Reading, Language and Literature is a two semester course that is tightly integrated with the Sidwell practicum. Three new activities were introduced in conjunction with project goals.

Reflective Questions: The importance of reflectivity for teachers was discussed and linked to the idea that reading comprehension is related to the depth of processing or questioning in which a reader engages. Students were asked to generate reflective questions or statements as they read their chapters and turn them in at each class period. Selected questions were discussed at the end of each class.

First Semester Final Exam: Students were presented with a situation that required the application and integration of concepts stressed in the class and the practicum. Working within the context of a thematic curriculum, students had to pick a theme and identify five major concepts for the thematic unit. They then had to select appropriate children's literature and design an instructional sequence to meet reading and concept development goals.

Second Semester Problem-Solving Activity: The notion of ongoing collaborative problem solving to address an educational problem was introduced via Shirley Brice Heath's article, "Questioning at Home and School." This article also vividly points out the way participants define problems from their own perspective (parents and teachers in this article defined the problem in different terms) and the importance of understanding the child's home culture when one addresses school problems. The problem-solving approach presented in the article demonstrated the kind of problem solving we hoped to encourage and provided a prior knowledge base for the problem-solving activity developed for the course.

The problem-solving activity itself developed from this background and was integrated within key concepts of the Reading, Language and Literature course. Students were asked to interview their practicum teacher to uncover his or her "diagnostic agenda" in making reading placements and judging reading performance. In the context of this interview the teacher was asked to identify a student in the classroom with whose progress the teacher was not entirely satisfied. This student then became the focus of a problem-solving activity aimed at hypothesizing possible instructional adjustments. The premise of this instructional adjustment problem-solving activity was that students can

succeed if teachers adjust the conditions of learning. Interns gathered data on a student in their Sidwell classroom through observation and conversations with their practicum teacher. They identified situations in which the problem did and did not occur. Through careful analysis of these situations, they identified factors that promoted success or difficulty. They then generated hypotheses about situational adjustments that would lead to success. (As the seniors worked through their problem-solving comprehensives in the first semester, it became apparent that they had difficulty "taking a diagnostic look"--identifying all possible causes for a situation. An effort was made to model this kind of thinking for the current juniors with a detailed case study and lead them through this type of thinking with their own cases.)

B. Junior Practicum and Related Course Activities: Four specific changes were made to better link the junior practicum with the junior level courses (Ed 462, 555, 571, 574, 576, 577) to achieve project goals. First, three of the Sidwell Friends practicum teachers assumed responsibility for ED 462. The course had previously been planned and organized by Sidwell's principal. The thinking behind the change was that if practicum teachers taught the course, they 1) would take more ownership of the problem of inducting novices into the teaching profession and 2) would be in a better position than the principal to link course topics and assignments with field experience. Both outcomes seem to have occurred. The three course teachers designated themselves as liaison teachers so the interns and classroom teachers would know whom to contact should junior practicum problems arise.

The teachers also spent considerable time during their summer vacation jointly planning the course, selecting readings, and determining assignments. They developed a thorough course evaluation form so they could improve the course for the following year. The form asked for student feedback on assignments, seminar sessions, classroom experiences, and notebooks and journals. Students were asked to comment on such things as which readings, assignments, class sessions, and classroom experiences were the most and least helpful, what kinds of help they received from the classroom teachers, what parts of the experience were particularly difficult, etc.

The second change was the assignment matrix the ED 462 teachers distributed to the interns and classroom teachers at the beginning of the semester. This matrix clearly indicated responsibilities which individuals in both roles had that week. For example, practicum teachers knew they were expected to discuss the school's Quaker philosophy, their classroom theme, their math resources, and materials.

Students knew when they were to draw a map of the school, interview school personnel, visit special classes, conduct a book club, observe one child, etc. These assignments were an integral part of the seminar sessions held each week.

This matrix served as a model for the second semester faculty. During the first semester field assignments came primarily from ED 462. In the second semester they came from three different courses, five faculty (four of whom were based at the university), and distinct content areas: math, social studies, science, reading and children's literature. By giving the matrix of field assignments to the classroom teachers and junior interns at the beginning of the semester, we increased the possibility that assignments could be completed with maximum input and assistance from the classroom teacher in a manner which contributed to normal classroom activities.

The last change that was made was the student evaluation, conducted four times during the junior year. Previously, the form had been completed solely by the practicum teacher. It covered three areas: professionalism, ability to work with children, and content knowledge. Cooperating teachers rated students on a five point Likert scale, with additional comments on strengths and weaknesses. The form did make us aware of two weaknesses in the junior year: few opportunities for the students to instruct large groups of children and the cooperating teachers' lack of awareness of university expectations and course teachings. The new form asked for interns to do a self-evaluation, which the practicum teachers could then agree or disagree with. The new form asked about quality of involvement and interaction in the classroom, about initiative and areas for improvement. It forced the students to reflect and make judgments about their own performance.

C. Comprehensive Examination Activities: At the completion of the planning year of the improvement project, the steering committee proposed revising the comprehensive examination required of senior students. In the past, the comprehensive examination was a traditional set of questions selected from a pool generated by faculty of the Teacher Education Program. Students were given a reading list and were able to use past examination questions to guide their study. Questions were distributed during November of the senior year and students prepared written responses which were due by the beginning of the second semester. Responses were read and rated by at least two faculty members. This format required students to review and present a summary of their knowledge in each of the disciplines within the Teacher Education Program.

The steering committee for this project suggested an alternative format for the comprehensive examination: identifying a problem situation and generating and trying out solution strategies; relating this experience to current literature; and finally, relating this activity to prior experience and learnings from the Teacher Education Program. The change was proposed because we believe this activity ties in more closely to our program goals, requires more integration of knowledge and experience, and provides an opportunity for students to demonstrate their reflectivity and problem-solving ability.

Throughout the fourteen weeks of the field placement, student teachers worked on an individual problem-solving activity related to their student teaching experience. They were asked first to examine and describe situations in the school environment which they found interesting. In the next phase, they were asked to identify and analyze situations they viewed as problematic. They were then asked to generate and try out solution strategies for a problem situation they selected to work on. Students documented their progress with the activity in a daily journal and prepared a report of their individual problem-solving activity at the conclusion of the semester.

For the second component of the comprehensive examination, students reviewed and summarized current literature related to the problem-solving experience. Finally, drawing on their problem-solving experience, their research findings, and their prior experience and learnings from Teacher Education coursework, students prepared a description of the role of the teacher and the learning environment they considered ideal.

Drs. Valli, Taylor, and Blum worked with the student teachers and supervisors throughout the semester as we developed and refined specific procedures for structuring the individual problem-solving activity and other components of the final written document. Students were given both verbal and written feedback at each stage. During the student teaching semester, their journal entries were reviewed and written comments were provided weekly by the field placement coordinator and their university supervisor. Progress with the individual problem-solving activity was discussed regularly in the weekly student teacher seminar. Students were encouraged to discuss the problem-solving activity with their cooperating teacher. Plans for their solution strategy trials required the cooperating teacher's approval. Drafts of the problem-solving activity report and of the final comprehensive document were reviewed at least twice by Drs. Valli, Taylor, and Blum. They prepared written comments for students and met with them to discuss revisions.

After the final documents were submitted, students were asked to evaluate the revised comprehensive examination by responding to a questionnaire. This evaluation tool was designed to provide information about students' perceptions of the individual problem-solving experience, how the activity had changed their view of teaching and/or of problem solving, and suggestions for other activities they felt would be helpful to future students.

Building on our experience in developing the individual problem-solving activity during the first semester, our review of the students' problem-solving reports, and their evaluation of the experience, Dr. Blum and Dr. Ciriello, a university supervisor, revised the activity for a second trial. In the revision, we tried to clarify the problem-solving project by reorganizing and restructuring into a four step sequence and by refining and elaborating questions and directions. For example, first semester students seldom related information from prior coursework or field experience to the situations they identified and analyzed until they were explicitly told to do so. In addition, they tended to have a hard time thinking about options and possibilities in changing those situations.

In the revised activity we developed a set of questions designed to guide students' analyses in a way that would help them to relate prior knowledge and/or experience to the new situation. Other questions asked them to consider how the situation would be in the "ideal" and to speculate about what they might do to move toward this "ideal." At this time, we also decided to rename the activity. The term "problem solving" seemed to drive students to focus in on a cause and arrive at a solution rather than to examine and speculate more broadly as we intended.

During the second semester, we were able to try out the revised activity with two secondary education student teachers. In this second trial, Dr. Blum and Dr. Ciriello were able to avoid most of the logistical problems we had encountered in the developmental phase. Students received the packet and an overview of the activity during their orientation meeting. Dr. Blum and Dr. Ciriello were able to provide weekly feedback and support and we were able to anticipate some of the difficulties students encountered. These included both technical and conceptual problems related to carrying out the situation analysis activity (e.g., identifying a situation to work on, thinking about the situation broadly, rather than only in technical terms, speculating about results of solution trials).

Our work with the secondary student teachers during the second semester provided an opportunity to try out the

revised activity and to examine more carefully the effectiveness of the situation analysis activity. Its purpose was to give students a way of demonstrating their reflectivity and problem-solving ability. In the initial trial we were somewhat disappointed by the narrow range of problems students selected. In almost every case the problem situation was a technical, management, or discipline issue. Beyond that, we felt it was very difficult for students to think at all broadly about the situation they identified and the implications or results of their solution trials. Students were eventually able to complete the activity successfully and recognized its value to their professional development. However, we wondered whether the activity warranted the tremendous amount of supervision and guidance required to help students complete the activity.

Although most logistical problems were resolved in the second trial, and we felt better prepared, once again, students' approach and initial work with the activity was narrow and focused on very technical aspects of the problem selected. For example, a secondary social studies student chose to work on increasing participation as his problem-solving activity. Initially, this seemed to be a broader type of concern, but the student's work in describing and analyzing the problem and generating solutions focused almost entirely on technical issues and strategies. His analysis of why students were not participating centered on the cooperating teacher's style. She lectured almost all the time and when she asked questions, they required short factual answers. Only a small group of the most able students ever volunteered in any class. To increase participation, the student teacher revised his management of questioning (i.e., he called on a "target group" he had identified, rather than relying on volunteer responses). The student teacher was disappointed in both the quantity and quality of participation he was getting, but only after much discussion with the university supervisor did he begin to consider a range of possible causes and a variety of management strategies for questioning which might increase participation. Without this discussion, he saw the problem as resting with the students they did not or could not ask questions. The supervisor helped him think about what constituted participation, and he was able to see that one might participate in other ways than asking questions (e.g., listening, taking notes). In addition, the supervisor helped him understand that the way he organized instruction was a major factor in the amount and quality of participation. This student, a bright and conscientious young man, was only able to broaden his perspective and consider a range of questions and possible solutions to his situation with intensive guidance and supervision from Dr. Ciriello.

Comments from students in both semesters' trials indicated that engaging in the situation analysis was effective in helping them to be more thoughtful in their practice, to ask more and better questions, to be more confident about their ability to change a situation, and to make more informed decisions. It was clear to us, however, that we had to modify the activity to make it more efficient to use. In addition, we planned to incorporate situation analysis activities in courses throughout the Teacher Education Program so that students would come to student teaching much better prepared to use this tool in order to promote reflective practice.

D. Conceptual Framework Development: As a result of analyzing the student teachers' problem-solving activities, Dr. Valli, Dr. Taylor, and Dr. Blum realized that further work needed to be done if we were to achieve our project goals. Although we were teaching our students how to be problem solvers, that was not a goal in and of itself. Rather, we were using problem solving as a vehicle to accomplish two inter-related goals: to help students relate professional knowledge to classroom events and to help students reflect on both technical and normative aspects of schooling. To accomplish these goals we realized that we needed to explicate a conceptual framework for the entire Teacher Education Program, within which students would engage in problem solving and other reflective activities. It seemed that such a framework could serve a number of functions:

- to provide a model for reflective teacher education which focuses on both technical and normative aspects of schooling
- to guide faculty in course development, discussions, readings, assignments, etc.
- to assist students throughout the program in developing clarity about the content and processes of reflection
- to assist student teachers in planning and evaluating their own teaching and problem solving
- to guide the field coordinator in planning training sessions for supervisors and cooperating teachers
- to guide supervisors and cooperating teachers in the direction, feedback, and assistance they provide to student teachers
- to provide a way to evaluate student progress and program success

After exploring several possible conceptual models, we settled on one which combines the Berlaks' dilemmas of schooling, Schwab's four commonplaces of teaching, and Van Manen's three levels of reflectivity (see Appendix I).

E. School Based Problem-Solving Group Activities: During the planning year of the improvement project, the steering committee and school system participants met together to learn about and try out a problem-solving strategy. In October and November, 1986, meetings were scheduled at Watkins, Wyngate, and Our Lady of Lourdes schools to continue this effort. The steering committee encouraged principals to invite other interested faculty to join the school based problem-solving groups in addition to teachers who had worked with us during the planning year. The steering committee asked that someone from each school be identified or volunteer to act as leader or facilitator for these meetings.

On October 3, Veola Jackson, the principal; Anne Gay and Audry Humphries, the two cooperating teachers; Beth Martin and Ann Voigt, the two student teachers; and Arona McNeill Vann, a new kindergarten teacher; met at Watkins School for the first problem-solving meeting with Drs. Taylor, Valli, and Blum. Audry Humphries acted as chairperson. Wendy Shorter, a teacher who had worked with us during the planning year but was not a cooperating teacher, did not attend. The Watkins group chose to continue working on the problem they had identified during the planning year: to improve students' self direction. At this first meeting they decided to focus on behavior in the cafeteria as a specific example of self directed behavior. On October 14, Dr. Taylor and Dr. Valli were invited to attend a regular faculty meeting at Watkins so that they could be part of a presentation to the Watkins faculty about the purpose and work of the problem-solving group. A second problem-solving group meeting on November 3, was attended by Veola Jackson, the principal; Anne Gay and Audry Humphries, the two cooperating teachers; Arona McNeill Vann, the kindergarten teacher; Drs. Taylor and Blum. Audry Humphries continued in her role as chairperson. She summarized the planning and activities that had been undertaken to improve conditions and behavior in the cafeteria. Following some discussion of these activities, she reported that the faculty had agreed that the situation was now satisfactory and that they did not want to pursue any additional problem-solving activities at present.

The first problem-solving group meeting at Our Lady of Lourdes, on October 20, was attended by Joan Coble, the principal; Kathy Kelly and Kelly Farley, the two cooperating teachers; Kerry Walsh, a student teacher, and Suzanne

Trapasso and Ann Basdekas, two first year teachers who were CUA graduates; Drs. Bauch and Blum. After introducing the project to the new members who had joined this group, the principal suggested that the group continue to work on improving communication among faculty, the problem they had identified the previous spring. During discussion, she explained that the faculty was also involved in a problem-solving activity related to improving reading and writing instruction in the school. Dr. Bauch suggested we combine rather than organize two separate projects. This was agreeable to all the members of the problem-solving group. On November 5, and December 3, Dr. Blum attended two regular faculty meetings at OLL. At the November 5 meeting the resource teacher led a workshop focusing on strategies to improve students' writing and study skills. The next meeting, however, was more a traditional faculty meeting. After reviewing the monthly calendar, the group divided into primary and intermediate levels to discuss things like discipline, the new report card, consistency/standards in grading, creating a transition class, and maintaining good relations with parent volunteers.

The Wyngate teachers decided to continue focusing on the problem of managing time more effectively in order to have more time for individual planning, conferences, etc. In preparation for the October meeting, the teachers kept a log on how they spent their time. The data were analyzed at the first meeting. The principal had created a Time Management Study form for this purpose and suggested that by the end of this first meeting the teachers would be able to complete the stem, "We need to find better ways to handle the demands of..." By the end of the meeting two areas had been identified: the demands of mainstreaming and of parent communication. The group decided to focus on the former for the time being, feeling that a disproportionate amount of time was spent on resource students and that the monthly EMT meetings were not as useful as possible. The group agreed to invite the support team to the next meeting to discuss the issue. That meeting was held in November. The support team was informed about the identification of the problem of communications about special students placing excessive demands on the classroom teachers. The goal of this meeting was communicated as finding ways to best work together for the good of all the children--especially the special needs children. A number of recommendations were generated: ways to use team meeting times better, having individual student work folders available for the support team, setting aside grade level time blocks for resource help, and using a plug-in rather than a pull-out resource approach. No decisions were made about these recommendations. The meeting was regarded as a first step in generating ideas.

The Sidwell Friends Lower School teacher participants continued to work on the problem of better integrating the junior practicum with the junior level education courses. An explicit goal was to find better ways of helping the juniors be more active inquirers about becoming teachers. Four collaborative meetings were held to further those efforts. On June 6, 1986, Dr. Valli and Dr. Taylor met with the Sidwell faculty to discuss the redesign of ED 462: Introduction to Elementary Education, previously planned by Dr. Lodish, the Sidwell principal. The course was now to be taught by a team of Sidwell teachers who also served as practicum teachers for the interns. The general purpose of the meeting was to give the Sidwell teachers background on the Teacher Education Program so they could plan ED 462. Discussion focused on important topics to include in the syllabus (providing connections but avoiding overlap with other courses) and ways to structure for student involvement and reflectivity.

On October 6, 1986, the entire group met again. In the meantime the ED 462 instructors (Carol Borut, Virginia Singer, and Betsy Johnson) met several times over the summer to develop the course syllabus and had given Drs. Taylor and Valli a draft for feedback. This meeting was to formatively evaluate the change efforts. Two meetings were held at the end of the first semester to plan for the second. On December 12, 1986, Linda Valli and Lila Bishop, the Sidwell science teacher, met to coordinate efforts for ED 571 which they taught jointly. On December 18, the entire group met to evaluate the first semester and give input to the second semester faculty.

On December 3, 1986, the improvement project participants (university faculty and supervisors, school principals and faculty, and student teachers) met for three hours to evaluate the strengths and weaknesses of the project thus far and to informally plan for the project's duration. The format of the meeting, devised by the steering committee, was to have participants discuss our project improvement efforts in relation to the recommendations of three major reports: the Holmes Group Report Tomorrow's Teachers, the Carnegie Report A Nation Prepared, and the Governor's Report Time for Results. In preparation for the meeting, participants received summary articles from Phi Delta Kappan, an excerpt from the Holmes Report on Professional Development Schools, and the three project goals.

Summaries of recommendations from the reports were distributed at the meeting for use during small group discussions on the implication of the reports for our project work. Each of the four groups selected a recorder to summarize implications and recommendations for collaboration in

achieving project goals. Forms were provided for this purpose. The whole group assembled to hear and discuss the recommendations of the small groups. A summary list of recommendations for recruitment, program development, field experiences, and evaluation was compiled and sent to each project school.

Overall, the meetings fell short of the outcomes we had anticipated. Some students had schedule conflicts and could not attend the meetings. Those who did attend were largely non-participants. Coordinating CUA and project school schedules was also difficult, especially in the case of Our Lady of Lourdes. Moreover, the meetings did not generate an on-going interest in a collaborative, research based problem-solving approach. After the departure of the student teachers in December, 1986, none of the schools indicated an interest in sustaining the problem-solving group commitment.

F. Student Teaching Supervision Activities: The continuing relationship between CUA and the three schools which served as field placement sites for student teachers provided an opportunity to examine and improve supervision during the student teaching semester. One component of the effort to revise the supervision model was a thorough review of the literature, undertaken by Margaret Moore, one of the university supervisors during the spring, 1987 semester. A second component of this effort was a series of evaluation/planning meetings with the cooperating teachers, principals, and supervisors who were involved in the field placement during the first semester.

Early in September, orientation meetings were scheduled at each of the improvement project schools with principals, cooperating teachers, student teachers, the university supervisor, and the field placement coordinator. These meetings provided an opportunity to discuss the university goals and requirements and to clarify cooperating teachers' expectations. All but one of the nine cooperating teachers had participated in the improvement project during the planning year. They had, therefore, been introduced to the university goals of increasing reflectivity and problem-solving ability of our students. These goals were reviewed and we discussed briefly the organization of school based problem-solving groups to continue the effort we had begun working on during the past year. In addition, we introduced the individual problem-solving activity each student would be working on as the semester proceeded. Only one teacher at each of the schools and one of the principals had served as cooperating teachers with the CUA program in the past. Therefore, a major purpose of the orientation sessions was to introduce university requirements in terms of student

responsibilities for attendance, planning and teaching in their classrooms, evaluation, seminar attendance, and participation in other school activities such as parent conferences, faculty meetings, semester grading, standardized testing, inservice activities/staff development. Finally, orientation sessions provided an opportunity for supervisors, cooperating teachers, and student teachers to begin planning an observation and evaluation schedule.

The university supervisor visited each student teacher at least once a week throughout the semester. During the visit, the supervisor observed the student teacher at work in her classroom, provided both written and oral feedback, met with the student teacher, and conferred with the cooperating teacher on progress and needed improvements. Approximately once every three weeks the cooperating teacher, student teacher, and university supervisor met together to evaluate the student teacher's progress in required competency areas. The field placement coordinator visited each student teacher at least once during the semester as well.

For the most part, meetings and discussions between the cooperating teacher and university supervisor or field placement coordinator focused on classroom responsibilities and teaching skills that student teachers were working on. In addition, cooperating teachers received written guidelines on the students' individual problem-solving activities, and student teachers were encouraged to involve the cooperating teachers in the planning and implementation of the activity.

During March, April and May, 1987, follow-up meetings were scheduled at the three schools where student teachers were assigned. Cooperating teachers and principals met with Dr. Blum and student teaching university supervisors to discuss the student teaching semester, participation in school based problem-solving groups, and their recommendations in planning for collaborative activities during the third year.

A question set developed by the steering committee asked for comments from two perspectives, as a cooperating teacher and as a member of a school based problem-solving group. Copies of the question set were sent to participants in advance and during the meetings we were able to touch on almost all questions. While the categories and specific questions served as a framework for the meetings, they provided a starting point and discussion was not limited by them.

Analysis of this interview data indicated that each teacher felt some degree of personal growth as a result of participation in the school based project meetings. However,

it appears questionable that teachers relate this personal growth to improving their performance in the role of cooperating teacher. Teachers who could be considered to be functioning at a higher level of abstraction with respect to the role of cooperating teacher (Glickman, 1981) understand their role, feel comfortable with it, and could proceed with the job, making adjustments as necessary. These teachers included in their description of their role promoting reflective thought in the student teacher. Less experienced teachers, or those who were not at higher levels of reflection, viewed the role primarily as serving as a model and a monitor to make sure student teachers gained skill in time management and quality lesson planning. These cooperating teachers appeared somewhat frustrated with the position, desired more direct guidelines for supervising student teachers, and would have welcomed a step-by-step program for working with them.

There were a number of specific suggestions for improving the student teaching semester. The importance of insuring that goals were clear to all members of the triad, university faculty, cooperating teacher, and student teacher, was stressed. Cooperating teachers suggested increasing the number of personal contacts with the university. Verbally presented materials and meetings were preferred over written materials.

Most teachers indicated that the role of the cooperating teacher and university expectations were made clear; however, several stated that implementing the role could be overwhelming. Suggestions to reduce this stress included preparing the student teacher with a stronger methods background, giving them more experience planning units before they came into the field, and coordinating seminar content more closely with the field experience. The suggestion was made that student teachers not have writing responsibilities for the university during the time they have full time planning and teaching responsibility.

Subsequent redesign of coursework incorporated activities that respond to some of these suggestions (e.g., more specific instruction in instructional design and material and activity development, preparation of more units). Additional training meetings were scheduled and materials designed to provide more specific information requested about the university program and supervision strategies. Revisions in the situation analysis activity reduced the amount of writing required during full time teaching.

Overall, the response to participation in the project and to working with student teachers was positive and enthusiastic. All of the schools and cooperating teachers

indicated they would like to continue the affiliation. In fact, in one school where the principal was retiring, the principal and teachers lobbied to override a school system administrative decision not to commit the new principal to the project. Two teachers from that same school were to be transferred in the fall. Both indicated they would like to continue as cooperating teachers if we would consider placing students in their new school.

The purpose of these meetings was evaluative: assessment and planning. Scheduling is a very serious problem in trying to coordinate university and school activities. Scheduling these meetings was no exception. Although scheduling the meetings was difficult and time consuming, much useful data was gathered. It was evident that teachers and principals had reviewed the questions and given thought to their comments and suggestions. Teachers and principals seemed open and willing to discuss freely and make recommendations. We believe this is true because they have seen their prior recommendations incorporated into project activities. We are aware that building a true collaborative relationship takes time and effort. We believe that we have begun to establish this kind of relationship with the participants in the project.

Using the findings from the literature and the results of the evaluation/planning meetings, the steering committee identified several components we wanted to include in the supervision model. From this base, we hoped to engage cooperating teachers and university supervisors in developing and trying out specific supervisory strategies as well as other components of the model such as assessment tools and training. Based on our findings from earlier efforts in this project, we felt it imperative that this development effort be a collaborative one so that all parties would feel a sense of ownership of the model and a commitment to it as a useful and efficient tool.

Project Activities--Year Three

During the third year, we continued collaborative activities with cooperating teachers and administrators and university faculty. We focused considerable energy on refining activities begun earlier in the project (e.g., adopting conceptual framework, revising situation analysis project) and concentrated on developing additional products (e.g., training materials for supervisors and cooperating teachers, teacher education handbook). In addition we concentrated on evaluation and assessment of the project.

A. Continued Work With Cooperating Teachers in Project Schools: During the fall semester, 1987, eight elementary student teachers completed their field placement with cooperating teachers in schools where the principal agreed to be part of the CUA Teacher Education Project. Two students completed their field assignment at Wyngate School, Montgomery County Public Schools. Four students were assigned to the Capitol Hill Cluster Schools, District of Columbia Public Schools. Both Wyngate and The Capitol Hill Cluster Schools (Peabody Early Childhood Center, Watkins Elementary School, and Stewart Hobson Middle School) have been part of the improvement project from its inception. Two of the cooperating teachers and the principal of The Capitol Hill Cluster Schools were original participants. Three teachers at The Capitol Hill Cluster Schools and one from Wyngate joined the pool of teachers and the new principal at Wyngate also made a commitment to be a part of the collaborative effort.

An additional Catholic school was invited to become a part of the project because no cooperating teachers were available at Our Lady of Lourdes School that semester. The resource specialist at Our Lady of Lourdes and Blessed Sacrament schools initiated a meeting with the principal and two interested teachers at Blessed Sacrament. Two students were assigned to Blessed Sacrament during the fall semester. The principal and both teachers participated in several orientation and planning meetings at the school to become familiar with project goals and activities.

Although no cooperating teachers were available to work with student teachers at Our Lady of Lourdes, the principal of that school has maintained an active role in all project activities and one of the original teacher participants served as a mentor to a student who completed a two day a week practicum placement. So, although the goal of working with the same cooperating teachers and schools was not totally achieved, our pool of schools and teachers has actually been expanded by being forced to go to Blessed Sacrament. We think this will help the project continue beyond the period of funding.

One major activity of the improvement project which has had an important impact on student teaching was the effort to clarify goals, expectations, requirements, and constraints of the school system and the university. As part of this effort we have worked with faculty from the cooperating school sites to develop improved orientation and supervision training for cooperating teachers and university supervisors.

Dr. Blum, Field Placement Coordinator, and university supervisors met with cooperating teachers individually and in

groups at the beginning of the semester to acquaint them with university goals in the Teacher Education Program and our expectations for the students during the semester. They were reminded of our focus on reflective teaching and problem solving. We tried to be much more specific in describing course content and the types of teaching strategies we hoped students might try out. We asked cooperating teachers to provide assistance in integrating with curriculum requirements in the school. In addition, cooperating teachers were introduced to the conceptual framework and the situation analysis activity as vehicles for promoting reflective teaching and problem solving. We encouraged cooperating teachers to discuss the situation analysis project with their student teacher since in our view the cooperating teacher could be a major resource in this activity.

During the semester, the university supervisor met regularly with cooperating teachers to monitor student progress and provide additional support. Additional group meetings were scheduled at each school to continue work on plans for supervision training which would promote reflective teaching.

B. Adoption of Conceptual Framework by CUA Teacher Education Faculty: At the beginning of the fall semester, 1987, Dr. Valli, Director of Teacher Education, presented the conceptual framework (see Appendix I) to the Teacher Education faculty. In a series of meetings, the faculty discussed the conceptual framework and decided to adopt it as part of the program. During the fall semester, several faculty members designed activities to incorporate the conceptual framework so that students would be introduced to it from the beginning of the program and work with it throughout. The result was further adaptations in courses described above. For example, in ED 251, students are now introduced formally to the three dimensions of the conceptual framework. The framework is then used to analyze course assigned readings, to structure field observations, and to guide written assignments. In ED 555, students use the problem-solving coaching guide to analyze problems of classroom management, and in ED 577, the coaching guide is used to analyze a real classroom problem students identify in their junior practicum. Another adaptation will be made in ED 555 starting in the fall, 1988 semester. The revised comprehensive examinations indicated that students had trouble relating literature to practical classroom problems. Through further investigation, the faculty realized that students had little experience with library research. In ED 555, students will now be required to write a research paper in which they select a classroom management problem to study, find different views on the problem, and formulate their own position.

C. Second Field Trial of Revised Comprehensive Examination Activities: In addition to classroom teaching responsibilities, student teachers are required to engage in an action research/reflective problem solving activity, the situation analysis project. This activity was developed and piloted in the fall semester, 1986. During the spring semester, 1987, a revision was developed and tried with two secondary student teachers. In the fall semester, 1987, we field tested the revised activity with our elementary education students as well as three secondary student teachers.

During the spring semester, 1987, Dr. Ciriello had served as university supervisor. In that capacity, she provided weekly feedback to students on their journal entries and shared copies of the journals and her feedback with Dr. Blum on a weekly basis. This was extremely successful and eliminated the logistical problems of delivering journals to Dr. Valli, Dr. Taylor, and Dr. Blum on a weekly basis. In addition, as the university supervisor, Dr. Ciriello was familiar with the classroom situations and was able to work very productively with the students on this activity. For the fall trial, we decided to have university supervisors provide weekly feedback and monitor student progress on the activity. In addition, a substantial amount of time was provided during weekly seminar sessions to discuss progress and problems with the activity.

University supervisors were appointed during the summer. Dr. Blum contacted each one and sent her a copy of the July, 1987 Progress Report and Implementation Plan to introduce them to the project and specifically to the conceptual framework and situation analysis activity. One university supervisor had served in that role during the fall, 1986 semester. Therefore, she was familiar with the concept of the project and somewhat familiar with the journal assignments. A second university supervisor had graduated from the CUA Teacher Education Program in May, 1985. She had no previous contact with the improvement project, but was of course, very familiar with the goals and content of the program. The third university supervisor was a graduate student with many years teaching experience, but no prior contact with the project or the CUA Teacher Education Program.

Individual orientation meetings were scheduled with university supervisors late in the summer. Additional orientation and planning meetings were scheduled just prior to the beginning of the semester. Weekly planning and evaluation meetings were scheduled throughout the semester so that Dr. Blum monitored progress and problems on a weekly basis.

We recognized that both written and verbal feedback were essential in guiding progress and encouraging reflection in the situation analysis activity, but we had not yet developed standards or criteria for providing this feedback. In the developmental stage, faculty simply responded spontaneously to students' journals. During the summer, we developed a coaching guide to provide feedback in a systematic, somewhat more standardized way.

University supervisors expressed a good deal of concern about being able to provide appropriate feedback. They were aware and somewhat anxious about their role since the final written summary of the situation analysis was a substantial factor in grading for all student teachers and became the first portion of elementary education students' comprehensive examination. At the weekly planning meetings, we discussed each student's progress and shared examples of feedback. Dr. Blum felt that all the supervisors were able to provide productive feedback and guidance. However, anxiety on the part of university supervisors was not completely alleviated. In fact, it was the source of considerable difficulty for one of the supervisors throughout the semester.

Examination of the final reports and elementary education comprehensive examinations indicated our supervisory efforts were having the desired effect. During this field trial, students addressed broader issues and designed solution strategies which reflected their understanding of their role in change in a teaching/learning environment. We believe that one reason for this difference in performance is related to the revision in the design of the activity. We believe that a second reason is related to the kind and quality of supervision we have developed. A third is the role of the conceptual framework in clarifying our basic ideas about reflection and how to translate those ideas to reflective practice.

The conceptual framework provides a way of organizing thinking when one discusses a problem. For example, one student teacher identified off task behavior in her classroom as the issue she wanted to work on. In discussion and written feedback, the university supervisor helped the student examine how she wanted her classroom to operate "in the ideal" or, to use the language of the conceptual framework, at a "critical" level. In the following sessions they discussed and planned ways of achieving the "ideal" or at least coming closer to it. These conversations dealt with technical aspects of instruction. At the same time, the supervisor and student discussed what certain kinds of teacher behaviors might mean to students or how they might be interpreted by them.

Evaluative comments from students at the end of the fall semester were similar to those of the earlier groups. Students find the activity difficult in that it requires a great deal of time and it is not a familiar sort of activity. However, in retrospect, they can appreciate its value in helping them to conceptualize the teaching/learning environment and the teacher's role quite differently.

Similarly, initial comments from university supervisors indicated they found the situation analysis activity difficult to supervise and stressful to students. However, after going through the process, they felt it had contributed to important changes and growth in student teachers' thinking and actions in the classroom.

During the spring semester, 1988, Dr. Blum and Ms. Favo, the university supervisor, incorporated several changes in the supervision of the situation analysis activity. The activity was introduced much more systematically and over a period of three weeks. We modeled and practiced preparing a journal entry in the first two seminar sessions. In addition, suggestions were made to help organize the activity and to reduce the time students spend on the activity. One change was that students were told they should spend only 30 minutes a day on the assignments. A second change involved having students keep their notes on index cards rather than in notebooks so that they could avoid rewriting and facilitate the final report writing.

One of the goals for this year was to involve cooperating teachers more actively in supervision of the situation analysis activity. It seemed an excellent opportunity for reflective supervision. However, from conversations with both student teachers and cooperating teachers, it appears that cooperating teachers did not become involved in the situation analysis activity, at least not in a formal way.

In an effort to encourage cooperating teachers to participate more in the activity, Dr. Blum and Ms. Favo discussed this goal with the secondary cooperating teachers second semester and sought their suggestions for integrating the activity more into their planning and evaluating with students. The teachers felt that they were indeed addressing the issues that students were working on, even though they might not be discussing them formally in the context of the situation analysis activity. We discussed whether it might be even more helpful to students to have some time for more specific discussions directly tied to the activity. No specific decision was made about how teachers would proceed, but we did agree to meet again and discuss the issue.

Based on experiences and findings during the field trials this year, Dr. Blum and Ms. Favo revised the situation analysis activity (see Appendix II). This revision was tried with student teachers in the fall semester, 1988.

D. Supervision Meetings: Developing and trying out a research based supervision model which encourages reflection is a goal we began working on in the spring, 1987 semester. We hoped to develop and try out with project participants an orientation to supervision as well as strategies and/or materials for implementation. Initial efforts included a review of research and identification of components to be included in the model. In the current period, we began to involve cooperating teachers and university supervisors in the design and trial activities so that all parties would feel a sense of ownership of the model and a commitment to it as a useful and efficient tool.

During the fall, 1987 semester, Dr. Blum scheduled a series of meetings focusing on supervision with cooperating teachers. At the meetings, cooperating teachers shared their successes and problems with supervision. In addition, Dr. Blum and the university supervisors introduced two models of supervision which seemed to fit well with the effort to promote reflective practice. These are clinical supervision (Goldhammer, 1980; Garman, 1984) and developmental supervision (Glickman, 1981).

During the spring, 1988 semester, we continued our efforts with cooperating teachers and other project participants to develop and try out a supervision model in a series of four meetings. At the first meeting, February 1, 1988, Drs. Valli and Blum presented a summary of the improvement project activities to date and an overview of the Teacher Education Program at CUA (e.g., course of studies, instructional priorities). Then, the group discussed supervision experiences and generated a set of goals of supervision. The second meeting, February 29, 1988, focused on clinical supervision. The meeting was chaired by Rich Lodish, Director of Sidwell Friends Lower School and a project participant from its beginning. Dr. Lodish uses clinical supervision in his work with Sidwell faculty and has developed training sessions for its use. At this meeting, he helped us examine the special needs of preservice teachers and how clinical supervision could be adapted for use with this group.

The third supervision meeting, March 28, 1988, was led by Dr. Maria Ciriello. Dr. Ciriello summarized the model of developmental supervision and provided several practice activities using this approach. At the fourth meeting, April 25, 1988, participants discussed their ideas for or-

ganizing and implementing training and supervision In small and large groups they brainstormed, then developed responses to the following questions: What should cooperating teachers do to help student teachers develop reflectivity? What support systems are necessary to enable this reflective supervision process? A summary of their responses indicated that cooperating teachers thought they should engage students in more reflective practice, such as modeling the types of questions we would like to see student teachers ask. For example, following a lesson, the cooperating teacher might ask the student, what went well, what could have gone better and how things might be changed to improve this lesson another time. Teachers also stressed the need to schedule a daily planning time for setting specific goals, monitoring students' progress, and helping students make connections between prior learning and current classroom experiences. Teachers identified a number of support systems they felt would enable the reflective process. These included inservice training, release time for planning and consultation, and improved communication between the university and the school (e.g., specific information about the Teacher Education Program and expectations for the student teaching experience).

Ms. Favo and Dr. Blum developed training materials which we tried out with cooperating teachers and university supervisors in the fall semester, 1988 (see Appendix III). These materials incorporate the suggestions of the cooperating teachers during the spring, 1988 supervision meetings as well as all previous data from student teachers, university supervisors, and cooperating teachers.

The four student teaching university supervisors for the fall semester, 1988, had no previous experience with the CUA Teacher Education Program. During July and August, Dr. Blum met with each of the supervisors at least once to orient them to the conceptual framework and supervision model. Three of the four were available in the metropolitan area throughout the summer and were able to schedule two to four additional meetings. During the orientation sessions we reviewed and discussed information about the Teacher Education Program, the conceptual framework, specific expectations for the student teaching field placement, and clinical and developmental supervision as combined in our supervision model. Background and support materials included: "Phases in student teaching" (Caruso, 1977); "Student teachers' preference for supervisory approach" (Copeland, 1979); Clinical supervision (Glickman, 1981); Developmental supervision: Alternative practices for helping teachers improve instruction (Goldhammer, Anderson & Krajewski, 1980); A conceptual framework for a reflective teacher education program (Valli, 1987); "On becoming a reflective teacher"

(Zeichner, 1984); and the draft Teacher Education Program Handbook.

On August 29, 1988, Ms. Favo conducted a half day training workshop with the university supervisors. The intent was to review program goals and priorities, to present information about developmental levels and needs of student teachers, to provide background and practice in supervision strategies, and to encourage supervisors to assess their own strengths and weaknesses re supervision and to begin to develop their own supervisory style. The session was designed to provide technical information about the duties of supervision such as scheduling, observations, and meetings.

The session began with a review of program goals and the conceptual framework adopted by the Teacher Education faculty. This was followed by a discussion of the purposes of supervision, including findings from research on student teaching, Goldhammer's model of developmental supervision and Glickman's model of clinical supervision. The next segment focused on practical guidelines for a successful student teaching placement. Examples of the topics include: scheduling, enhancing the relationship with the cooperating teacher, dealing with instructional problems commonly faced by student teachers, and developing written forms for observation. A final segment during which supervisors practiced observing and giving feedback was rescheduled with Dr. Blum the following week. Dr. Blum met with supervisors weekly throughout the semester to monitor student teacher progress and provide additional support for the supervisors, especially in providing feedback for the situation analysis activity.

Dr. Blum and the appropriate supervisor met with each of the cooperating teachers during the first two weeks of school for an orientation session. The purpose of the orientation session was to familiarize new cooperating teachers with our program goals and expectations. Using the draft Teacher Education Program Handbook and the situation analysis activity guidelines as support material, we introduced the gist of the conceptual framework, the goal of educating reflective teachers, our expectations for classroom responsibilities, and the activities involved in the situation analysis project. These introductory sessions were carefully limited to an hour, but individual supervisors followed up within two weeks with another visit and additional information as needed and/or requested. Two of the cooperating teachers had served as cooperating teachers in the fall semester, 1987. These teachers had also taken the supervision course developed by Dr. Maria Ciriello as part of the improvement project. With these teachers, the orien-

tation meeting time was a cooperative session among the cooperating teacher, the (new) supervisor and Dr. Blum to plan for the student teaching semester and to go over the revised situation analysis activity guidelines. No additional training sessions were scheduled with cooperating teachers. However, supervisors met regularly with cooperating teachers in conjunction with their weekly observation/supervision sessions with student teachers. Supervisors encouraged cooperating teachers' use of the supervision model as well as their involvement in the situation analysis project. Dr. Blum will be scheduling followup meetings with the cooperating teachers to assess the semester's activities.

E. Program Assessment and Evaluation: During the summer of 1988, Drs. Valli, Taylor, and Blum, and Ms. Favo met weekly to develop assessment measures of reflective outcomes. As others have noted, assessing or measuring reflection is particularly difficult since reflection is an internal process. We are using written products of student thinking to assess their reflective qualities.

We have developed two types of instruments to assess reflection (see Appendix IV). The first assesses the quality of reflection in the students' comprehensive examination (based on their situation analysis). Each part of the analysis (definition of the situation, solution trial, etc.) has a three point scale, based on Perry's ideas of cognitive judgment. At the highest levels of reflective judgment, students make objective judgments based on reasoning and evidence. Knowledge is seen as contextually based, and judgment is modified with new information. At the lowest levels of reflective judgment, students view the world as simple, believe knowledge is absolute, and use unsupported personal belief as often as they use evidence.

In the situation analysis, a student who rated a 1 (high) on the problem description, for example, would have fully analyzed the situation using all aspects of the framework, differentiated between observation and inference, provided documentation, described the problem from multiple perspectives, and arrived at a comprehensive statement of the problem. By contrast, a student who rated a 3 (low) would not use the framework to coherently analyze the problem, would not document or distinguish inference from fact, and would describe the situation from an egocentric perspective.

The faculty readers of the comprehensive examinations have been asked to rate each of the seven parts of the exam on a seven point scale. In addition, Dr. Blum and Ms. Favo are rating the situation analyses. Most students are receiving 2's on most sections, indicating that with assistance

they can document and generalize, link causes, effects, and solution strategies, introduce appropriate literature, and begin to develop a consistent philosophy. An outcome grid will be developed.

The second instrument we are using to assess student reflection judgment is a set of vignettes based on the dilemmas of teaching (one dimension of our conceptual framework). We developed this instrument as a measure of reflection independent of the situation analysis. We determined that this independent measure was necessary since students receive varying amounts of assistance from faculty, university supervisors, and cooperating teachers on their comprehensive examinations. Once all the vignettes are developed, they will be given at the beginning and end of the Teacher Education Program to determine cognitive development.

II. MAJOR ISSUES, STRATEGIES, AND COLLABORATIVE APPROACHES

We began this project with two major premises: that teacher education programs should prepare prospective teachers to be reflective about their practice, and that learning how to be problem solvers would facilitate reflectivity. These premises guided the project goals and activities. We knew, for instance, that students needed an introduction to the nature and theory of problem solving, that reflective problem-solving activities needed to be infused throughout their education courses, that students needed assistance in the content for as well as the process of reflection, and that the school environment of their field placements should embody the reflective orientation of the project.

As documented in the March, 1987 Progress Report, Teacher Education students are taught the nature and theory of problem solving as part of the information processing unit in ED 361: Psychology of Education. Problem solving and other reflective activities, have been incorporated in each course in the professional education course sequence. We feel successful in these endeavors at two levels: the congruence of the activities with project goals, and the acceptance of the goals and activities by program participants (students and teachers). We have not formally assessed student cognitive or reflective outcomes and feel it would be premature to do so since the program itself is still in transition. However, as described above, we are currently developing assessment tools which address this goal (see Appendix IV).

We have encountered five basic problems in our project work to date. Three deal with the problem-solving strategies we were using; two deal with collaboration.

Difficulties With Reflective Problem Solving

A. Student Teacher Difficulties with Problem Solving: For the culminating reflective activity of their professional preparation, students are to identify and attempt to solve a classroom problem they have during student teaching. In conjunction with that activity, they must reflect on their own thinking processes, relate theory and research to their approach and explain how their approach is consonant with their educational philosophy, view of schools, teachers, learners, etc.

This activity was successful in 1) helping students realize that they could question anything in the classroom, that they did not have to take anything for granted and 2) helping them discover that they could figure things out and bring about improvements in the classroom. We believe these are very significant outcomes. However, we noted in the initial trials that there was a tendency among some students to focus more on quickly solving a problem than on understanding a problem in all its complexity. Students also too frequently focused primarily on the technical aspects of the problem (e.g., how to help Billy stay on task) rather than on normative aspects (e.g., is the task worthwhile, should Billy be forced to attend to the task, why is it important for him, etc.)

We introduced four changes during the third year to begin addressing this problem. First, the most recent cohorts had more experience with problem solving prior to student teaching than last year's student teachers did. Secondly, the activity was explained more fully to them, their supervisors, and cooperating teachers at the start of their student teaching semester. Third, supervisors and cooperating teachers had more training in helping students be reflective problem solvers. (Technical problem solvers might be an apt contrast). And fourth, we introduced a conceptual framework in an effort to make the broader, normative, non-technical aspects of reflective practice more apparent. These changes yielded positive results. We expect to see even more evidence of success in the future. For example, the fall, 1988 student teachers were introduced to the conceptual framework and the problem-solving activity in their junior year. We expect they will be more critically reflective and more aware of the broad aspects of teaching than our past cohorts.

B. Cooperating Teacher Difficulties in Participation in the Problem-Solving Activity: Because we wanted the school environment that student teachers were working in to model the project's reflective orientation, we asked the cooperating teachers to work in a group to identify and solve a

school-wide problem. While that activity made sense at a theoretical level, several problems emerged which made us decide to drop the activity during the third year of the project.

Although cooperating teachers agreed to this activity, they never fully owned it. It was more of a university requirement for involvement in the project. Consequently, the type of collaborative, reflective problem solving we had envisioned too often became just another meeting to attend. Problems were often narrowly delimited so they could be quickly solved and the obligation fulfilled. Moreover, the university did not have adequate resources to assist in the activities. Because of schedule conflicts, student teachers also had difficulty attending the meetings.

In place of these problem-solving groups, we decided instead to have cooperating teachers focus on the problem of inducting new teachers. Specifically, we asked them to look at different models of supervision and to develop or adopt a model that is in keeping with the reflective goals of the program. This effort was successful in that the group of teachers who agreed to participate did indeed provide substantial assistance in developing and trying out aspects of the supervision plan and supervision training model. However, only a limited number of teachers agreed to become involved, and several who did were unable to schedule all the meetings.

C. Difficulties in Teaching and Assessing Something as Internal as Reflection: We are operating on the assumption that students' written products convey something about the quality of their reflection. But we do not know whether the program orientation will carry into their first year teaching, or if students can continue the same type of reflection without the guidance and feedback we give them. We hope to have some answers to these questions by tracking our students after graduation.

Difficulties in Collaboration

A. Difficulties in Collaboration with Cooperating Schools: This problem was organizational rather than conceptual. We experienced more turn-over in our schools and teachers than we initially anticipated. Two of the four principals have changed. Some teachers have left their schools, other teachers would prefer not to or cannot have a student teacher every year. Thus we are forced into placing students in schools or with cooperating teachers who have not been part of the OERI project. In order to address this problem, we have developed specific reflective supervision strategies which we will ask all university supervisors and cooperating

teachers to use. The model is explained in the student handbook we are developing (see Appendix V); instruments are being developed (see Appendix III) and training will be offered.

B. Difficulties in Collaborating with Teacher Education Faculty: The Teacher Education faculty at CUA has been enthusiastic, warm and supportive of the improvement project. Several faculty members outside the improvement project staff have volunteered large amounts of time to various project activities. In the fall, 1987 semester, Dr. Valli formally introduced the conceptual framework in a series of meetings. The faculty reviewed and discussed the framework at length and then formally resolved to adopt it as an official part of the Teacher Education Program. The plan is to introduce the framework and reinforce it throughout the program. In order to do this, Dr. Valli asked that faculty develop specific activities which introduce and reinforce the framework.

While the faculty seems genuinely receptive to the idea of adopting the conceptual framework, integrating it into one's thinking and implementing it in courses requires a substantial investment of time and effort. The examples of activities submitted by faculty thus far is encouraging. However, it is difficult to speculate about how much other faculty will involve themselves in this essential project activity. Teacher Education meetings will regularly have implementation of the conceptual framework as an agenda item.

III. MAJOR OUTCOMES

As documented in the July, 1987 Progress Report and Implementation Plan, we anticipated outcomes for learners, higher education faculty, and school faculty as well as institutional/programmatic outcomes. Because many project activities have been developmental, it is not yet possible to assess outcomes or evaluate their impact summatively. In the following section, we can comment on our data thus far in terms of project outcomes; however, one of the basic assumptions we have made is that the best way to teach students to be reflective is to infuse instruction throughout the program and to provide many opportunities to practice reflective problem solving. We cannot fairly evaluate the effect of infusion until we have a group of student teachers who have been introduced to the conceptual framework and reflective problem-solving activities throughout their program.

A. Learner: We anticipated that our students would be critically reflective about instructional, curricular, and

contextual aspects of teaching and that this reflectivity would be evident in their problem-solving approach and ability. According to NETWORK's categories, this would be considered primarily a performance outcome. It assumes basic knowledge and understanding of the problem-solving strategy they are taught. This broad reflective outcome will be assessed through an instrument we are developing (see Appendix IV). The more specific problem-solving goal will be assessed through a rating instrument developed as part of the Practice Profile (see Appendix IV). We have also asked students to complete a two-question instrument pre and post student teaching, asking "What knowledge/skills/attitudes about teaching do you think will be/were most helpful to you when student teaching? Where did you learn them?"

Comments from students in four semester trials of the problem-solving activity indicate that engaging in the situation analysis is effective in helping them to be more confident about their ability to change a situation, and to make more informed decisions. They are able to analyze their thinking process and note when important changes in thinking occur. Every student teacher has been able to complete the activity successfully; however, faculty on the steering committee and university supervisors have provided regular feedback and guidance and extensive direction and support in four cases. Thus far, students have not been able to complete the situation analysis activity independently. Our impression is that the 1987-88 student teachers benefited from introduction of the conceptual framework even though it was introduced only at the beginning of the student teaching semester. We feel the major difference was in supervision which incorporated the ideas of the conceptual framework. Also, because the faculty and supervisors had more experience with the activity and could anticipate problems, we were able to structure the activity more effectively and provide feedback in a way that encouraged reflection and consideration of the elements of the conceptual framework. We expect that the fall semester, 1988 students will be even more successful since they have had a more systematic introduction to the conceptual framework and several experiences with reflective problem-solving activities during their junior year.

B. Higher Education Faculty: The following outcomes were anticipated in the instructional practices of the teacher education faculty:

- a) acceptance of a common conceptual framework for program development
- b) explanation and modeling of reflective problem solving in the professional education courses

- c) incorporation of reflective problem-solving activities in coursework

As documented earlier in this report, the Teacher Education faculty formally adopted the conceptual framework as part of the program in the fall of 1987. Several faculty have shared examples of activities they have introduced into their courses to explain and model problem solving. Nevertheless, we recognize that adopting the conceptual framework in a formal way and integrating it into one's thinking and teaching are quite different. To encourage all Teacher Education faculty to involve themselves in this effort, implementation of the conceptual framework will be a regular agenda item at Teacher Education Program meetings.

C. School Faculty: We anticipated the following changes in the knowledge and practices of school faculty so that they could participate in implementing the program:

- a) a willingness and ability to become explicit teachers of (not just models for) CUA students
- b) a willingness and ability to engage in reflective supervision
- c) ownership of the program's conceptual framework
- d) an understanding of and commitment to reflective problem solving

With the exception of Sidwell Friends School, the outcomes for school faculty have met with only very limited success. Teachers and administrators have joined the project with enthusiasm and have, for the most part, participated with energy. They have been most cooperative about scheduling meetings, although this was often difficult because of conflicts between university and public school schedules. They have come to meetings prepared and contributed many excellent ideas and suggestions. However, we have found it almost impossible to involve teachers very actively in project activities, such as the school based problem-solving groups or supervising the situation analysis project.

Building an effective collaborative relationship takes time, energy, and effort. We have such a relationship with Sidwell Friends school, but that relationship was intact for seven years before the project began. That is the one case where we have evidence of several teachers involving themselves in project activities such as attempting to become explicit teachers rather than models for our students and engaging in reflective supervision. In our other project schools, only a few individual teachers have done so.

We believe we have begun to build a genuine collaborative relationship with all the project schools. In spite

of staff turnover much in excess of what we anticipated, all the schools have made a commitment to continue in the project. In an effort to streamline the time and effort necessary to understand project goals and concepts we have designed and are currently developing a Teacher Education Program Handbook (see Appendix V) and training materials for supervision (see Appendix III). We piloted these materials with cooperating teachers in the fall semester, 1988.

Finally, we have expanded the group of participating schools from four to eight. Blessed Sacrament has agreed to continue working with us, an additional MCPS school (Ashburton), and a second DCPS cluster (River Terrace and Smothers) joined our collaborative project in the fall, 1988 semester. Initial orientation and planning meetings with the new participants seem promising. Several teachers at different grade levels have attended these sessions and we hope this expanded number of school sites will provide an adequate pool of cooperating teachers who are familiar with our program goals, expectations and operation.

D. Institutional/Programmatic: At the institutional level we anticipated the following outcomes:

- a) refinement and acceptance of a broad, reflective conceptual framework for the program
- b) development of training sessions and instruments for reflective supervision

The teacher education faculty has formally adopted the conceptual framework and training materials were developed and piloted in the fall semester, 1988. They will be revised and refined as necessary.

IV. INSTITUTIONALIZED FEATURES OF THE IMPROVEMENT PROJECT

As a result of the improvement project, the design and function of the Teacher Education Program is being significantly altered. Just a few examples include: adoption and incorporation of the conceptual framework, implementation of reflective supervision, revised comprehensive examination, professional school relationship with limited school sites for student teaching. Because of the nature of the changes, we anticipate that many will be "institutionalized" and will therefore be able to be maintained even without additional funding. Our concern is related to the apparent need for continual orienting and training of new participants. This will certainly require the production of materials and support for training. The grant funds enabled us to offer stipends for participation and also supported training workshops. As part of its commitment, the University sup-

ported graduate credit for participation. Additional funding will need to be identified for these efforts to continue.

V. OVERALL STRENGTHS AND WEAKNESSES AND "LESSONS LEARNED"

Strengths and Weaknesses

The most effective aspects of the improvement project to date are those related to redesign of the Teacher Education Program (e.g., adoption of the conceptual framework; incorporation of reflective problem-solving activities in coursework; revision of the comprehensive examination).

The least effective elements are those related to collaboration with schools. However, we do not believe this lack of success is because of a lack of interest or unwillingness to participate. As described above, we are designing and developing materials which we expect will facilitate understanding of project goals and strategies so that it will be possible for school faculty to participate more actively with less time necessary for training.

Lessons Learned by Monitoring Activities

The comprehensive examination included three components: a problem-solving activity report, a review of the literature related to an individual student teacher's problem, and a description of the role of the teacher and the classroom environment based on a synthesis of information and experience from coursework and field placements. Weekly monitoring and guidance was available to students for the first phase, the individual problem-solving activity. Specific and systematic monitoring and guidance was provided during the preparation of the other portions and the total report. Two cohorts of elementary education student teachers have completed the activity. In the fall, 1987 semester, seven of nine students successfully completed the comprehensive examination by the February deadline. The other two were given extensive feedback for revising portions of the final report which did not meet minimum requirements. Results were identical in the fall, 1987 semester when that group worked with the revised activity. One elementary education student teacher completed the activity in the spring, 1988 semester. For this trial, we incorporated additional changes and modified supervision somewhat.

Drs. Valli, Taylor, and Blum took responsibility for developing this alternative comprehensive examination and for supervising students as they completed each phase. Dr. Ciriello has played a crucial role in revision and supervision as well. Students demonstrated that, with guidance, they could engage in reflective problem identification and

problem-solving activities. In addition, they have demonstrated their ability to integrate this experience with scholarly sources and prior experience from coursework.

One section of the problem-solving activity report required that students reflect on their thought process as they worked through the problem-solving activity. Student responses from this section of the report confirm that students recognized that this assignment required a different kind of thought process than a more conventional comprehensive examination. Many noted their recognition of the complexity of life in the classroom and the usefulness of a reflective approach to both instruction and management. However, these students did not feel adequately prepared to complete the activity independently.

The process of developing and trying out the problem solving-activity portion of the comprehensive examination was accompanied by the type of problems typical of the developmental phase of any endeavor. For example, in the fall 1986 trial, we were not able to give students a comprehensive set of directions for the activity at the beginning of the semester. Directions for components of the activity needed to be modified from time to time. In the fall, 1987 trial, we resolved some of the initial problems, but we introduced the conceptual framework and could spend only a very limited amount of time trying to familiarize students with it.

Supervisors reported that the student teachers found that trying to complete assignments related to the problem-solving activity was sometimes confusing. Until they reached the later phases of the activity (solution trial and report writing) several students had difficulty understanding the relationship between the problem-solving activity and other aspects of the field placement. In addition, supervisors reported considerable anxiety about the responsibility for supervising this activity since they were not entirely clear about directions and/or expectations for the assignment. This anxiety was relieved as supervisors worked with the problem-solving activity and conceptual framework. In fact, one of the university supervisors, Ms. Favo, has played a major role in revising the activity guidelines, designing supervision strategies, and developing training materials.

In the following summary are lessons learned from analysis of the comprehensive examinations and the problem-solving groups. They were developed during a series of brainstorming meetings in the summer of 1987 during which Drs. Valli, Taylor, and Blum thought about the work they had done in the school based problem-solving groups, on the steering committee, and in the restructuring of the seniors' comprehensive examination. The focus of the meetings was on

obstacles to reflective problem solving. Steps taken to overcome these obstacles are included.

A. Comprehensive Examinations:

1. Students need more guidance in reflective problem solving: in goal setting; situational analysis; non linear thinking; normative thinking; and using heuristic strategies like similarity, means/ends analysis, working backwards and planning by simplification. This lesson led to the development of the conceptual framework and related activity infusion throughout coursework.
2. The problem-solving model we taught students might be more appropriate for solving problems in the area of teaching and learning. It might be less conducive for thinking about curriculum or subject matter problems, for political/ethical problems like the wise use of authority relations, or for larger social questions like how to provide for more equity in a classroom. In fact, in subsequent trials, university supervisors felt that students who linked the problem-solving activity to their teaching could benefit the most from it. The most recent revision of the problem-solving activity encourages students to select a problem reflected in their lesson plan evaluations and work with the problem-solving activity so that it is integrated with other classroom planning and teaching activities.
3. Student teachers often want to be accepted in the school environment, to model their cooperating teachers, to handle problems immediately, rather than reflectively, considering all alternatives and the principles underlying them. This lesson led to developing workshops and training materials for supervisors and cooperating teachers. These participants are now better prepared to understand and help implement program goals.
4. There is still dichotomous thinking and working: the university teaches the theoretical; the school the practical. This creates a situation where problem solving is less reflective than desirable, less able to bring all relevant knowledge to bear on the situation. This lesson has led the CUA faculty to develop a handbook which communicates to field personnel, the program goals and instructional priorities.

5. It is possible that weaker student teachers need cooperating teachers who tell, model, coach and give feedback, rather than encourage reflective self analysis. This lesson led to workshops focused on developmental supervision.
6. The structure of student teaching, a fourteen week internship, promotes the goal of putting in time rather than becoming a reflective practitioner. Perhaps the termination of student teaching should coincide with specific accomplishments rather than a specific date. No action has been taken on this lesson as yet.
7. Too often student teachers' thinking does not change through their observations. Novices might need more outside intervention to shape the situation in a problematic way to help them see it differently. This lesson led to the development of the conceptual framework and related course activities.
8. Novices are not likely to question the established structures and procedures in a classroom as part of the problem (e.g., too many reading groups, line-up procedures, boy/girl seating divisions). Their initial reaction is to see problems within individual students. This lesson led to including the four commonplaces in the conceptual framework.
9. Novices either have an inadequate knowledge base or do not know how to draw upon or transfer it to a concrete situation (e.g., transitions, teacher expectations, second language problems). This lesson led to including specific directions within the situation analysis activity which guide students to think about other situations where they encountered similar situations or prior coursework which addressed them.
10. Supervisors and cooperating teachers are not familiar enough with CUA's Teacher Education Program to assist with the transfer of knowledge in reflective problem solving. This lesson led to the writing of a program handbook and developing training sessions.
11. Students have a hard time understanding that educational reality can be interpreted from conflicting paradigms (probably evidence of a lack of emphasis in the program). This results in an "add on" approach to problem solving--attempting

multiple solutions with little internal consistency. This lesson led to the inclusion of the dilemmas dimension of the conceptual framework.

B. School Based Problem-Solving Groups

1. The problem-solving groups did not provide an apparent way to link theory to practice, to be collaboratively reflective, or to consider normative issues. They were partially experienced as a university imposition--not the way teachers normally go about their activities. This lesson led to acquainting cooperating teachers with the program's conceptual framework and abandoning the school based problem-solving groups. Instead, we asked cooperating teachers to assist student teachers with identifying and resolving their classroom problems.
2. School structures (little planning time, isolated work, mandated policies and curriculum) work against practitioners seeing issues and problems comprehensively. We have not addressed this obstacle yet, but intend to continue to work with our project schools in the direction of the Holmes Group's professional development school concept.
3. To a certain extent, the schools were "putting their best face forward" for the university and one another. A level of trust and acceptance has not yet been established which is needed for truly collaborative problem solving. We hope this will naturally resolve itself as we continue to work with project schools.
4. Differences in institutional cultures were problematic. Some classroom teachers regarded university faculty as too caught up in theory and unrealistic ideas; some university faculty regarded classroom teachers as too caught up in the immediate. We hope this will be resolved as we continue to work with project schools.

VI. PRODUCTS AND DISSEMINATION ACTIVITIES

Various types of materials have been produced in support of or as a result of project activities. Over the three year period, we have developed and refined a guide and rating scale to assist student teachers in their action research/problem-solving activity (see Appendix II). Perhaps even more basic to our program, we developed a conceptual framework which has been adopted by the Teacher Education

faculty and is being integrated into each course in the professional education sequence (see Appendix I). We are currently designing a research plan to assess students conceptual level as a result of their introduction to the conceptual framework and reflective problem-solving activities (see Appendix IV). Fairly early in the project, we completed a selective literature review of supervision articles, comparing the findings and recommendations to our project goals and experience. (This literature review was submitted with the July, 1987 Progress Report and Implementation Plan and as Appendix VI of the March, 1988 Progress Report.) The literature review helped initiate design and development of training materials for supervisors and cooperating teachers (see Appendix III). In order to address the need for continuing training and orienting of participants in our program we are developing a new Teacher Education Program Handbook and observation/assessment instruments (see Appendix V). As a reference tool, we have compiled the CUA Teacher Education Improvement Project Report Bibliography included with this report. It contains all references cited in our improvement project's reports. Finally, two papers were presented: Linda Valli and Nancy Taylor, "Reflective Teacher Education: A Process/Content Model," paper presented at the Reflective Teacher Education Conference, Houston, TX, October 1987; and Linda Valli, "Collaboration for Transfer of Learning: Preparing Pre-Service Teachers," paper presented at the Association of Teacher Educators (ATE), San Diego, CA, February 1988. (Copies of these papers were submitted as Appendix VII and Appendix VIII of the March, 1988 progress report.) A third article, "Beginning Teacher Problems Suggest Areas for Preservice Program Improvement" is in progress for submission to Teaching Education (see Appendix VI).

Professional educators and organizations (e.g., NCATE, AACTE) working on the knowledge base in teacher education should be interested in the conceptual framework and problem-solving approach we are developing through this project. Often the knowledge base is defined in vague, narrow, or technical (e.g., competencies) terms. The conceptual framework we have developed is fairly unique in including reflective and normative aspects of teaching as an explicit part of the knowledge base.

The interest in reflective teacher education is indicated by NETWORK organizing panels around the theme of reflection at recent meetings of ATE, AACTE, and AERA and by the University of Houston hosting a working meeting of OERI projects last October. This suggests (or might create) further interest among teacher educators in focusing on reflection as a major theme. Small elementary education programs should be particularly interested in our

project's infusion approach (having the same broad goals span the entire professional education sequence). That is generally more difficult to accomplish (or even attempt) at large universities.

VII. IMPLICATIONS FOR OTHERS

Implications for others are implied or embedded throughout this final report, particularly under outcomes and lessons learned. This section will summarize those implications under each of our three project goals:

A. To Facilitate Students' Transfer of Learning from the University to the Classroom: Transfer of learning is difficult for everyone, particularly beginners. Our project experiences support research findings that professional knowledge of teaching is more likely to influence practice if a number of conditions obtain: if universities and schools have common expectations; if frequent supervisory feedback is given and focuses on pedagogical issues raised in courses; if faculty and cooperating teachers model desired behavior and thinking; and if theory is immediately related to practice. These are the implications for others. The way in which we attempted to provide these conditions, our successes and failures, are described in detail in the article "Collaboration for Transfer of Learning", included in the March, 1988 progress report.

B. To Establish a Conceptual Framework Wherein Pre-Service Teachers are Urged to Actively Reflect About Both Technical and Normative Aspects of Schooling: Experience with our pre-service students again supports research findings: new teachers want to be told what to do, want to imitate practice, and want to focus on narrow, technical aspects of teaching. The lessons we finally learned from that are implications for other programs. First, officially incorporating a program goal on normative aspects of schooling is essential. However, students will not automatically consider ethical and political implications. Although David Hursh's recent dissertation (University of Wisconsin, Madison 1988) suggests that student teachers cannot consider classroom phenomenon apart from ethical aspects, they need guidance in doing so in a more logical, thorough and systematic manner. We found that adopting a conceptual framework which included normative aspects of schooling to be helpful. Other programs might find other strategies.

Second, the implementation of this approach must be consistently monitored. Even though everyone agrees that the very "heart of teaching is moral" amazingly little attention is paid to ethical and political issues in teacher education programs or research. Some even argue, with little evidence,

that neophytes can only focus on technical issues. Our profession, like our society, has a deeply embedded technical orientation. The implication of this is that implementing a reflective teacher education program which focuses on ethical considerations will be more difficult than implementing other kinds of programs. Those responsible for the program must find ways to sustain interest and commitment.

C. To Create the Types of School Environments Which Will Facilitate Student Teachers' Professional Growth: This was the most difficult goal to achieve. If changes in individual thinking and behavior are hard to bring about, changes in institutional life are almost impossible. Our project experience has implications for the concept of professional development schools proposed by the Holmes Group and others. University faculty are generally not directly involved in the daily operations for elementary and secondary schools. They are, therefore, not in the best position to effect institutional change. If particular types of school environments are desired for student teacher placements, schools should be found with a propensity for that climate. It is unrealistic to think that those changes will occur as a result of a student teaching program in a school. That program is too small a part of school life. University influence can help foster a particular orientation--in our case, reflective teaching--but it cannot create an orientation not already present, however tacit or incipient. We also discovered that the presence of one or two practitioners with close ties to the university program or faculty is extremely helpful in developing and sustaining a collaborative relationship.

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THE CATHOLIC UNIVERSITY OF AMERICA

DEPARTMENT OF EDUCATION

USING RESEARCH KNOWLEDGE TO IMPROVE TEACHER EDUCATION:

A PROBLEM SOLVING APPROACH

PRACTICE PROFILE--NOVEMBER 1, 1988

PRINCIPAL INVESTIGATOR: LINDA VALLI, PH.D.

PROJECT COORDINATOR: IRENE BLUM, PH.D.

OERI/NIE CONTRACT NO. 400-85-1062

PROJECT DEMOGRAPHICS

Student Characteristics: Undergraduate elementary education majors; cohort size 10-15; three cohorts involved: sophomores, juniors and seniors.

Teacher Characteristics: Six university faculty involved from the areas of curriculum, supervision, reading, human development, educational psychology and foundations. Approximately 10 cooperating teachers from grades 1-6 and university supervisors involved.

School/District Characteristics: We are working primarily with four schools: an independent Quaker school; a Catholic archdiocesan school; a public school in a large suburban district; and a public school in a large urban district.

Program Characteristics: Level: Undergraduate elementary education; Program Orientation: Reflective Problem-Solving

IMPLEMENTATION REQUIREMENTS

Costs: \$30,000 - \$40,000 annually

Training: Three, two-hour meetings with new supervisors, cooperating teachers and faculty. One hour weekly meeting for continued implementation and improvement.

Materials/Equipment: Photocopied articles; supervision booklets from ASCD; CUA Teacher Education Program Handbook.

Personnel: Part-time field placement coordinator needs additional time for handbook development, supervisor training, etc.

Organizational Arrangements: Needs two large adjacent classrooms at the university for monthly meetings.

Cooperative Arrangements: Consistent group of cooperating schools and classroom teachers who commit to the program for several years.

COMPONENTS FOR PRACTICE PROFILE

(1 = ideal; 2 = acceptable; 3 = unacceptable)

MAINTAINING PARTNERSHIPS: (for faculty, supervisors, & cooperating teachers)

- A. (1) Attends and is prepared for orientation, supervision or teacher education meetings by doing readings, questionnaires, sample assignments, etc.
- (2) Attends and is prepared for some supervision, orientation, or teacher education meetings.
- (3) Attends no meetings.
- B. (1) Takes initiative in finding ways to regularly implement aspects of the reflective problem-solving approach in classes and/or supervision of students and encourages others to do the same.
- (2) Uses assignments, supervision, content, strategies, etc. in keeping with the program's reflective problem-solving approach when directed.
- (4) Discourages a reflective problem-solving approach in classes and/or supervision of students.

INSTRUCTION: (for faculty, supervisors, cooperating teachers)

- A. (1) Takes every appropriate occasion to give assignments which use conceptual framework language.
- (2) Gives assignments which use conceptual framework language, but only when urged or assisted, or when the opportunity is self-evident.
- (3) Never gives assignments which use conceptual framework language.
- B. (1) Reconceptualized courses around the reflective problem-solving orientation and conceptual framework of the program.
- (2) Partially revised courses around the reflective problem-solving orientation and conceptual framework of the program.
- (3) Did not revise courses around the reflective problem-solving orientation and conceptual framework of the program.
- C. (1) Takes every appropriate opportunity to provide students with reflective problem solving practice.
- (2) Provides students with opportunities to practice reflective problem solving, but only when urged or assisted, or when the opportunity is self-evident.
- (3) Never provides students with opportunities to practice reflective problem solving.
- D. (1) Encourages students to be reflective through journal assignments, higher order questioning, case analyses, etc.
- (2) Encourages students to be reflective but without support or direction.
- (3) Never encourages students to be reflective.

- E. (1) Takes every appropriate opportunity to model and explain reflective problem solving behavior.
- (2) Occasionally models reflective problem solving behavior.
- (3) Never models reflective problem solving behavior.
- F. (1) Takes every appropriate opportunity to use the coaching guide to assist and evaluate students in identifying and acting upon a problem situation.
- (2) Uses the coaching guide to assist and evaluate students, but only when urged or assisted.
- (3) Never uses the coaching guide to assist or evaluate students.
- G. (1) On a weekly basis, gives student teachers oral and written feedback on situation analysis activity to encourage reflection and use of the conceptual framework.
- (2) Sporadically gives student teachers written or oral feedback on situation analysis activity.
- (3) Never gives student teachers feedback on situation analysis activity.
- H. (1) Takes every appropriate occasion to use conceptual framework language in teaching and feedback to students.
- (2) Uses conceptual framework language in teaching and feedback to students, but only when urged or assisted, or when the opportunity is self evident.
- (3) Never uses conceptual framework language in teaching and feedback to students.

STUDENT EVALUATION: (for students in the program)

- A. (1) Analyzes problem using all aspects of the conceptual framework (e.g. across all commonplaces, at three levels of reflection, from different dilemma perspectives).
- (2) Analyzes problem using some aspects of the conceptual framework.
- (3) Does not use the conceptual framework in analyzing problems.
- B. (1) Generalizes from concrete instances of the problem to an inclusive statement of the problem.
- (2) Recognizes, with coaching, instances of a problem situation, but cannot generalize.
- (3) Cannot recognize or coherently express an educational problem.
- C. (1) Generates a plausible and related set of effects, causes and solutions to the problem.
- (2) Generates, with coaching, plausible and related effects, causes and solutions to a problem.
- (3) Cannot coherently analyze a problem.
- D. (1) Implements & reflectively evaluates the success of a solution trial before deciding upon subsequent action.
- (2) Implements solution trials with difficulty and on a limited basis.
- (3) Cannot successfully implement solutions.
- E. (1) Independently identifies and relates pertinent research and theory to the problem.
- (2) With coaching, identifies and relates pertinent research and theory to the problem.

- (3) Cannot relate pertinent research and theory to the problem.
- F. (1) Independently relates the problem solving activity to her or his educational philosophy.
- (2) With coaching relates the problem solving activity to her or his educational philosophy.
- (3) Cannot relate the problem solving activity to her or his educational philosophy.

THE CATHOLIC UNIVERSITY OF AMERICA

DEPARTMENT OF EDUCATION

USING RESEARCH KNOWLEDGE TO IMPROVE TEACHER EDUCATION:

A PROBLEM SOLVING APPROACH

PROGRAM ASSESSMENT REPORT--NOVEMBER 1, 1988

PRINCIPAL INVESTIGATOR: LINDA VALLI, PH.D.

OERI/NIE CONTRACT NO. 400-85-1062

An increasing number of teacher educators (Berlak and Berlak, 1981; Zeichner, 1983) are arguing for inquiry-oriented teacher education programs. Their arguments are based on the beliefs that reflective teaching is possible and that teachers should develop habits of consciously informed rather than impulsive or imitative action. Those who promote reflective teaching argue for teacher empowerment within a self-renewing profession (Wildman and Niles, 1987).

But the question is still contested as to whether or not pre-service teacher education programs can help students become reflective practitioners. This article addresses that question by analyzing written products of students who experienced a problem solving orientation to reflective practice during their student teaching semester.

The students were undergraduate elementary education majors in a four-year bachelor's degree program at the Catholic University of America. They were all women in their early twenties. Data were collected from two cohorts of seniors; nine graduated in 1987 and eight in 1988. The data included 1) essays written by these students describing a problem solving activity required during student teaching; 2) a questionnaire in which the student teachers evaluated that experience; and 3) a questionnaire in which three university supervisors evaluated the experience. Thirteen of the seventeen students and three out of four supervisors returned the questionnaire.

Before addressing the question as to whether or not teacher education programs can help students be reflective, the term "reflection" will be defined and a description given of the instructional content and processes used in the

teacher education program at CUA to promote this quality. This is necessary since reflection means different things to different practitioners.

For Cruickshank (1985) and his colleagues, reflection is the retrospective comparison of the effectiveness of different teaching strategies. For Schon (1987) it is the process of thinking in and on action. Reflection-in-action is necessary because teachers, like other professionals, face situations which are unique or in which appropriate action is uncertain or made problematic by value conflicts.

Zeichner and Liston (1987) draw on Dewey's concept of "reflective action" to characterize the elementary student-teaching program at the University of Wisconsin, Madison: "the active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the consequences to which it leads" (p. 24). The program prompts students to see both teaching and its value-laden contexts as problematic. At the University of Florida, reflection is defined as "a way of thinking about educational matters that involves the ability to make rational choices and to assume responsibility for those choices" (Ross, forthcoming).

The CUA program uses Berlak and Berlak's (1981) definition of reflection: the ability to stand apart from the self to critically examine one's actions and the context of those actions for the purpose of a more consciously driven mode of professional activity, as contrasted with action based on habit, tradition, or impulse. The following are regarded as necessary components and evidence of a reflective orientation:

- 1) relating knowledge (albeit research, theory or experiential) to practice
- 2) analyzing one's own teaching and the school context for the purpose of transformative action
- 3) viewing a situation from multiple perspectives (e.g. different theoretical perspectives or perspectives of different participants)
- 4) seeing alternatives to and consequences of one's actions
- 5) understanding the broad social and moral embeddedness of teaching.

In other words, reflection would not be evidenced merely by asking a lot of questions or by narrowly evaluating the comparative effectiveness of one's teaching strategies. It must be linked to action, be broad in scope, and normatively oriented.

During the first two years of an OERI teacher education improvement project, changes were made in the undergraduate elementary education program to promote reflective teaching. These changes included using classroom instruction to promote inquiry, communicating program goals to supervisors and cooperating teachers, and modeling reflective teaching.

In the first year of the project, for example, the purpose of the social foundations course was to have students answer the question: What is the basic problem of schools today? To do that they discussed five aspects of controversial issues: the precipitating situation, the historical context, the philosophical issues, the social impact, and the impact on the teaching profession.

In the Introduction to Elementary Education course, which includes a practicum experience, the instructors primarily used a discovery mode of teaching. So for the class on their school's philosophy, students interviewed

one of the school's personnel, presented reasons why that person was most important to the school, and determined whether those reasons were consistent with the school's philosophy. Students then discussed how the school carried out its philosophy, how it did not, and what they thought all good schools and teachers had in common.

University supervisors and cooperating teachers were asked to help student teachers make their own decisions and evaluate themselves. The junior practicum evaluation form was rewritten with this in mind. Cooperating teachers were also asked to explain their classroom actions, decisions, and reasoning to student teachers, so that students would focus on teacher thinking not just teaching behaviors.

The most substantial and systematic change was in the student teaching semester. Students were required to engage in an action research project. They were given a set of observation activities and taught a problem solving mode of reflection. During the first three weeks of student teaching, students kept a journal, reflecting on events which seemed important, interesting, or troublesome. A set of questions guided their writing, and supervisors gave oral and written feedback. During the remaining eight to ten weeks, students engaged in a problem solving activity. They selected a situation in their classroom which they worked to improve through a process of data gathering, analyzing, re-defining, solution generating, evaluating, and reflecting. They were required to find literature relevant to their problem and to relate their work to what they had previously learned about educational philosophies, child and cognitive development, instructional and organizational strategies, etc.

Student Reflections on Reflectivity

Student evaluations of the problem solving activity were the first data source analyzed for evidence of reflective orientations. Questions relevant to the focus of this paper were: Did the problem solving activity change the way you think about teaching? The way you think about yourself as a teacher? Did it change the way you see school or classroom problems? What were positive and negative aspects of using problem solving as a way of understanding and affecting life in classrooms? Supervisors were asked the same set of questions (e.g. Did the activity change the way your student teachers thought about teaching?)

Responses were summarized by question and analyzed for common themes. Five themes emerged across the first four questions. Of the thirteen students who responded, eleven claimed that the problem solving activity increased their awareness of the classroom context. Nine said it helped them value and use an organized mode of thinking. Seven experienced an increase in self-confidence. Five students said they became more aware of the importance and availability of resources, and four discussed the importance of self-analysis.

Context Awareness: This category contained far more responses than the others. A number of students alluded to this benefit of the problem solving activity in response to more than one question. They used phrases like increased my awareness, made me more observant, saw all factors, became more alert, and got a bigger picture of the problem. Students began to question their first impressions of a situation, realizing that they had to go beyond surface impressions, that their initial judgments could be based on faulty assumptions, that they tended initially to blame students for problems, that situations needed constant diagnosis and re-examination.

This questioning of initial impressions was linked to the problem solving requirement that students focus on a specific situation, generate deeper and more probing questions, examine the broader classroom, school, and social context for influences on the problem, expand their range of causes and solution strategies, and consider both positive and negative consequences of their solution strategies. Student teachers claimed that by doing these things they were better able to see the inter-relationship of factors. They said that by using this holistic approach, they developed a more thorough, relational, and critical perspective. The importance of understanding pupils' perspectives and being involved with one's students was discussed, as well as the possibility of enlisting the class to solve problems. As one student teacher said, "The teacher in conjunction with his/her students make up the classroom. They really need to work together." This suggests a view of teaching and learning as a "we" rather than an "I/them" relation.

A few other comments fell into this category. One student said that she became more realistic that problems will exist. Others said they became more aware that problems aren't simply solved, that they are not always the teacher's fault, but that even if solving a particular problem is beyond the teacher's ability, that things can still be done to improve classroom conditions.

Organized Thinking: The previous category included statements about increased awareness of the multiplicity and relatedness of seemingly isolated classroom phenomena. This category suggests that the student teachers valued the problem solving activity as helping them consider these phenomena in a systematic, logical way. One student said she became more critical and logical in confronting problems. Others said the activity enabled them to gain some

distance on a problem, to "pull away" and thus become less biased and more reflective. Some students positively contrasted this structured way of looking at classrooms to a trial and error mode of practice. They said that although much of teaching was "thinking on your feet", they realized the benefit of a systematic process to analyze situations. One student added, "I also learned that it is okay to try things out in a classroom even if you are not 100% positive they will work....the smallest strategy could eventually improve a situation."

Self-Confidence: This category pulled together statements about the problem solving activity's affective influence. The activity seems to have imparted, to at least half of the students, increased self-confidence and a sense of efficacy. Students said they became more confident, more aggressive, more capable of handling problems. They said that they realized problems could be overcome and that they did not always have to rely on others to solve their problems. One student called the problem solving activity a "coping strategy" and another said that negative situations did not have to be accepted as a necessary part of classroom life.

Resources: A fourth benefit students identified was an increased awareness that resources were important and available in dealing with classroom problems. As resources, students mentioned literature, knowledge, past learning, experience, feedback, other's opinions, and the school's professional staff. One student said she realized the need to keep up on current ideas, trends and strategies; a second thought the process would have a "greater effect when it is done with a group." As she said, "Many minds generate ideas, bouncing them back and forth." One student who said that "knowing that I will be able to find

support and much literature eases many of my worries" added that she would still have to "work on instinct and others' opinions."

Self-Analysis: The fifth category, mentioned by only four students, was the importance of self evaluation and self awareness. Students said the activity helped them clarify their goals and philosophy of education, that it broadened their sense of responsibility, including the responsibility to meet the needs of individual students.

It is my responsibility to be reflective...and not to become frustrated and blame it (a problem) all on the ability or personality of the student(s)...the teaching profession goes hand in hand with perseverance and an acknowledgment of each child's potential to perform, to a certain extent, successfully. As a teacher I must persevere and use my experience and wisdom to find that "certain extent" of each child.

Is there evidence in these self reports that the problem solving activity helped students be reflective? Of the five indicators of reflectivity outlined at the beginning of this article, students claimed to do much of the first four. Many students referred to the importance of various sources of knowledge--research, theory, experiential--in guiding, clarifying and reinforcing their thinking. While recognizing the availability of outside resources, students seemed to appropriately balance the value of these recourses with the continued need for self-reliance, instinct, and thinking on their feet. A few discussed the importance of reflective self-analysis, of looking at a situation from the students' perspective, and of thinking about negative consequences to solution strategies before trying them out.

Though there was some discussion of analyzing the school context, most references to the school were about available resources. The school context was

generally taken-for-granted. Students seldom spoke of the need or possibility of changing the institution. They focused on classroom or interpersonal factors within the institution, yet even within the classroom routines such as line up procedures, seating arrangements, and the number of reading groups were often left unquestioned. Students also gave little attention to the broad social and moral aspects of teaching.

Supervisor Observations on Reflectivity

The written reports of their problem solving activities, as well as written feedback from the three supervisors, revealed similar patterns of reflective outcomes. Each of the supervisor evaluation questionnaires was analyzed according to a) the five criteria for reflection listed at the beginning of the paper and b) the five outcomes students mentioned in their evaluation of the activity.

Increased awareness of the classroom context, improved self-confidence, and more organized thinking were the three areas most strongly confirmed by the supervisors. Regarding context awareness, supervisors said that the problem solving activity helped students see the big picture, the "complex environment of the classroom." They learned that teaching was not "solely presenting information, but motivating, challenging and controlling groups of individuals." They realized that teaching was not "a simple activity easily managed by almost anyone"; that it was a delicate balance of attending to both individual and group needs. The activity forced students teachers to look at all aspects of a problem, especially the "non-intuitive," rather than settle for simplistic explanations and questionable solutions.

While this initial expansion of their classroom focus added to student teachers' feelings of being overwhelmed by the scope of their responsibility as

teachers, that stage was quickly transcended. Supervisors said the activity helped students work through these feelings by forcing them to use a consistent, structured approach which made "monumental tasks manageable." Learning how to think about problems in a systematic way increased students' sense of efficacy. The supervisors used the expressions "confidence" and "empowerment." Student teachers gained confidence because they learned they could improve the classroom environment. This turned their "reactions" into "actions" and prevented them from "succumbing to discouragement."

In addition to these major themes agreed upon by all three, individual supervisors mentioned a number of other reflective outcomes to the problem solving activity. One said the activity helped them realize that they could draw upon school resources to benefit students, and forced them to explore alternatives, evaluate themselves, and develop methods for improving their weaknesses. Another supervisor claimed the activity forced students to question the status quo, be more openminded about ways to improve the classroom, see that there is no "one best way to meet all challenges," and seek ideas by reading and asking advice. The third supervisor added that the activity intellectually stretched many students, but added that the activity only changed those students who put a great deal of thought into the assignments. But one of the other supervisors had a more optimistic perspective, claiming that "if the student teacher is even minimally cooperative there must be some change in their thinking after this experience."

Reflective Evidence in Problem Solving Papers

The last data source analyzed for evidence of students' reflective orientations was the final written report of their problem solving activities. Of the seventeen problem situations students chose to work on in their

classrooms, eight dealt with the quality of student work and six with off-task, disruptive behavior. Sometimes the problem was with an individual, sometimes a small group, and on occasion, the entire class. In many cases, work quality and off-task behavior were analyzed as related problems. Work quality problems included transfer students, bi-lingual students, and primary level students lacking expected organizational, language, or motor skills. In addition to these fourteen, one student teacher tackled problems with a school district's competency based curriculum. Another analyzed the problems she was having organizing and pacing her teaching, and the final student focused on a sex equity issue in her classroom.

The guidelines for the problem solving report embody aspects of our operational definition of reflectivity. For example, students must describe the context in which the problem situation occurred (#2). They must discuss possible causes, effects and solutions, suggesting a solution for each possible cause and explaining hypothetical advantages and disadvantages for each. Afterwards, they must evaluate their solution attempts, documenting change, student response, etc. (#4). When students have completed the activity, they are asked to discuss changes in their perception of the problem, solution approaches, and their thinking in general (#2). They must also relate the issues they dealt with to the professional literature (#1) and to their own philosophy of teaching (#5).

Given these guidelines students were forced to follow, the problem solving papers necessarily include evidence that the activity promoted reflectivity. Therefore, students papers were not analyzed for these indicators, but for issues which have particular salience for the research literature on reflection and the problems of beginning teachers. Two of those issues will be dealt with

here: student ability to relate professional knowledge to practice, and their ability to consider competing perspectives.

Professional Knowledge: Much literature is devoted to the ineffectiveness of the professional preparation of teachers (Veenman, 1984). Images of their own teachers and the concrete behavior of cooperating teachers are apparently much more powerful than abstract notions of teaching presented in university courses. Lortie (1975) calls this mode of teacher socialization the "apprenticeship of observation." Speaking more generally about reconstructing ideas and beliefs which have been unconsciously internalized, Paul (1987) discusses the problem of "inert knowledge." He claims that children and adults fail to "transfer the knowledge they learn in school to new settings because they already have activated ideas and beliefs in place to use in those settings" (134).

CUA students also copied the teaching they saw or had previously experienced. Marsha, for example, quickly adopted her cooperating teacher's method of discipline. A first occasion of misbehavior resulted in the student's name being written on the board; a second occasion meant five points off the following quiz. The university supervisor's negative reaction to this mode of discipline took Marsha by surprise. In her judgment, since the disciplinary measure swiftly ended the misbehavior, it must be the right thing to do.

However, as the student teachers began to systematically analyze their classrooms according to the problem solving procedures, the majority did not simply imitate their teachers or try any solution which crossed their minds. Students explicitly drew upon concepts like logical consequences and internal motivation, or upon approaches to reading and direct instruction which were stressed in coursework. Louise, for example, questioned the competency based

curriculum used in her school, where objectives were "taught and tested in the same order" they were listed in the school district's curriculum. She claimed the objectives were not sequenced and were highly segmented, offering students little opportunity to use their knowledge in other contexts. In her paper, Louise discussed the problem of "transfer of learning," studied in Psychology of Education, which this created for students and decided to compensate for the problem by teaching objectives in an "integrated" manner, a concept emphasized in a number of her methods classes.

Louise also took exception to at the use of writing as punishment. . Although that practice was customary in her classroom and throughout the school, Louise attempted to implement a logical consequences approach to discipline, an idea she had studied in Classroom Management:

I tried to move away from having the children write if they broke a rule, and make the punishment fit the situation. For example, the class would not be quiet and let me finish a spelling lesson. Instead of making them write, I explained what their classwork would have been and had them complete it at home along with the original homework.

Similarly, Chris analyzed and attempted to resolve problems of irresponsible behavior from perspectives emphasized throughout her professional preparation. She did not scold or punish students for not doing homework, not bringing materials to class, or not following directions. Nor did she try to instill responsibility through external motivators like stickers or candy.

Chris believed that one of the primary aims of schooling should be to "help students resolve problems and take responsibility for their own behavior." She also observed that students displayed responsible behavior in social activities. On the playground they cooperated with each other and

followed game rules. "Students told me that they were used to solving problems at play because when they play in the streets at home there are no adults around to interfere and resolve conflicts."

This personal knowledge supported what Chris had learned in classes about effective teachers using methods which "help students become actively involved in the learning process," in setting their own learning goals, and in developing an internal locus of control. Chris decided that if students could resolve their problems in play, they could also resolve their learning problems. Therefore, she engaged them in problem solving activities and guided them through "the procedure of solving their own problems in order to create a sense of responsibility in each." In other words, she selected to teach her students the same type of reflective, self-analytic thinking and problem solving she was learning as a student teacher.

This movement away from unreflectively mimicing observed teaching behavior is best captured in the closing remarks of one of the student teachers. "If I am to be a successful teacher, I think I am going to have to be more willing to question the people who have authority over me. Not necessarily rebel against it [the authority], but be willing to discuss the decisions that have been made and my questions about them." This student had silently disagreed with her cooperating teacher's decision to limit use of core books in reading groups and instead rely on basal readers and work sheets. The disagreement sprang in large measure from the whole language, experience-based approach to reading instruction she had learned the previous year.

Multiple Perspectives: As mentioned, many student teachers selected a control problem to deal with. This focus is not surprising given the persistent difficulties beginning teachers have with discipline and classroom disorder

(Veenman, 1984). When students discussed the changes which occurred in their thinking as a result of this activity, a number claimed substantive shifts in perspective. Pam, for instance, initially thought a student who was not doing his work was simply lazy. She was particularly upset by this student since he was disturbing the class and her own concentration. However, she soon learned that the problem was much more complex. "Disciplining Jimmy didn't improve his behavior or influence him to complete his work independently." Pam came to realize that Jimmy needed help with assignments and that he had a strong need for peer acceptance and teacher praise. He was not simply a lazy, recalcitrant child.

This change suggests a movement away from the egocentric thinking characteristic of the first stage of teaching concerns: survival (Fuller and Bown, 1975). Initially Pam was upset because Jimmy was disturbing her and distracting her classroom; but her concern shifted to Jimmy's learning and emotional needs. Other student teachers similarly were able to adopt their students' perspectives, mentioning the importance of discussing the problem and possible solution strategies with the child and the importance of not "misreading" a child.

Janet, for instance, worried about the constant reprimands one student received. "From his eyes, it may look like he just can't do anything right...." About two of her other "problem" students, Jane wrote:

My view of the problem in each case shifted as well. Margaret was not a "troublemaker" who needed to be straightened out, nor was Delores an inherently bad child to have in class because she talked so much. Both were vivacious and confident little girls who really just seemed to need a little control in dealing with their problems. In both cases, when the

solution attempts shifted from teacher-oriented to student-oriented, a change in behavior became apparent.

Related to this shift from teacher-centered to student-centered thinking was a shift from a student control to an instructional focus. Initially many of our student teachers viewed off task or misbehavior as strictly an issue of controlling students better, somehow getting them to abide by the rules (e.g. by taking off quiz points). However, many of them realized like Pam, that misbehavior was not just the result of having bad or lazy children in the classroom, that it might be caused by weak instruction or instruction which did not match the learning needs or interests of their students.

For solution strategies to problems initially perceived as student control, student teachers did not implement rules and punishment. Instead, they taught their students organizational habits, provided for on-going remediation and peer tutoring, worked on better transitions between activities, gave more explicit directions, varied the mode of instruction in reading groups, spent more time organizing their lessons, and attended to the distribution of discussion and recitation questions. This shift in thinking supports Brennan and Noffke's (1988) contention that management and discipline concerns often embody the "whole area of teacher-student relationships" and provide a way to help prospective teachers consider the interconnectedness and ethical base of classroom issues (p. 6).

Implications

The research literature suggests that beginning teachers will have difficulty being reflective (Wildman and Niles, 1987), that they do not see classroom complexities the way experienced teachers do (Veenman, 1984), and that they become more custodial and less student-centered in their attitudes

and behavior (Hoy, 1977; Wehlage, 1981). Research on beginning teachers also indicates that the more discrepancies beginning teachers experience between the school reality and the teacher education ideals, the more their attitudes change in a conservative, authoritarian direction (Veenman, 1984).

The outcomes of this problem solving activity suggest that teacher education programs can help overcome these problems. In keeping with evaluations of other reflective programs (Korthagen, 1985; Zeichner and Liston, 1987), CUA students gave indication of being reflective, particularly about classroom complexities. With guidance and feedback, they were able to weigh alternatives, envision consequences, and view situations from alternative perspectives. Instead of becoming more custodial and less student-centered, they did the reverse. The problem-solving guidelines and supervisor support appear to help them shift from survival to student concerns rather quickly.

When student teachers were placed in schools with the most discrepancy from their university preparation ideals, they did not adapt the behavioral expectations of the school. Instead of using physical, instructional, or arbitrary punishment for student misbehavior, they attempted to implement logical consequences, provide more active and varied instruction, and look at the problem from the students' perspectives. Instead of teaching an objective driven and fragmented curriculum, they found ways to teach and relate objectives across subject matter boundaries.

Had these students experienced these problems as first year teachers without university support, they might have exhibited the same conservative adjustment pattern found in other studies. The key variable here might well be the university contact in the form of supervisors and problem-solving

guidelines which enumerated expectations (e.g. analyze the problem from the viewpoint of all participants).

Whether or not these findings persist into the first year of teaching remains to be seen. Evaluations of a reflective teacher education program in the Netherlands do, however, indicate that graduates benefit from and continue to use their reflective preparation: "more than 50% of the respondents reported learning effects of reflective teaching and directing one's own growth" (Korthagen, 1985, p. 13). Former students say they engage in self-analysis, are confident, learn from their experience and mistakes, and continually ask themselves "why".

But the research findings presented here also suggest that some aspects of reflection might be harder to teach than others. Students could relate past learning to the specific problems they had selected only with considerable assistance and prompting. Discussion of educational theories and approaches often was done in an "add on" manner, as though there were total consistency among conflicting approaches to education. Although they could often see the difference between a student and a teacher perspective and reframe their problem accordingly (MacKinnon, 1987), they could seldom see competing perspectives in the professional literature. And although some students spoke of the importance of self-analysis, the evidence was that they generally used theory and research to justify their ideas rather than to modify them. Moreover, students generally failed to question the social context of schooling and to consciously consider normative aspects of schooling.

An initial analysis of the difficulties student teachers were having with reflection indicated that the reflective goals of the program might be better achieved through the introduction of a conceptual framework which made

explicit the content and process of reflection we were promoting. Principles from cognitive psychology (Perkins, 1987) suggest that conceptual frameworks work like scaffolds. They are artificial structures which enable students to process and organize information at more advanced levels than they could carry out independently. Frameworks can help students organize information and make connections across course content in ways which otherwise would be unavailable to them. Garman (1984) has also argued that for supervision purposes, teachers and supervisors need a common language or framework which pictures teaching in a manageable way.

The three dimensional conceptual framework developed for the CUA teacher education program responds to a number of the reflective problems the student teachers were having. The intent is to use the framework as a common language and structure for reflection throughout course and field assignments. These dimensions are also used in a variety of ways in other reflective teacher education programs (Posner, 1985; Zeichner and Liston, 1987).

The first dimension of the framework is Schwab's (1973) four commonplaces of education. As Schwab points out, every teaching situation has four features or commonplaces: a teacher, someone (or something, like a computer) which instructs; a learner, an individual or group whom the teacher intends to instruct; subject matter, the knowledge, skills, values, attitudes or ideas which are presented, negotiated or shared; and the context, the social and physical space in which teaching occurs (Posner, 1985). This would include the facilities, norms, expectations, etc. of the classroom, the school, the local community and the broader society.

This dimension was selected as a way to encourage a comprehensive and relational analysis of all aspects of classroom life; as a way to encourage

student teachers to consider all potential causes and effects of classroom problems; and as a way of discouraging student teachers from identifying problem sources in individual students. Anecdotal feedback from supervisors indicates that student teachers who use this dimension in their problem solving seem to more quickly perceive that the classroom is not stable, but a socially constructed environment which they can and (at times) should change.

The second dimension of the framework is Berlak and Berlak's (1981) idea of dilemmas of schooling. This concept allows students to see that control, knowledge, learning, and motivational decisions are frequently a tradeoff between competing goals. As the authors point out, the dilemma language "is an effort to represent the thought and action of teachers as an ongoing dynamic of behavior and consciousness within particular institutional contexts of schools" (1981: 111). It is a way of examining tensions in teachers, situations, and society. These tensions exert contradictory pulls which teachers must resolve as they go about the business of teaching.

The program goal is to use the idea of dilemmas to help students examine alternative positions and courses of action more consciously, to realize the need for sound judgment in deciding whether or not to embark on a particular course of action. This dimension should diminish "add on" thinking and promote self-analysis. If students are exposed to alternative positions they should be more able and willing to use evidence to modify rather than merely justify their thinking.

The third dimension is Van Manen's (1977) notion of three levels of reflectivity: the technical, interpretive and critical. These levels describe different ways of and reasons for examining educational phenomena. Since problem solving is often construed as a purely technical process, the second

and third levels are particularly important in our program. For example, guidelines for the problem solving activity now force students to describe how they envision the situation in the ideal and to explain the educational and social goals their activity is promoting. This dimension encourages students to situate technical problems within their normative assumptions and implications.

Conclusion

Over the next year, the essays of students whose professional education has stressed this conceptual framework will be compared with those analyzed for this paper to determine whether or not the framework makes a difference in the scope, content, and quality of reflection. Does the framework raise the quality of reflective judgment? Help students question their own value assumptions? Modify their opinions based on new evidence? Consider the ethical implications of technical decisions?

There are further questions about reflection which need to be explored by those involved in teacher education reform efforts. Is there a relationship between the quality of reflection and the quality of teaching? Is a reflective orientation sustained and developed in the beginning years of teaching? Are graduates of reflective programs more or less satisfied with teaching than graduates from performance based programs (Flowers and Shearron, 1976)? Are they more or less likely to stay in teaching? How do graduates from reflective programs evaluate their programs? If they had a choice, would they want more emphasis on reflection or on skill preparation (Korthagen, 1985)? Is technical preparation a more solid foundation for reflective teaching than reflective preparation? Or does concentration on skill inhibit the development of reflective teachers?

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Appendix I

Conceptual Framework for a Reflective Teacher Education Program

THE CATHOLIC UNIVERSITY OF AMERICA

DEPARTMENT OF EDUCATION

A CONCEPTUAL FRAMEWORK

FOR A REFLECTIVE TEACHER EDUCATION PROGRAM

by

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October 1987

The overall goal of the teacher education program at CUA is to help pre-service students develop both the skills and the reflective qualities essential for the professional practice of teaching. We believe that a reflective orientation is particularly critical if students are to become self-directed teachers able to use professional knowledge to improve their practice. That professional knowledge would include ethical considerations as well as pure craft or technical considerations. As Gary Griffin (1984) has argued:

It is important that preservice students be helped to learn the positive rewards of reflecting on their own practice and questioning that practice. Nothing is so dulling to the senses as engaging in the same activities day after day after endless day. When teachers think about their work in some organized and systematic way, it appears that they come to value that work more and, importantly, devise ways to make the work more effective and satisfying for themselves and the students in their classrooms....Preservice students may develop these ways of thinking about teaching if they are helped to ask questions, reflect upon answers, ponder dilemmas, and pose solutions in regularly scheduled opportunities for learning.

The conceptual framework we have adopted for a reflective teacher education program relates Schwab's notion of four teaching commonplaces, the Berlaks' idea of dilemmas of schooling, and Van Manen's concept of three levels of reflection. The framework, thus, has three dimensions: foci, issues, and levels. It fits our notion of what the professional component of teacher education should include since it incorporates normative and technical aspects of teaching. Following is a description of each of the three dimensions and some examples of the framework's instructional use.

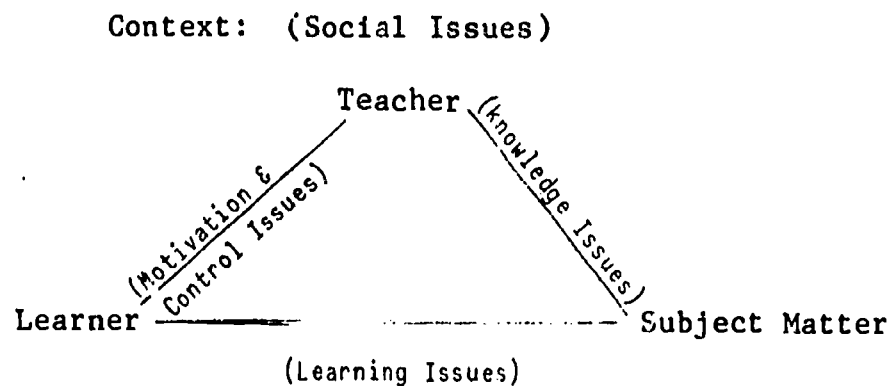
Teaching Commonplaces: As Schwab points out, every teaching situation has four features: a teacher, someone (or something, like a computer) which instructs; a learner, an individual or group whom the teacher intends to instruct; subject matter, the knowledge, skills, values, attitudes or ideas which are presented, negotiated or shared; and the context, the social and physical space in which the teaching occurs (Posner 1985). This would include the facilities, norms, expectations, etc. of the classroom, the school, the local community and the broader society. Each of these commonplaces and the relations among them should serve as foci for reflection.

Schooling Dilemmas: Similarly, the dilemma language can be thought of as embodying issues for reflection, issues which largely arise in the relation among the commonplaces. The Berlaks describe sixteen basic dilemmas of teaching, which they divide into three categories: control, curriculum, and societal. The control dilemmas primarily focus on whether the teacher or the student should have control over time, operations, and standards, and whether the teacher should have control over all realms of the students' development or just over the cognitive realm.

The curriculum category contains eight of the sixteen dilemmas and can be divided into four subcategories: knowledge, learning, students, and motivation. The dilemmas about knowledge focus on whether knowledge should be presented as public or private, given or problematic, and whether the content or process of knowledge is more important. Learning dilemmas or issues arise since learning can be structured as an individual or as a collective activity. Learning can also be structured as a fragmented and molecular process or as holistic and integrated. Students can be treated as persons or as clients and as individuals with unique or shared characteristics. And lastly, students can be motivated through intrinsic or extrinsic means. The way the teacher handles each of these dilemmas determines the nature of the curriculum.

The four remaining dilemmas are more broadly societal in nature. Childhood can be regarded as a unique period of life or as continuous with adulthood. School resources can be distributed on an equal or a differentiated basis. Deviance can be handled through an equal justice or an ad hoc rule application approach, and either the sub-group or the common aspects of our cultural heritage can be emphasized. Again, the position the teacher holds or the way a particular issue is resolved determines the nature of child's experience in school.

Figure I: A Conceptual Framework for Reflective Teacher Ed



Reflective Levels

- 1) Critical: why, what ought to be
- 2) Interpretive: what is, what it means
- 3) Technical: how to

Reflective Levels: Using Van Manen's (1977) levels of reflectivity can assist students in developing powers of critical reflection. Based on the main traditions of the social sciences (empirical-analytic, hermeneutic-phenomenological, and critical-dialectical), Van Manen's levels of reflectivity make explicit different ways of and reasons for examining educational phenomena.

The first level of reflectivity is technical. It "refers to the technical application of educational knowledge and of basic curriculum principles for the purposes of attaining a given end" (1977: 226). At this level "how to" questions are asked, which can be answered through empirical modes of data gathering, modeling, and trial-and-error experimentation. These are questions of means, not ends, since purposes and goals tend to be pre-specified or taken-for-granted. In technical or instrumental rationality, efficiency and effectiveness are generally the criteria which govern action. The primary reasons for reflecting at this level would be prediction and control.

The second level of reflectivity is derived from the interpretive, traditions and focuses on the meanings people give their experiences. At this level, teachers would be concerned about the meaning particular phenomena have for their students. Interpretive questions only partially can be answered by observational methods. Since the interpretive tradition's purpose is empathic understanding, its methods must answer questions about another's beliefs, values, and social reality. This inner reality is entered by studying all forms of human expression in their social and context.

The highest level of reflective rationality comes from the critical-dialectical traditions, which deliberate on norms and the worthiness of social goals. It constantly critiques the political and ethical nature of social practices and examines teaching-learning situations for repressive and emancipatory characteristics. It is preoccupied by questions of the desirable, which are beyond the scope of scientific rationality. Critical reflectivity considers "what ought to be" in terms of justice, equality and human freedom. Its purpose is personal and social liberation. Critical reflection questions are not how to do something but, rather, is it worthwhile? Is it good? Good for whom? How did I develop my own ideas of the desirable and in what ways might they be limited or distorted?

A matrix can be created with VanManen's three levels of reflectivity and Schwab's four commonplaces to guide reflective teacher education activities. We have deliberately placed critical reflection first. We agree with Van Manen that these levels are hierarchical. They are not, however, developmental. A person does not develop the capacity to be technically reflective, then interpretively, etc. In fact, we suspect that concentration on technical reflection can be detrimental to the higher levels.

By placing critical reflection first, we are taking the position that questions of meaning and technique must always be addressed in the context of goals and purposes, in relation to what the reflecting practitioner considers to be the common good or the ethical response. We anticipate that this type of framework can help overcome tendencies to focus primarily on narrow management or instructional problems in purely technical ways.

Figure II: A Commonplaces & Levels of Reflectivity Matrix				
	I. Teacher	II. Learner	III. Subject Matter	IV. Context
A. critical reflection				
B. interpretive reflection				
C. technical reflection				

Within this conceptual framework, then, course related questions, case studies, and other related instructional activities can be developed which will give students experience in understanding and dealing with the total spectrum of teaching at all levels of reflection. An underlying assumption here is that knowing how to ask the right kind of question is at least as important a skill as knowing the right answer--especially when the answers emerge from a narrow technical paradigm. Competing theories should be presented so that students understand that the "right" answer often depends on theoretical assumptions and predispositions. Question examples, case studies, and an introduction to reflective supervision follow.

QUESTIONS: In a Classroom Management course, which emphasized establishing positive relationships & learning environments and preventing inappropriate behavior students might have to deal with questions like:

Learning Environments

- IVA What values do different types of classroom arrangements promote (individualistic, competitive, cooperative, meritocratic, equitable) and which ones should I be promoting?
- IVB Do these arrangements mean the same thing to all the students? Who experiences what in positive or negative ways?
- IVC How can I establish a learning environment which students like and which are in keeping with the social and learning values I am trying to promote?
- IVA If student preferences for a learning environment differ from mine, what should I do?

Inappropriate Behavior

- IIA What norms should govern my choice of disciplinary strategies?
- IIB What will it mean to a particular student if I use a particular disciplinary strategy? (e.g. call home, discuss the situation, cancel recess privileges?)
- IIC How can I handle disruptive classroom behavior?

In an Introduction to Elementary Education course, important topics to be explored might be the student as active learner, an integrated curriculum, and the school philosophy. Again, questions which span the matrix can guide the way those topics are treated.

Active Learners

- IIA What type of learning ought to go on in the classroom?
- IIB What does it mean to students to be learners? Is it important to them to be active learners?
- IC How can I assist students in being active learners--or the type of learners they want to be?

Integrated Curriculum

- IIIA Should the curriculum be organized thematically? Why? When? How much? What purposes are served?
- IIIB Does knowledge presented through an integrated curriculum have different meaning to students than knowledge presented in traditional discipline-bound segments? (e.g. the usefulness of particular forms of knowledge, how knowledge can empower people).
- IIIC How can I create an integrated curriculum?

School Philosophy

- IIIA What should the school philosophy be and how should it influence the curriculum? What influence should the norms and values of the community have on the curriculum? How should conflicts between these be mediated? (e.g. parent complaints of too much emphasis on peaceful conflict resolution or environmental concerns).
- IVA Should the school foster ways of counteracting tendencies in students, classrooms, the school at large, and the broader society which run counter to the school philosophy?
- IIIB What does the school philosophy mean to our students?

IIC What are tendencies in individuals, institutions, and society which run counter to the school philosophy? How can members of the school community work to overcome these?

IIIC How can the school philosophy be used to structure the curriculum?

A notion of dilemmas is important to this conceptual framework because it makes clear that there are not absolute, correct answers to educational questions. Resolutions to problems of practice depend on a variety of factors: competing theoretical assumptions, teacher beliefs, social contexts, competing--even contradictory-- aims of teaching, understanding of a particular child, etc. Different resolutions can be justified on different grounds. An example, using a possible question for a Classroom Management course, illustrates this point.

"What norms should govern my choice of disciplinary strategies?" was listed as a question in the learner/critical reflection frame. The answer to this question in great part depends upon where one places oneself on several of the Berlaks' control and societal dilemmas: whether one believes the teacher should have more or less control over the students' activities, whether one believes each child should be treated uniquely or according to a set standard, etc. The dilemma language in the conceptual framework encourages the teacher to consider the widest range possible before making a decision.

Case Studies: Students use the framework to work through case studies which range from purely hypothetical cases early in their studies to individually identified problems from the field which are examined through data gathering and hypothesis testing in the natural setting.

Experience with the conceptual framework to reflect on cases studies will help pre-service students similarly analyze their own problems of practice. During the first three weeks of student teaching, students keep a journal, focusing on a different event or situation each day. Supervisors encourage them to incorporate the three dimensions of the framework in their writing. Into the fourth week, students select a classroom problem situation which they would like to analyze and improve. During the remaining eight-ten weeks of student teaching, students go through an eight phase process of defining; data gathering; analyzing; redefining; solution generating, testing, and evaluating; and reflecting.

Specific guidelines help students draw upon the three dimensional conceptual framework. They are asked to explore multiple ways of viewing the problem, consider why the problem is worthy of being addressed, and examine the role of each of the commonplaces in both the problem and potential solutions. Students are asked to consider how their own thinking changed during the process, and to relate their approach to their educational philosophy and beliefs about the design of instruction and learning environments, and the purpose of schooling. This last phase is extended beyond student teaching and serves as the senior comprehensive examination.

Reflective Supervision: A third type of activity which embodies our approach to reflective teacher education is in the area of supervision. We begin with the assumption that cooperating teachers must do more than model good instruction. They must be consciously self-analytic about their own teaching in conversations with the student teacher and must be able to assist the student teacher in that same reflective process. Even though student teachers are apt to report qualities of good teaching, when asked about the characteristics of effective cooperating teachers (Copas 1984), research indicates that without making explicit the principles underlying behavior, modeling alone result in little or no learning (Perkins 1987).

Our overall goal would be to move the supervision approach toward what Glickman (1981) has labelled non-directive. This is a desirable goal since the non-directive approach to supervision is the only one which encourages reflectivity. It is also a feasible one, even for beginning teachers whom Glickman has characterized as high in commitment, but unfocussed about their work and low in abstract thinking. He argues that these types of teachers can best learn by supervisory techniques which encourage self-analysis and solving ones own instructional problems.

In Glickman's schema, there are three types of supervisory orientations: directive, collaborative, and nondirective. He advocates the directive approach for teachers who have low motivation and take minimum responsibility for their work. In this approach, the supervisor demonstrates appropriate teaching behavior, tells the teacher what actions to take, sets standards for improvement, and reinforces through material or social incentives. In the collaborative approach, the teacher takes much more initiative. The course of action is mutually agreed upon once the supervisor listens to the teacher's goals or concerns, asks probing and clarifying questions, presents his or her own perceptions of the situation, and works with the teacher to generate alternative courses of action.

The nondirective orientation presumes that teachers are capable of analyzing and solving their own instructional problems. In this approach, the supervisor listens to concerns, asks questions and rephrases teacher statements to make sure the problem is clearly understood, and presents ideas and solutions only when asked by the teacher. The supervisor asks the teacher to determine the course of action to be taken, rather than mutually establishing that course with the teacher. Our expectation would be that although most student teachers would need a considerable amount of directive supervision at the beginning of the semester, that they would all be able to participate in either the collaborative or, preferably, the nondirective approach by the end of the semester.

As in standard approaches to clinical supervision, we would recommend pre- and post-conferencing in addition to observation. During the pre-observation stage, the student teacher should indicate the focus for observation. It would be the supervisor's responsibility during the post-observation conference to make sure the student teacher includes all dimensions of the conceptual framework in his or her self-analysis. In other words, is there evidence that the student teacher is considering all the relevant relations between student, teacher, subject matter, and context? Is there evidence that he or she is thinking at all three reflective levels? That the student teacher is considering competing explanations or positions?

Appendix II

Comprehensive Examination/Situation Analysis Project

SITUATION ANALYSIS PROJECT

**SUPERVISED STUDENT TEACHING
CATHOLIC UNIVERSITY OF AMERICA**

SITUATION ANALYSIS ACTIVITY

Overview

During the student teaching semester, in addition to classroom teaching responsibilities, student teachers are required to engage in a reflective problem solving activity. This activity, The Situation Analysis Project, is designed to encourage students to integrate field experience with the knowledge base and to have students demonstrate their ability to be reflective in problem solving situations. During the field semester, student teachers identify and analyze a problematic situation, then generate and try out solutions, and finally prepare a written summary report. The specific sequence of activities is outlined below.

Activities

Steps

Exploring the Teaching/Learning Environment	<ol style="list-style-type: none">1. Describe selected situations2. Reflect on situations
Initial Analysis of Selected Situations	<ol style="list-style-type: none">1. Describe and analyze selected situations2. Brainstorm possible causes for the situations
In-Depth Analysis of Targeted Situation	<ol style="list-style-type: none">1. Develop a goal for the selected situation2. Generate a set of solution strategies
Solution Trials	<ol style="list-style-type: none">1. Select a set of solution strategies2. Try out solution strategies3. Evaluate solution strategies
Summary/Report	<ol style="list-style-type: none">1. Identify a situation2. Describe the situation3. Discuss why the situation concerns you4. Brainstorm possible causes of the situation5. Develop solution strategies linked to the causes6. Implement and evaluate a sequence of solution strategies7. Discuss your thinking process in completing this activity

SITUATION ANALYSIS ACTIVITY #1

Exploring the Teaching/Learning Environment

Schools are such active places that beginning teachers need help in analyzing the many simultaneous happenings. The purpose of this activity is to help you do that.

These are some ideas to get started. You will receive more specific assistance throughout the semester. Please keep your dated situation analysis write-ups on loose leaf paper for a three ring binder. Each week, you will turn these write-ups in to your university supervisor.

Weeks 2-3

Choose a situation or event to reflect on and write about at least twice during the week. Set aside half an hour for this activity. The event can take place anywhere around the school: classroom, teacher's lounge, library, principal's office, hall, cafeteria, playground, bus, etc. It can involve one person or a group of people (students, teachers, parents, staff). It can focus on an administration directive, a casual conversation, an instructional activity, teacher planning or diagnosing, or anything else which seems important, interesting, curious or bothersome to you.

1. Describe the event. What was the event? Who was involved? Where did the action take place? If pertinent, discuss the event in terms of the four commonplaces (teacher, learner, content and context).
2. Reflect on the event. Think about what you saw and what it means. The following are examples of questions you might consider. Be sure to include at least two in your write-up.
 - a. Can you relate this situation to a dilemma in education? Can you think about differing points of view to explain what happened?
 - b. How would you interpret the event? If others were involved, how do you think they might interpret it?
 - c. Can you relate what happened in this situation to coursework or your own prior experience?
 - d. How would you have handled the situation? What decisions would you make? Why?
 - e. If you were involved in the situation, how would you handle it if it happened again? Why?
 - f. In the ideal, how would you envision this situation? How should it have been resolved or changed?
3. If possible, ask your cooperating teacher how s/he would have handled this situation. Why would s/he handle it in that way?

SITUATION ANALYSIS ACTIVITY #2

Initial Analysis of Selected Situations

Weeks 4-6

During the next few weeks, select a situation which occurs in your classroom that is of academic and practical interest to you and which you would like to try to analyze.

Each week, prepare a written summary of your analysis and turn it in to your university supervisor.

During week 4, select a situation related to classroom management and organization.

During week 5, select a situation related to curriculum content or instructional design.

During week 6, select a situation which is reflected in your lesson evaluations.

In your written summary:

1. Describe in as much detail as possible how the situation manifests itself in the classroom. Be sure to include specific examples of the situation.
2. Try to isolate when this situation occurs. What happens before or after? What might lead up to or result from it?
3. Who is involved? Is it the whole class, a group, or only a few children? Is it the same child or children in all cases?
4. What is the relationship among the four commonplaces (teacher/student/content/context) in this situation?
5. Explain why this situation concerns you. Elaborate as fully as possible.
6. In the "ideal" how would you envision this situation? Think about the situation at the critical level. What should be happening? Can you think of other points of view?
7. Draw on your personal resources to help you analyze this situation. These include:
 - prior coursework
 - prior personal experience
 - your cooperating teacher
 - your university supervisor
 - other school personnel
8. List the effects of the situation you have described.
9. List all the possible reasons or causes you can think of why the situation occurs.
10. List any other questions you have about the situation.

SITUATION ANALYSIS ACTIVITY #3

In-Depth Analysis of the Targeted Situation

Weeks 7-8

1. After reviewing your analyses from previous weeks, identify a situation in the classroom that you would like to work on. Describe how this situation manifests itself.
 - Be sure to include specific examples of the situation as it occurs over a period of days.
 - Try to isolate when this situation occurs. What happens before or after? What might lead up to or result from it?
 - Who is involved? Is it the whole class, a group, or only a few children? Is it the same child or children in all cases?
 - What is the relationship among the four commonplaces (teacher/student/content/context) in this situation .
2. Explain in some detail why this situation concerns you. Elaborate as fully as possible.
3. In the "idea," how would you envision this situation? Think about the situation at the critical level. What should be happening? Can you think of other points of view?
4. With the "ideal" situation in mind, develop a practical goal you would like to achieve relative to this situation.
5. Generate a list or set of solution strategies which you think might help you achieve this goal.
 - a. List the effects of the situation you observed.
 - b. Brainstorm a set of causes for the situation.
 - c. Develop at least one solution strategy for each cause you considered.
 - d. List the advantages and disadvantages of each solution strategy you developed.
 - e. Discuss the situation, your goal and choices of solution strategies with your cooperating teacher.
6. Develop a plan for solution trials. After considering the advantages and disadvantages of the solution strategies you designed, select one or two that you think would be most profitable and reasonable to try out first. Discuss this plan with your cooperating teacher.

Note

Many students have found it helpful to do this section on individual index cards, listing one effect, one cause, one solution strategy, each on a separate card. The card set is much easier to manipulate than a standard written summary. This saves

SITUATION ANALYSIS ACTIVITY #4

Solution Trials

Weeks 9-12

During this phase of the Situation Analysis Activity, you will be selecting, trying out, and evaluating a series of solution strategies.

Each week, be sure to write up at least one solution trial and turn in your written summary to your university supervisor.

1. Solution Trial #1

- a. Select a solution strategy you would like to try.

Be prepared to justify your choice of a solution strategy on the basis of your observation, advantages/disadvantages, and from theory.

- b. Try out your solution strategy as soon as possible.

- c. Evaluate your solution attempt.

-Describe (document) what happened.

-How well did it work?

-What was the change or difference in behavior?

-What was the change or difference in performance?

-How did students perform?

-Did the entire target group respond in the same way?

- d. Decide how to continue. Be sure to consider the following:

-Do you want to restate the problem?

-Do you want to continue with this strategy?

-Do you want to modify this strategy?

-Do you want to try another strategy?

2. Solution Trial Series

In the following weeks, repeat the process outlined above as you continue trying to improve the situation. The sequence remains:

- a. Select a solution strategy you would like to try.
- b. Try out your solution strategy.
- c. Evaluate your solution attempt.
- d. Decide how to continue.

Note

Many students who are working on a situation that is directly related to their teaching find it useful to document progress as part of their lesson plan evaluations.

SUMMARY/REPORT

Weeks 13-14

1. Describe in depth the problem situation you selected to work on. Describe the context of the situation. What happened? Who was involved? How did the situation manifest itself in the classroom? Be sure to include specific examples you have documented.
2. Discuss why the situation concerned you. Be sure to support your concerns with references to your own prior experience, prior coursework and discussions with your cooperating teacher and supervisor.
3. Describe how you viewed the situation in the "ideal" and the practical goal you defined.
4. List and discuss the possible causes and effects you identified. Whenever possible, explain how you arrived at your conclusions or explanations of the relationship between the situation and its possible causes.
5. List and discuss possible solutions you generated. Be sure you suggest a solution for each possible cause. Explain the advantages and disadvantages for each solution you suggest.
6. Summarize your solution trials in sequence (week one, week two, etc.). Describe your experience trying out solution strategies.
 - a. Describe the solution you selected.
 - b. Justify your choice of a solution on the basis of your observations, advantages/disadvantages, and from theory.
 - c. Evaluate your solution attempt. Document what happened.
 - How well did it work?
 - What was the change or difference in behavior?
 - What was the change or difference in performance?
 - How did students respond?
 - Did the entire target group respond in the same way?
 - d. State your conclusions--this might include any or all of the following:
 - Restate the problem.
 - Suggest additional causes to consider.
 - Refine or modify the solution strategy.
 - Suggest another solution strategy.

7. Discuss your thinking process in completing this activity.
- a. How did your perception of the problem change?
 - b. How did your approach to solutions change?
 - c. What were the critical times or events that influenced your thinking?
 - d. How did your thinking about the related dilemma(s) change?
 - e. How did your thinking change with respect to the critical, interpretive, and technical levels relative to the situation?
 - f. How did your thinking change with respect to the relationships among the four commonplaces (teacher/student/content/context)?

COACHING GUIDE--SITUATION ANALYSIS ACTIVITY #1
EXPLORING THE TEACHING/LEARNING ENVIRONMENT

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----- DESCRIBING THE EVENT	YES	NO
* tells what the event was	---	---
* states who was involved	---	---
* tells where the action took place	---	---
* discusses the event in terms of the four commonplaces, when pertinent	---	---

----- REFLECTING ON THE EVENT	YES	NO
* relates the situation to a dilemma in education	---	---
* considers differing points of view to explain what happened	---	---
* interprets the event, including other points of view when applicable	---	---
* relates situation to coursework or prior experience	---	---
* discusses how s/he would have handled the situation and/or decisions s/he would make	---	---
* discusses how s/he would handle a similar situation in the future	---	---
* describes how s/he envisions situation in the ideal and how it should have been resolved	---	---

----- DISCUSSING THE EVENT WITH COOPERATING TEACHER	YES	NO
* asked cooperating teacher how she or he would have handled the situation	---	---
* discussed cooperating teacher's rationale for his or her decision	---	---

COACHING GUIDE--SITUATION ANALYSIS ACTIVITY #2

INITIAL ANALYSIS OF SELECTED SITUATIONS

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----- DESCRIBING THE SITUATION	YES	NO
* describes in detail how situation manifests itself in the classroom	---	---
* includes specific examples of the situation	---	---
* states who was involved	---	---
* tells where the action took place	---	---
* documents what happens before and after the situation occurs	---	---
* discusses the situation in terms of the four commonplaces, when pertinent	---	---

----- REFLECTIVE ANALYSIS OF THE SITUATION	YES	NO
* relates the situation to a dilemma in education	---	---
* explains why this situation is of concern	---	---
* considers differing points of view to explain what happened	---	---
* interprets the event, including other points of view when applicable	---	---
* relates situation to coursework or prior experience	---	---
* discusses how s/he would have handled the situation and/or decisions s/he would make	---	---
* discusses how s/he would handle a similar situation in the future	---	---
* describes how s/he envisions situation in the ideal and how it should have been resolved	---	---
* lists effects observed	---	---
* lists plausible set of reasons or causes	---	---

----- DISCUSSING THE SITUATION WITH COOPERATING TEACHER	YES	NO
* asked cooperating teacher how she or he would have handled the situation	---	---
* discussed cooperating teacher's rationale for his or her decision	---	---

COACHING GUIDE--SITUATION ANALYSIS ACTIVITY #3

IN-DEPTH ANALYSIS OF TARGETED SITUATIONS

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----- DESCRIBING THE SITUATION	YES	NO
* Identifies and generally describes a situation in the classroom	---	---
* includes specific effects of the situation	---	---
* documents with examples of the situation over a period of days and/or weeks	---	---
* describes in detail how situation manifests itself in the classroom	---	---
* states who was involved	---	---
* tells where the action took place	---	---
* documents what happens before and after the situation occurs	---	---
* discusses the situation in terms of the four commonplaces, when pertinent	---	---
----- REFLECTIVE ANALYSIS OF THE SITUATION		
* relates the situation to a dilemma in education	---	---
* explains why this situation is of concern	---	---
* considers differing points of view to explain what happened	---	---
* interprets the event, including other points of view when applicable	---	---
* relates situation to coursework or prior experience	---	---
* describes how s/he envisions situation in the ideal	---	---
* develops a reasonable goal for the situation	---	---
* lists effects observed	---	---
* lists plausible set of reasons or causes	---	---
* develops at least one solution for each cause	---	---
* considers advantages and disadvantages for each solution	---	---
* develops a plan for solution trials	---	---
----- DISCUSSING THE SITUATION WITH COOPERATING TEACHER		
* discussed situation, your goal, your choice of solutions and your plan for solution trials with cooperating teacher	---	---

COACHING GUIDE--SITUATION ANALYSIS ACTIVITY

SUMMARY/REPORT

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DESCRIBING THE SITUATION	YES	NO
* Identifies and generally describes a situation in the classroom	---	---
* includes specific effects of the situation	---	---
* documents with examples of the situation over a period of days and/or weeks	---	---
* describes in detail how situation manifests itself in the classroom	---	---
* states who was involved	---	---
* tells where the action took place	---	---
* documents what happens before and after the situation occurs	---	---
* discusses the situation in terms of the four commonplaces, when pertinent	---	---
----- REFLECTIVE ANALYSIS OF THE SITUATION		
* relates the situation to a dilemma in education	---	---
* explains why this situation is of concern	---	---
* relates situation to coursework or prior experience	---	---
* considers differing points of view to explain what happened	---	---
* interprets the event, including other points of view when applicable	---	---
* describes how s/he envisions situation in the ideal	---	---
* develops a reasonable goal for the situation	---	---
* lists effects observed	---	---
* lists plausible set of reasons or causes	---	---
* develops at least one solution for each cause	---	---
* considers advantages and disadvantages for each solution	---	---
* describes sequence of solution trials	---	---
* justifies choice of solution strategies	---	---
* evaluates effect of solution strategies	---	---
* states conclusions	---	---
* suggests additional causes and/or solution strategies	---	---

REFLECTING ON YOUR THINKING PROCESS

- * discusses differences between initial and later perception of the situation
- * discusses differences between initial and later approach to causes and solutions
- * identifies times or events which influenced and/or changed thinking
- * discusses differences in view of dilemma
- * discusses differences in view re critical, interpretive and technical levels
- * discusses differences in view of relationships among commonplaces (teacher/student/content/context)

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THE CATHOLIC UNIVERSITY OF AMERICA
DEPARTMENT OF EDUCATION

UNDERGRADUATE COMPREHENSIVE EXAM SCHEDULE

- | <u>e</u> | <u>Due</u> |
|-----------------------|--|
| 1) Early December | <u>Draft of Situation Analysis</u>

Two faculty readers will guide your work on your situation analysis so that it meets the department standards for a comprehensive examination paper. Schedule a meeting with these readers, to be held by the first day of final exams. When you schedule the meeting, ask if your readers would like a draft of your situation analysis prior to the meeting, or if they want you to bring the draft to the meeting. It is to your advantage to get input from the faculty as soon and as frequently as possible. Ask for suggestions about relevant literature. |
| 2) Last Day of Finals | <u>Situation Analysis Papers</u>

Submit a final report of your situation analysis to Dr. Blum for student teaching credit. Also submit a copy to <u>each</u> of your readers by the last day of final exams. (Keep a copy for yourself to work on over the semester break). This report should be approximately 10-12 double-spaced typed pages summarizing your individual situation analysis activity from the point where you selected a problem situation on which to focus. Since this paper will be the basis for your comprehensive exam paper, we strongly recommend that you use a word processor. Be sure to include:

a) a summary description of your problem, data gathering and analysis, solution generating and evaluation.

b) an analysis of your thinking processes during the activity: did your perception of the situation, your approaches to solutions, or other aspects of your thinking change? Describe what these changes were and why you think they occurred. |

3) Christmas Break

Review of Literature

We strongly encourage you to spend some time during your semester break a) reviewing prior coursework which relates to the problem situation you chose to analyze and b) researching literature which relates to your problem.

3) Week of Spring
Pre-registration

Meeting

Schedule a meeting with your readers during pre-registration week. At this meeting, your readers will give you feedback on your situation analysis paper and discuss related research and coursework with you.

4) End of January

Draft of Comprehensive Exam Paper

More detailed guidelines will be distributed later. This draft should basically include:

- a) A summary description of the situation analysis activity.
- b) An analysis of your thinking process in completing this activity.
- c) An exploration of prior learning and selected literature related to this situation. Summarize the relevant literature and explain what the literature tells you about the way you described, analyzed, and went about solving the problem as well as implications for the type of classroom teacher you hope to become.

5) End of February

Final Comprehensive Exam Papers

This paper should be approximately 25 double-spaced pages in APA, Chicago or Turabian style. You should use at least 10 references.

THE CATHOLIC UNIVERSITY OF AMERICA
DEPARTMENT OF EDUCATION

UNDERGRADUATE COMPREHENSIVE EXAM WRITING GUIDELINES

As you write, keep in mind that this is the final, summative statement you, as an undergraduate, are making about teaching. It is similar to an undergraduate thesis and should reflect the highest caliber of writing possible as well as the knowledge and wisdom you have attained about being a teacher. You should be proud to include this paper in a portfolio you might prepare for a job interview.

Papers should be 25-35 double-spaced pages in length. They will not be accepted for a final reading if they fail to meet the following standards. Papers will not be returned, so keep a copy for yourself.

Style

(You might want to refer to Strunk & White, The Elements of Style or a similar text).

- 1) No syntax problems (run-on sentences, sentence fragments, dangling modifiers, etc.), punctuation problems, spelling problems, or typographical errors. If necessary, have someone proofread your final product.
- 2) Consistent use of verb tense. Use the past tense to describe your problem solving activity. You are reporting on something that happened, that is over, that you are now reflecting on. ("Jimmy was not completing his work", not "Jimmy is not completing his work").
- 3) Do not use the pronoun "you" (e.g. "To be a good teacher, you must"). Write more formally. You may, however, use the pronoun "I" since this is a personal reflection paper on an event you were intimately involved in.

Form

- 1) Use a cover sheet; double-space and number your pages.
- 2) Use APA, Turabian or Chicago style.
- 3) Sources must be alphabetized by the author's last name.
- 4) Be consistent in using a standard reference form.
- 5) You must show evidence of having used all sources cited in the bibliography. It is not enough to merely list ten books or articles.
- 6) You may include relevant work samples or charts either in the body of the paper or in an appendix.
- 7) Use sub-headings as advanced organizers as necessary.

Content and Organization

Think of this as one unified paper with an introduction, body and conclusion. Be sure there are direct links and transitions throughout. The questions and ideas which follow should be used to guide your thinking. Do not think of them as a sequence of questions to answer separately.

- 1) In the introduction state the purpose and give an overview of the paper. Explain why this problem is important and worthy of being addressed. Write for a general audience who does not know what the paper is about.
- 2) In the body of the paper you should include: a summary description of your problem solving activity, related theory and research based literature, and your reflections on the activity and on teaching in general. These three areas should be well balanced in your paper.

The tendency will be to overemphasize a description of the activity itself because that is the easiest part. Do not simply include your situation analysis as you've already written it. Use your readers' suggestions to condense certain parts, expand on others, relate relevant literature, etc. Be sure, however, that you do include a clear statement of the problem as you came to define it, the causes, effects and solution strategies you generated, and an explanation of why you chose the solution(s) you did.

Explore the relevant research and literature in depth. Use textbooks, course notes, and professional journals. Be sure that you relate the ideas in the literature to each other and to your problem situation. What are the important concepts and theories which relate to your problem? Do the ideas in the literature always support one another? Do different theories lead to different conclusions? Do they support your own actions and thinking? Now that you've read the literature would you change anything you did in the classroom? Does your experience challenge any of the literature? Can you now change your descriptive language into more conceptual and theory-based language?

Reflect on and describe your own thinking processes as you went about this activity. What did you learn? How did your perception of the problem change? Your approach to solutions? Other aspects? Consider areas such as the school context, classroom environment, students, teachers, subject matter, learning, instruction (any of the commonplaces or teaching dilemmas). But again, deal only with areas which directly relate to your problem.

- 3) In the conclusion, don't merely summarize. Rather, discuss implications for future teaching. What have you learned, what do you believe about being a teacher? What is the most important thing you learned or want to remember when you have your own classroom? In general, how has the process of student teaching and working through this project influenced your perspective on teaching.

Situation Analysis Project

Fall, 1988

SITUATION ANALYSIS PROJECT

**SUPERVISED STUDENT TEACHING
CATHOLIC UNIVERSITY OF AMERICA**

SITUATION ANALYSIS ACTIVITY

Overview

During the student teaching semester, in addition to classroom teaching responsibilities, student teachers are required to engage in a reflective problem solving activity. This activity, The Situation Analysis Project, is designed to encourage students to integrate field experience with the knowledge base and to have students demonstrate their ability to be reflective in problem solving situations. During the field semester, student teachers identify and analyze a problematic situation, then generate and try out solutions, and finally prepare a written summary report. The specific sequence of activities is outlined below.

Activities

Steps

Exploring the Teaching/Learning Environment	<ol style="list-style-type: none">1. Describe selected situations2. Reflect on situations
Initial Analysis of Selected Situations	<ol style="list-style-type: none">1. Describe and analyze selected situations2. Brainstorm possible causes for the situations
In-Depth Analysis of Targeted Situation	<ol style="list-style-type: none">1. Develop a goal for the selected situation2. Generate a set of solution strategies
Solution Trials	<ol style="list-style-type: none">1. Select a set of solution strategies2. Try out solution strategies3. Evaluate solution strategies
Summary/Report	<ol style="list-style-type: none">1. Identify a situation2. Describe the situation3. Discuss why the situation concerns you4. Brainstorm possible causes of the situation5. Develop solution strategies linked to the causes6. Implement and evaluate a sequence of solution strategies7. Discuss your thinking process in completing this activity

SITUATION ANALYSIS ACTIVITY #1

Exploring the Teaching/Learning Environment

Schools are such active places that beginning teachers need help in analyzing the many simultaneous happenings. The purpose of this activity is to help you do that.

These are some ideas to get started. You will receive more specific assistance throughout the semester. Please keep your dated situation analysis write-ups on loose leaf paper for a three ring binder. Each week, you will turn these write-ups in to your university supervisor.

Week 1-5

Choose a situation or event to reflect on and write about at least twice during the week. Set aside half an hour for this activity. The event can take place anywhere around the school: classroom, teacher's lounge, library, principal's office, hall, cafeteria, playground, bus, etc. It can involve one person or a group of people (students, teachers, parents, staff). It can focus on an administration directive, a casual conversation, an instructional activity, teacher planning or diagnosing, or anything else which seems important, interesting, curious or bothersome to you.

1. Describe the event in terms of the four commonplaces: teacher, learner, content and context. What was the event, who was involved, where did the action take place?
2. Reflect on the event. Think about what you saw and what it means. The following are examples of questions you might consider. Be sure to include at least two in your write-up.
 - a. Can you relate this situation to a dilemma in education? Can you think about differing points of view to explain what happened?
 - b. How would you interpret the event? If others were involved, how do you think they might interpret it?
 - c. Can you relate what happened in this situation to coursework or your own prior experience?
 - d. How would you have handled the situation? What decisions would you make? Why?
 - e. If you were involved in the situation, how would you handle it if it happened again? Why?
 - f. In the ideal, how would you envision this situation? How should it have been resolved or changed?
3. If possible, ask your cooperating teacher how s/he would have handled this situation. Why would s/he handle it in that way?

SITUATION ANALYSIS ACTIVITY #1

Initial Analysis of Selected Situations

Weeks 4-6

During the next few weeks, select a situation which occurs in your classroom that is of academic and practical interest to you and which you would like to try to analyze.

Each week, prepare a written summary of your analysis and turn it in to your university supervisor.

During week 4, select a situation related to classroom management.

During week 5, select a situation related to instructional design.

During week 6, select a situation which is reflected in your lesson evaluations.

In your written summary:

1. Describe in as much detail as possible how the situation manifests itself in the classroom. Be sure to include specific examples or effects of the situation.
2. Try to isolate when this situation occurs. What happens before or after? What might lead up to or result from it?
3. Explain why this situation concerns you. Elaborate as fully as possible.
4. In the "ideal" how would you envision this situation? Think about the situation at the critical level? What should be happening?
5. Draw on your personal resources to help you analyze this situation? These include:
 - prior coursework
 - prior personal experience
 - your cooperating teacher
 - your university supervisor
 - other school personnel
6. List all the possible reasons or causes you can think of why the situation occurs.
7. List any other questions you have about the situation.

SITUATION ANALYSIS ACTIVITY #3

In-Depth Analysis of the Targeted Situation

Weeks 7-8

1. Using a situation you began to analyze, develop a reasonable goal that works toward the "ideal" you identified in activity #2.
2. Generate a list or set of solution strategies which you think might help you achieve this goal.
 - a. List the effects of the situation you observed.
 - b. List the possible causes you brainstormed.
 - c. Develop at least one solution strategy for each cause you considered.
 - d. List the advantages and disadvantages of each solution strategy you developed.
 - e. Discuss the situation, your goal and choices of solution strategies with your cooperating teacher.

Note

Many students have found it helpful to do this section on individual index cards, listing one effect, one cause, one solution strategy, each on a separate card. The card set is much easier to manipulate than a standard written summary. This saves a good deal of rewriting.

SITUATION ANALYSIS ACTIVITY #4

Solution Trials

Weeks 9-12

During this phase of the Situation Analysis Activity, you will be selecting, trying out, and evaluating a series of solution strategies.

Each week, be sure to write up at least one solution trial and turn in your written summary to your university supervisor.

1. Solution Trial #1

- a. Select a solution strategy you would like to try.

Be prepared to justify your choice of a solution strategy on the basis of your observation, advantages/disadvantages, and from theory.

- b. Try out your solution strategy as soon as possible.

- c. Evaluate your solution attempt.

-Describe (document) what happened?

-How well did it work?

-What was the change or difference in behavior?

-What was the change or difference in performance?

-How did students perform?

-Did the entire target group respond in the same way?

- d. Decide how to continue. Be sure to consider the following:

-Do you want to restate the problem?

-Do you want to continue with this strategy?

-Do you want to modify this strategy?

-Do you want to try another strategy?

2. Solution Trial Series

In the following weeks, repeat the process outlined above as you continue trying to improve the situation. The sequence remains:

- a. Select a solution strategy you would like to try .
- b. Try out your solution strategy.
- c. Evaluate your solution attempt.
- d. Decide how to continue.

Note

Many students who are working on a situation that is directly related to their teaching find it useful to document progress as part of their lesson plan evaluations.

SUMMARY/REPORT

Weeks 13-14

1. Describe the problem situation you selected to work on in as much detail as possible. Describe the context of the situation. What happened? Who was involved? How did the situation manifest itself in the classroom? Be sure to include specific examples you have documented.
2. Discuss why the situation concerned you.
3. List and discuss the possible causes and effects you identified. Whenever possible, explain how you arrived at your conclusions or explanations of the relationship between the situation and its possible causes.
4. List and discuss possible solutions you generated. Be sure you suggest a solution for each possible cause. Explain the advantages and disadvantages for each solution you suggest.
5. Summarize your solution trials in sequence (week one, week two, etc.). Describe your experience trying out solution strategies.
 - a. Describe the solution you selected.
 - b. Justify your choice of a solution on the basis of your observations, advantages/disadvantages, and from theory.
 - c. Evaluate your solution attempt.
Document what happened.
 - How well did it work?
 - What was the change or difference in behavior?
 - What was the change or difference in performance?
 - How did students respond?
 - Did the entire target group respond in the same way?
 - d. State your conclusions--this might include any or all of the following:
 - Restate the problem.
 - Suggest additional causes to consider.
 - Refine or modify the solution strategy.
 - Suggest another solution strategy.
6. Discuss your thinking process in completing this activity.
 - a. How did your perception of the problem change?
 - b. How did your approach to solutions change?
 - c. How did your thinking change?

COACHING GUIDE--SITUATION ANALYSIS ACTIVITY #1:

EXPLORING THE TEACHING/LEARNING ENVIRONMENT

COACHING

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DESCRIBING THE EVENT

YES	NO
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- * tells what the event was
- * states who was involved
- * tells where the action took place
- * discusses the event in terms of the four commonplaces, when pertinent

REFLECTING ON THE EVENT

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- * relates the situation to a dilemma in education
- * considers differing points of view to explain what happened
- * interprets the event, including other points of view when applicable
- * relates situation to coursework or prior experience
- * discusses how s/he would have handled the situation and/or decisions s/he would make
- * discusses how s/he would handle a similar situation in the future
- * describes how s/he envisions situation in the ideal and how it should have been resolved

DISCUSSING THE EVENT WITH COOPERATING TEACHER

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- * asked cooperating teacher how she or he would have handled the situation
- * discussed cooperating teacher's rationale for his or her decision

COACHING GUIDE--SITUATION ANALYSIS ACTIVITY #1

INITIAL ANALYSIS OF SELECTED SITUATIONS

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DESCRIBING THE SITUATION	YES	NO
* describes in detail how situation manifests itself in the classroom	---	---
* includes specific examples (reflection) of the situation	---	---
* states who was involved	---	---
* tells where the action took place	---	---
* documents what happens before and after the situation occurs	---	---
* discusses the situation in terms of the four commonplaces, when pertinent	---	---
REFLECTIVE ANALYSIS OF THE SITUATION		
* relates the situation to a dilemma in education	---	---
* explains why this situation is of concern	---	---
* considers differing points of view to explain what happened	---	---
* interprets the event, including other points of view when applicable	---	---
* relates situation to coursework or prior experience	---	---
* discusses how s/he would have handled the situation and/or decisions s/he would make	---	---
* discusses how s/he would handle a similar situation in the future	---	---
* describes how s/he envisions situation in the ideal and how it should have been resolved	---	---
* lists plausible set of reasons or causes	---	---
DISCUSSING THE SITUATION WITH COOPERATING TEACHER		
* asked cooperating teacher how she or he would have handled the situation	---	---
* discussed cooperating teacher's rationale for his or her decision	---	---

TEACHING GUIDE - SITUATION ANALYSIS ACTIVITY #1
 IN-DEPTH ANALYSIS OF TARGETED SITUATIONS

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DESCRIBING THE SITUATION

- identifies and generally describes a situation in the classroom
- includes specific effects of the situation
- documents with examples of the situation over a period of days and/or weeks
- describes in detail how situation manifests itself in the classroom
- states who was involved
- tells where the situation took place
- documents what happens before and after the situation occurs
- discusses the situation in terms of the four components when pertinent

DEVELOPING AN ANALYSIS OF THE SITUATION

- relates the situation to a dilemma in the room
- explains why this situation is of concern
- considers differing points of view to explain what happened
- interprets the events including other points of view when applicable
- relates situation to components of prior experience
- describes how some resolved situation in the room
- relates a resolution to the dilemma
- describes the situation
- lists possible solutions or actions
- develops at least one solution for each case
- considers advantages and disadvantages for each solution
- develops a plan for solution trial

IMPLEMENTING THE SITUATION WITH EXPERIMENTAL TEACHING

- describes situation, your ideas, your solution of solution, and your plan for solution trials with cooperating teachers

**SITUATION ANALYSIS:
A REFLECTIVE PROBLEM SOLVING STRATEGY**
(A Coaching Guide and Evaluation Tool)

----- **PHASE I: DEFINING THE PROBLEM SITUATION**

YES

NO

- explains why the problem is of concern
- explains why the problem is worthy of being addressed (e.g. what important educational goal it impedes)
- explores multiple ways of viewing the problem
- infers reasonable causes and effects of the problem
- clearly delineates the problem

----- **PHASE II: GATHERING IDEAS OR DATA ABOUT THE SITUATION**

- explores the context in which the problem occurs and does not occur
- examines the specific tasks during which the problem occurs and does not occur
- examines the strengths and weaknesses the students, or other relevant parties, bring to the situation (e.g. skill, motivation)
- asks the persons involved about their views of the problem
- states lingering questions about the situation

----- **PHASE III: ANALYZING THE PROBLEM SITUATION**

- relates experiential knowledge to the problem situation
- relates professional education knowledge to the situation (from education journals, coursework, supervisor, cooperating teacher, etc.)
- explores all possible teacher, student, context, and curriculum factors
- examines conflicting explanations of the problem
- selects the most important information to understand the problem (e.g. prioritizes)
- narrows down all possible causes to the most probable ones

PHASE IV: REDEFINING THE SITUATION

- o re-examines initial problem statement, causes/effects, and goal orientation
- o re-states problem, goal, or causes/effects as necessary, in light of data gathering and analysis

PHASE V: GENERATING SOLUTIONS

- o envisions the "ideal" situation in contrast to the problem situation
- o develops an educational goal for the situation selected for change
- o brainstorms all possible changes (in person, task, context variables) which could accomplish this goal
- o has a solution related to each possible cause
- o lists the advantages/disadvantages of each solution strategy
- o generates a set of principles (from theory and experience) against which possible solutions can be judged and prioritized
- o determines a preferred solution based on above principles
- o itemizes specific, sequential solution steps

PHASE VI: TESTING SOLUTIONS

- o considers possible unintended consequences of solution strategy
- o specifies what kind of change occurred

PHASE VII: EVALUATING SOLUTIONS

- o determines if problem situation improved
- o determines which strategy worked best
- o determines if the goal was attained
- o determines if new goals or solution strategies are warranted

PHASE VIII: REFLECTING ON PROBLEM SOLVING

- o considers how thinking changed during the problem solving activity (e.g. perception of problem, solution approach)
- o relates activity to own educational philosophy and beliefs about the nature of the learner, the role of the teacher, the design of instruction and learning environments, and the purpose of schooling

THE CATHOLIC UNIVERSITY OF AMERICA
DEPARTMENT OF EDUCATION

UNDERGRADUATE COMPREHENSIVE EXAM SCHEDULE

Date

Due

1) Early December

Draft of Situation Analysis

Two faculty readers will guide your work on your situation analysis so that it meets the department standards for a comprehensive examination paper. Schedule a meeting with these readers, to be held by the first day of final exams. When you schedule the meeting, ask if your readers would like a draft of your situation analysis prior to the meeting, or if they want you to bring the draft to the meeting. It is to your advantage to get input from the faculty as soon and as frequently as possible. Ask for suggestions about relevant literature.

2) Last Day of Finals

Situation Analysis Papers

Submit a final report of your situation analysis to Dr. Blum for student teaching credit. Also submit a copy to each of your readers by the last day of final exams. (Keep a copy for yourself to work on over the semester break). This report should be approximately 10-12 double-spaced typed pages summarizing your individual situation analysis activity from the point where you selected a problem situation on which to focus. Since this paper will be the basis for your comprehensive exam paper, we strongly recommend that you use a word processor. Be sure to include:

- a) a summary description of your problem, data gathering and analysis, solution generating and evaluation.
- b) an analysis of your thinking processes during the activity: did your perception of the situation, your approaches to solutions, or other aspects of your thinking change? Describe what these changes were and why you think they occurred.

3) Christmas Break

Review of Literature

We strongly encourage you to spend some time during your semester break a) reviewing prior coursework which relates to the problem situation you chose to analyze and b) researching literature which relates to your problem.

3) Week of Spring
Pre-registration

Meeting

Schedule a meeting with your readers during pre-registration week. At this meeting, your readers will give you feedback on your situation analysis paper and discuss related research and coursework with you.

4) End of January

Draft of Comprehensive Exam Paper

More detailed guidelines will be distributed later. This draft should basically include:

- a) A summary description of the situation analysis activity.
- b) An analysis of your thinking process in completing this activity.
- c) An exploration of prior learning and selected literature related to this situation. Summarize the relevant literature and explain what the literature tells you about the way you described, analyzed, and went about solving the problem as well as implications for the type of classroom teacher you hope to become.

5) End of February

Final Comprehensive Exam Papers

This paper should be approximately 25 double-spaced pages in APA, Chicago or Turabian style. You should use at least 10 references.

Faculty Readers for Comprehensive Examinations

<u>Senior</u>	<u>Readers</u>
Lynn Montrose	Linda Valli Patricia Bauch
Mary Kate McQuire	Linda Valli Patricia Bauch
Maureen McCarthy	Maria Ciriello Sally Pickert
Jennifer Smith	Maria Ciriello Sally Pickert
Lourdes Martell	Nancy Taylor Rick Yekovich
Colleen Makepeace	Nancy Taylor Rick Yekovich
Eleanor Hanlon	Irene Blum Carol Walker
Jill O'Connor	Irene Blum Carol Walker
Angela Akers	Linda Valli Pat Bauch

THE CATHOLIC UNIVERSITY OF AMERICA
DEPARTMENT OF EDUCATION

UNDERGRADUATE COMPREHENSIVE EXAM WRITING GUIDELINES

As you write, keep in mind that this is the final, summative statement you, as an undergraduate, are making about teaching. It is similar to an undergraduate thesis and should reflect the highest caliber of writing possible as well as the knowledge and wisdom you have attained about being a teacher. You should be proud to include this paper in a portfolio you might prepare for a job interview.

Papers should be 25-35 double-spaced pages in length. They will not be accepted for a final reading if they fail to meet the following standards. Papers will not be returned, so keep a copy for yourself.

Style

(You might want to refer to Strunk & White, The Elements of Style or a similar text).

- 1) No syntax problems (run-on sentences, sentence fragments, dangling modifiers, etc.), punctuation problems, spelling problems, or typographical errors. If necessary, have someone proofread your final product.
- 2) Consistent use of verb tense. Use the past tense to describe your problem solving activity. You are reporting on something that happened, that is over, that you are now reflecting on. ("Jimmy was not completing his work", not "Jimmy is not completing his work").
- 3) Do not use the pronoun "you" (e.g. "To be a good teacher, you must"). Write more formally. You may, however, use the pronoun "I" since this is a personal reflection paper on an event you were intimately involved in.

Form

- 1) Use a cover sheet; double-space and number your pages.
- 2) Use APA, Turabian or Chicago style.
- 3) Sources must be alphabetized by the author's last name.
- 4) Be consistent in using a standard reference form.
- 5) You must show evidence of having used all sources cited in the bibliography. It is not enough to merely list ten books or articles.
- 6) You may include relevant work samples or charts either in the body of the paper or in an appendix.
- 7) Use sub-headings as advanced organizers as necessary.

Content and Organization

Think of this as one unified paper with an introduction, body and conclusion. Be sure there are direct links and transitions throughout. The questions and ideas which follow should be used to guide your thinking. Do not think of them as a sequence of questions to answer separately.

- 1) In the introduction state the purpose and give an overview of the paper. Explain why this problem is important and worthy of being addressed. Write for a general audience who does not know what the paper is about.
- 2) In the body of the paper you should include: a summary description of your problem solving activity, related theory and research based literature, and your reflections on the activity and on teaching in general. These three areas should be well balanced in your paper.

The tendency will be to overemphasize a description of the activity itself because that is the easiest part. Do not simply include your situation analysis as you've already written it. Use your readers' suggestions to condense certain parts, expand on others, relate relevant literature, etc. Be sure, however, that you do include a clear statement of the problem as you came to define it, the causes, effects and solution strategies you generated, and an explanation of why you chose the solution(s) you did.

Explore the relevant research and literature in depth. Use textbooks, course notes, and professional journals. Be sure that you relate the ideas in the literature to each other and to your problem situation. What are the important concepts and theories which relate to your problem? Do the ideas in the literature always support one another? Do different theories lead to different conclusions? Do they support your own actions and thinking? Now that you've read the literature would you change anything you did in the classroom? Does your experience challenge any of the literature? Can you now change your descriptive language into more conceptual and theory-based language?

Reflect on and describe your own thinking processes as you went about this activity. What did you learn? How did your perception of the problem change? Your approach to solutions? Other aspects? Consider areas such as the school context, classroom environment, students, teachers, subject matter, learning, instruction (any of the commonplaces or teaching dilemmas). But again, deal only with areas which directly relate to your problem.

- 3) In the conclusion, don't merely summarize. Rather, discuss implications for future teaching. What have you learned, what do you believe about being a teacher? What is the most important thing you learned or want to remember when you have your own classroom? In general, how has the process of student teaching and working through this project influenced your perspective on teaching.

Situation Analysis Project

Fall, 1987

SITUATION ANALYSIS PROJECT

**SUPERVISED STUDENT TEACHING
CATHOLIC UNIVERSITY OF AMERICA**

JOURNAL ACTIVITY #1: INITIAL SITUATION ANALYSIS

Schools are such active places that beginning teachers need help in analyzing the many simultaneous happenings. The purpose of this journal is to help you do that.

These are some ideas to get started. You will receive more specific assistance throughout the semester. Please keep your dated journal entries on loose leaf paper for a three ring binder.

Weeks 1-3

Choose one situation or event to reflect on and write about in your journal each day. Set aside half an hour for this activity. The event can take place anywhere around the school: classroom, teacher's lounge, library, principal's office, hall, cafeteria, playground, bus, etc. It can involve one person or a group of people (students, teachers, parents, staff). It can focus on an administration directive, a casual conversation, an instructional activity, teacher planning or diagnosing, or anything else which seems important, interesting, curious or bothersome to you.

Describe the context of the event. What was the event, who was involved, where did the action take place? Reflect about what you saw and what it means. While there are many things you can write about, be sure to include answers to the following questions in each of your entries.

For situations where a teacher is involved:

- 1) What decisions characterized the teacher's handling of the event?
- 2) What seemed to be the rationale for the decisions?
- 3) Does the way the teacher handled the situation reflect what you've been taught? Explain.
- 4) What might be problematic for you if you had responsibility for this situation?
- 5) How would you handle the situation? What professional or experiential knowledge are you drawing on?

For situations where a teacher wasn't involved:

- 1) How would you handle the situation?
- 2) What decisions would you have to make?
- 3) What is your rationale?
- 4) How do your decisions reflect what you've been taught?
- 5) What do you think would be problematic for you?

JOURNAL ACTIVITY #2: EXTENDED SITUATION ANALYSIS

Weeks 4-6

Select a situation which occurs in your classroom that is of academic and practical interest to you and which you would like to try to analyze.

- 1) Describe in as much detail as possible how the situation manifests itself in the classroom.
- 2) Explain why this situation concerns you. Elaborate as fully as possible.
- 3) Try to isolate when this situation occurs. What happens before or after? What might lead up to or result from it?
- 4) List all the possible reasons you can think of why the situation occurs.
- 5) List any other questions you have about the situation.
- 6) What have you learned from prior experiences or classes which might help you analyze this situation? What personal resources can you draw on?
- 7) In the "ideal" how would you envision this situation?
- 8) What steps might be taken to achieve this "ideal"?

JOURNAL ACTIVITY #9: GOALS AND TRIALS

Weeks 7-10

- 1) Develop a goal for the situation you have selected to analyze.

-Generate a list or set of strategies or techniques which you think might help you achieve this goal.

Consider the reasons you identified as possible causes for the situation.

Develop a "solution strategy" for each of these.

Justify each of your choices of a solution strategy on the basis of your observation and from theory.

Present the principle(s) which underlie your solution strategy.

List the advantages and disadvantages of each solution strategy you developed.

-Select a solution strategy you would like to try out.

-Discuss the situation, your goal, and choices of solution strategies with your cooperating teacher.

- 2) Try out your solution strategy as soon as possible.

- 3) Evaluate your solution attempt.

-Describe (document) what happened:

How well did it work?

What was the change in behavior?

What was the change or difference in performance?

How did students perform?

Did the entire target group respond in the same way?

- 4) Conclusion

-Do you want to restate the problem or change your goal?

-Do you want to continue with this strategy?

-Do you want to modify this strategy?

-Do you want to try another strategy?

JOURNAL ACTIVITY #4: SUMMARY REPORT

Weeks 12-14

- 1) Describe the problem situation you selected to work on in as much detail as possible. Describe the context of the situation. What happened? Who was involved? How did the situation manifest itself in the classroom?
- 2) Discuss why the situation concerned you.
- 3) List and discuss the possible causes and effects you identified. Whenever possible, explain how you arrived at your conclusions or explanations of the relationship between the situation and its possible causes.
- 4) List and discuss possible solutions you generated. Be sure you suggest a solution for each possible cause. Explain the advantages and disadvantages for each solution you suggest.
- 5) Summarize your solution trials in sequence (week one, week two, etc.). Describe your experience trying out solution strategies.

-Describe the solution you selected.

-Justify your choice of a solution on the basis of your observations and from theory.

-Present the principle(s) which underlie your solution.

-Evaluate your solution attempt.
Document what happened.

How well did it work?

What was the change in behavior?

What was the change or difference in performance?

How did students respond?

Did the entire target group respond in the same way?

-State your conclusions--this might include any or all of the following:

Restate the problem.

Suggest additional causes to consider.

Refine or modify the solution strategy.

Suggest another solution strategy.

- 6) Discuss your thinking process in completing this activity.
 - How did your perception of the problem change?
 - How did your approach to solutions change?
 - How did your thinking change?

SITUATION ANALYSIS:
A REFLECTIVE PROBLEM SOLVING STRATEGY
(A Coaching Guide and Evaluation Tool)

PHASE I: DEFINING THE PROBLEM SITUATION

YES NO

- o explains why the problem is of concern
- o explains why the problem is worthy of being addressed (e.g. what important educational goal it impedes)
- o explores multiple ways of viewing the problem
- o infers reasonable causes and effects of the problem
- o clearly delineates the problem

PHASE II: GATHERING IDEAS OR DATA ABOUT THE SITUATION

- o explores the context in which the problem occurs and does not occur
- o examines the specific tasks during which the problem occurs and does not occur
- o examines the strengths and weaknesses the students, or other relevant parties, bring to the situation (e.g. skill, motivation)
- o asks the persons involved about their views of the problem
- o states lingering questions about the situation

PHASE III: ANALYZING THE PROBLEM SITUATION

- o relates experiential knowledge to the problem situation
- o relates professional education knowledge to the situation (from education journals, coursework, supervisor, cooperating teacher, etc.)
- o explores all possible teacher, student, context, and curriculum factors
- o examines conflicting explanations of the problem
- o selects the most important information to understand the problem (e.g. prioritizes)
- o narrows down all possible causes to the most probable ones

PHASE IV: REDEFINING THE SITUATION

- o re-examines initial problem statement, causes/effects, and goal orientation
- o re-states problem, goal, or causes/effects as necessary, in light of data gathering and analysis

PHASE V: GENERATING SOLUTIONS

- o envisions the "ideal" situation in contrast to the problem situation
- o develops an educational goal for the situation selected for change
- o brainstorms all possible changes (in person, task, context variables) which could accomplish this goal
- o has a solution related to each possible cause
- o lists the advantages/disadvantages of each solution strategy
- o generates a set of principles (from theory and experience) against which possible solutions can be judged and prioritized
- o determines a preferred solution based on above principles
- o itemizes specific, sequential solution steps

PHASE VI: TESTING SOLUTIONS

- o considers possible unintended consequences of solution strategy
- o specifies what kind of change occurred

PHASE VII: EVALUATING SOLUTIONS

- o determines if problem situation improved
- o determines which strategy worked best
- o determines if the goal was attained
- o determines if new goals or solution strategies are warranted

PHASE VIII: REFLECTING ON PROBLEM SOLVING

- o considers how thinking changed during the problem solving activity (e.g. perception of problem, solution approach)
- o relates activity to own educational philosophy and beliefs about the nature of the learner, the role of the teacher, the design of instruction and learning environments, and the purpose of schooling

COMPREHENSIVE EXAM SCHEDULE

<u>Date</u>	<u>Due</u>
December 16	Final report summarizing your individual situation analysis activity Be sure to include: <ol style="list-style-type: none">1. A description of the situation analysis activity from the point where you began to select the situation you ultimately focused on2. An analysis of your thinking process in completing this activity:<ul style="list-style-type: none">- How did your perception of the situation change?- How did your approach to solutions change?- How did your thinking change? <p>This report should be approximately 10 typed pages</p>
December 17	Reading session -- LV, NT, MC, IB
December 18	Pick up report with written feedback
January 15	Draft of Comprehensive Paper Due This should include: <ol style="list-style-type: none">1. A description of the situation analysis activity (#1 above)2. An analysis of your thinking process in completing this activity (#2 above)3. Exploration of selected literature related to this situation4. A summary of how this experience relates to coursework and field experiences in your teacher education program. In this section you should address:<ul style="list-style-type: none">- What you believe the nature of education should be- What you believe about the nature of the learner- What you believe about how children learn best- What you believe about the role of the teacher in delivering instruction- What you believe about how to design the learning environment- what you believe about how to design instruction
January 25	Reading session -- LV, NT, MC, IB
February 8	Final paper due

The final paper should be approximately 20 typed pages in APA, Chicago or Turabian style. It should have at

Situation Analysis Activity

Spring, 1987

JOURNAL: STUDENT TEACHERS

Schools are such active places that beginning teachers need help in analyzing the many simultaneous happenings. The purpose of this journal is to help you do that.

These are some ideas to get started. You will receive more specific assistance throughout the semester. Please keep your dated journal entries on loose leaf paper for a three ring binder.

Weeks 1-3

Choose one situation or event to reflect on and write about in your journal each day. Set aside half an hour for this activity. The event can take place anywhere around the school: classroom, teacher's lounge, library, principal's office, hall, cafeteria, playground, bus, etc. It can involve one person or a group of people (students, teachers, parents, staff). It can focus on an administration directive, a casual conversation, an instructional activity, teacher planning or diagnosing, or anything else which seems important, interesting, curious or bothersome to you.

Describe the context of the event. What was the event, who was involved, where did the action take place? Reflect about what you saw and what it means. While there are many things you can write about, be sure to include answers to the following questions in each of your entries.

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- 1) How would you handle the situation?
- 2) What decisions would you have to make?
- 3) What is your rationale?
- 4) How do your decisions reflect what you've been taught?
- 5) What do you think would be problematic for you?

SITUATION ANALYSIS

Weeks 4-6

Select a situation which occurs in your classroom that is of academic and practical interest to you and which you would like to try to analyze.

- 1) Describe in as much detail as possible how the situation manifests itself in the classroom.
- 2) Explain why this situation concerns you. Elaborate as fully as possible.
- 3) Try to isolate when this situation occurs. What happens before or after? What might lead up to or result from it?
- 4) List all the possible reasons you can think of why the situation occurs.
- 5) List any other questions you have about the situation.
- 6) What have you learned from prior experiences or classes which might help you analyze this situation? What personal resources can you draw on?
- 7) In the "ideal" how would you envision this situation?
- 8) What steps might be taken to achieve this "ideal"?

GOALS/TRIALS

Weeks 7-10

- 1) Develop a goal for the situation you have selected to analyze.

- Generate a list or set of strategies or techniques which you think might help you achieve this goal.

Consider the reasons you identified as possible causes for the situation.

Develop a "solution strategy" for each of these.

Justify each of your choices of a solution strategy on the basis of your observation and from theory.

Present the principle(s) which underlie your solution strategy.

List the advantages and disadvantages of each solution strategy you developed.

- Select a solution strategy you would like to try out.

- Discuss the situation, your goal, and choices of solution strategies with your cooperating teacher.

- 2) Try out your solution strategy as soon as possible.

- 3) Evaluate your solution attempt.

- Describe (document) what happened:

How well did it work?

What was the change in behavior?

What was the change or difference in performance?

How did students perform?

Did the entire target group respond in the same way?

- 4) Conclusion

- Do you want to restate the problem or change your goal?

- Do you want to continue with this strategy?

SUMMARY/REPORT

Weeks 12-14

- 1) Describe the problem situation you selected to work on in as much detail as possible. Describe the context of the situation. What happened? Who was involved? How did the situation manifest itself in the classroom?
- 2) Discuss why the situation concerned you.
- 3) List and discuss the possible causes and effects you identified. Whenever possible, explain how you arrived at your conclusions or explanations of the relationship between the situation and its possible causes.
- 4) List and discuss possible solutions you generated. Be sure you suggest a solution for each possible cause. Explain the advantages and disadvantages for each solution you suggest.
- 5) Summarize your solution trials in sequence (week one, week two, etc.). Describe your experience trying out solution strategies.

-Describe the solution you selected.

-Justify your choice of a solution on the basis of your observations and from theory.

-Present the principle(s) which underlie your solution.

-Evaluate your solution attempt.
Document what happened.

How well did it work?

What was the change in behavior?

What was the change or difference in performance?

How did students respond?

Did the entire target group respond in the same way?

-State your conclusions--this might include any or all of the following:

Re-state the problem.

Suggest additional causes to consider.

Refine or modify the solution strategy.

Suggest another solution strategy.

- 6) Discuss your thinking process in completing this activity.

-How did your perception of the problem change?

Coaching Guide and Evaluation Tool
for Situation Analysis

SITUATION ANALYSIS:
A REFLECTIVE PROBLEM SOLVING STRATEGY

(A Coaching Guide and Evaluation Tool)

----- PHASE I: DEFINING THE PROBLEM SITUATION

YES

NO

- o explains why the problem is of concern
- o explains why the problem is worthy of being addressed (e.g. what important educational goal it impedes)
- o explores multiple ways of viewing the problem
- o infers reasonable causes and effects of the problem
- o clearly delineates the problem

----- PHASE II: GATHERING IDEAS OR DATA ABOUT THE SITUATION

- o explores the context in which the problem occurs and does not occur
- o examines the specific tasks during which the problem occurs and does not occur
- o examines the strengths and weaknesses the students, or other relevant parties, bring to the situation (e.g. skill, motivation)
- o asks the persons involved about their views of the problem
- o states lingering questions about the situation

----- PHASE III: ANALYZING THE PROBLEM SITUATION

- o relates experiential knowledge to the problem situation
- o relates professional education knowledge to the situation (from education journals, coursework, supervisor, cooperating teacher, etc.)
- o explores all possible teacher, student, context, and curriculum factors
- o examines conflicting explanations of the problem
- o selects the most important information to understand the problem (e.g. prioritizes)
- o narrows down all possible causes to the most probable ones

PHASE IV: REDEFINING THE SITUATION

- o re-examines initial problem statement, causes/effects, and goal orientation
- o re-states problem, goal, or causes/effects as necessary, in light of data gathering and analysis

PHASE V: GENERATING SOLUTIONS

- o envisions the "ideal" situation in contrast to the problem situation
- o develops an educational goal for the situation selected for change
- o brainstorms all possible changes (in person, task, context variables) which could accomplish this goal
- o has a solution related to each possible cause
- o lists the advantages/disadvantages of each solution strategy
- o generates a set of principles (from theory and experience) against which possible solutions can be judged and prioritized
- o determines a preferred solution based on above principles
- o itemizes specific, sequential solution steps

PHASE VI: TESTING SOLUTIONS

- o considers possible unintended consequences of solution strategy
- o specifies what kind of change occurred

PHASE VII: EVALUATING SOLUTIONS

- o determines if problem situation improved
- o determines which strategy worked best
- o determines if the goal was attained
- o determines if new goals or solution strategies are warranted

PHASE VIII: REFLECTING ON PROBLEM SOLVING

- o considers how thinking changed during the problem solving activity (e.g. perception of problem, solution approach)
- o relates activity to own educational philosophy and beliefs about the nature of the learner, the role of the teacher, the design of instruction and learning environments, and the purpose of schooling

Comprehensive Examination

1986-87

Comprehensive Exam Schedule

DATE

DUE

December 12

Final report summarizing your individual problem solving activity

Be sure to include:

1. A description of the problem solving activity from the point where you began to select the problem you ultimately focused on
2. An analysis of your thinking process in completing this activity:
 - How did your perception of the problem change?
 - How did your approach to solutions change?
 - How did your thinking change?

This report should be approximately 10 typed pages.

December 15

Reading session -- LV, NT, PB, IB

December 16

Pick up report with written feedback

December 17

Optional meeting for consultation

January 16

Draft of Comprehensive Paper Due

This should include:

1. A description of the problem solving activity (#1 above)
2. An analysis of your thinking process in completing this activity (#2 above)
3. Exploration of selected literature related to this problem.
4. A summary of how this experience relates to coursework and field experiences in your teacher education program.

In this section, you should address:

 - What you believe the nature of education should be
 - What you believe about the nature of the learner
 - What you believe about how children learn best
 - What you believe about the role of the teacher in delivering instruction
 - What you believe about how to design the learning environment
 - What you believe about how to design instruction

January 21

Reading session -- LV, NT, PB, IB

February 2

Final paper due

The final paper should be approximately 20 typed pages in APA, Chicago or Turabian style. It should have at least 10 references.

Individual Problem Solving Activity

Fall, 1986

8/24/86

JOURNAL: STUDENT TEACHERS

Schools are such active places that beginning teachers need help in analyzing the many simultaneous happenings. The purpose of this Journal is to help you do that.

These are some ideas to get started. You will receive more specific assistance throughout the semester. Please keep your dated Journal entries on loose leaf paper for a three ring binder.

Weeks 1-4

Choose one situation or event to reflect on and write about in your Journal each day. Set aside half an hour for this activity. The event can take place anywhere around the school: classroom, teacher's lounge, library, principal's office, hall, cafeteria, playground, bus, etc. It can involve one person or a group of people (students, teachers, parents, staff). It can focus on an administration directive, a casual conversation, an instructional activity, teacher planning or diagnosing, or anything else which seems important, interesting, curious or bothersome to you.

Describe the context of the event. What was the event, who was involved, where did the action take place. Reflect about what you saw and what it means. While there are many things you can write about, be sure to include answers to the following questions in each of your entries.

For situations where a teacher is involved:

- 1) What decisions characterized the teacher's handling of the event?
- 2) What seemed to be the rationale for the decisions?
- 3) Does the way the teacher handled the situation reflect what you've been taught? Explain.
- 4) What might be problematic for you if you had responsibility for this situation?
- 5) How would you handle the situation? What professional or experiential knowledge are you drawing on?

For situations where a teacher wasn't involved:

- 1) How would you handle the situation?
- 2) What decisions would you have to make?
- 3) What is your rationale?
- 4) How do your decisions reflect what you've been taught?
- 5) What do you think would be problematic for you?

Peer Coaching Guide--Journal

The student teacher journal is intended to help you analyze some of the events and situations you are experiencing in your classroom and school. Comment to your partner on whether she or he followed the initial guidelines.

1. Chose one situation or event to reflect on and write about in the journal.
2. Described the context of the event.
3. Told what the event was.
4. Reflected about what was seen and what it meant.

For situations where a teacher was involved:

5. Described the decisions which characterized the teacher's handling of the event.
6. Speculated about the rationale underlying the decisions.
7. Commented on whether the way the teacher handled the situation reflects what you've been taught.
8. Commented on what might be problematic if you had control.
9. Discussed how you would handle the situation.

For situations where a teacher wasn't involved:

10. Discussed how you would handle the situation.
11. Described decisions you would have made.
12. Gave a rationale for decisions.
13. Explained how decisions reflect what you've been taught.
14. Commented on what would be problematic for you.

Do you and your partner have any suggestions to improve the guidelines?

In what way(s) do you find the journal helpful?

Student Teaching Journal Assignment

Week of October 1-8

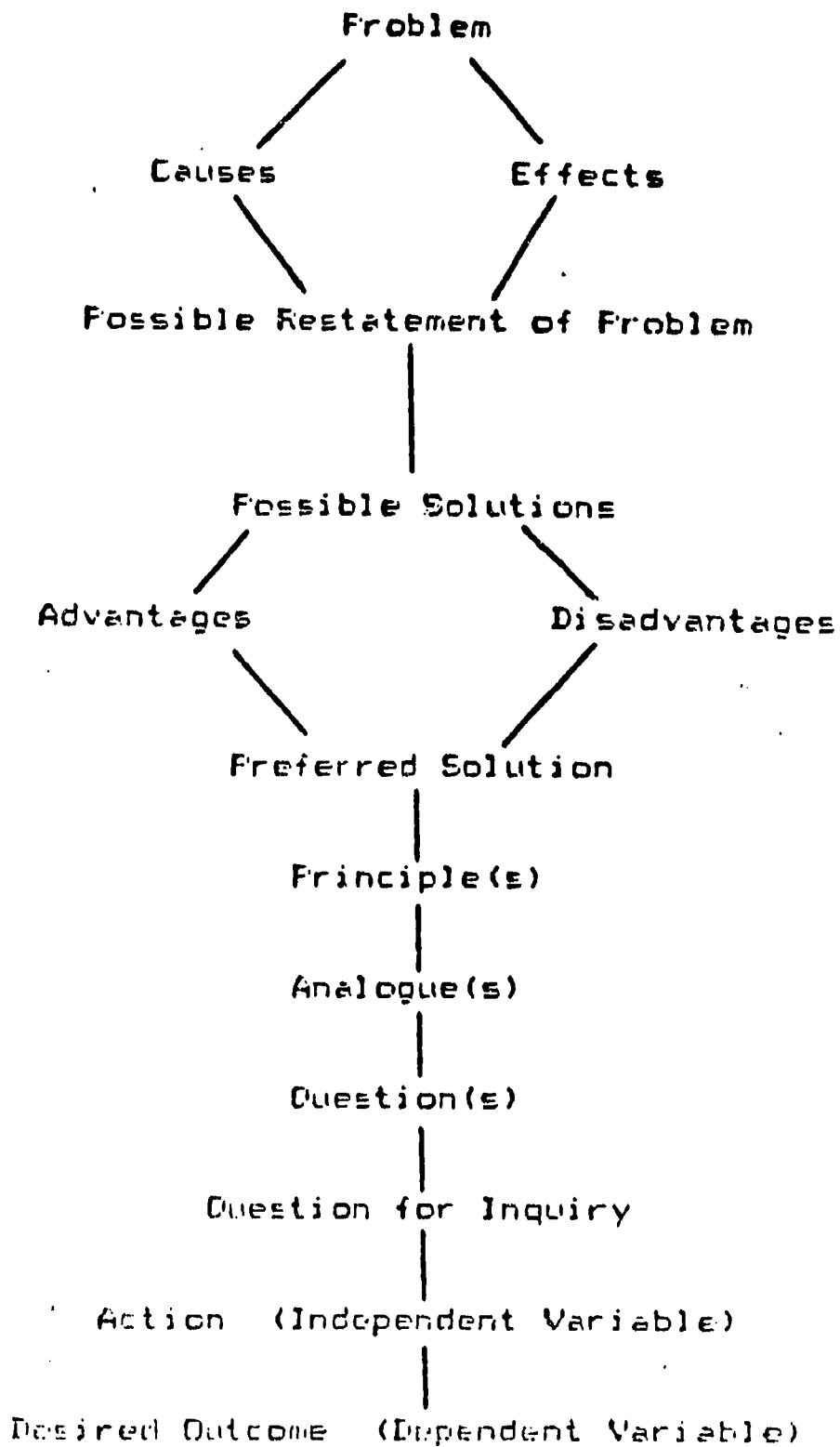
Following are five types of concerns which were frequently described in your journal entries:

- the way students are grouped for instruction.
- the educational experience different types of students have (e.g. girls/boys; high/low achievers; ethnic minority/majority students, etc.).
- acting out or non-task oriented behavior (by an individual or group).
- achievement problems (by an individual or group).
- how students are evaluated and graded

Choose a category which occurs in your classroom, which is of academic and practical interest to you, and which you would like to try to do something about.

- 1) Describe in as much detail as possible how the situation manifests itself in the classroom.
- 2) Explain why this situation concerns you. Elaborate as fully as possible.
- 3) List all the questions you can think of which are related to your concern, all the things you would like answers to or more information about. Do this in a brainstorming fashion. Don't censor or refine questions. That will be done later when you try to create some hypotheses about the situation. As you work with the situation, more questions should come to you. Systematically record those.
- 4) What goals do you have relative to this situation? What does this imply about your educational or teaching philosophy?

UNIVERSITY OF MARYLAND
PROBLEM SOLVING THINKING



PREFERRED SOLUTION: Use cooperative learning: think-pair-share modes

PRINCIPLE:

1. When students are actively involved, they will learn more, remember more, and make better use of what they have learned.
2. Active participation increases positive affect toward learning tasks.
3. Active participation, through sharing, produces a better self-concept.

ANALOGUE: This problem reminds me of what I do when I am not required to participate in an activity: I become lazy and restless and start talking.

QUESTION: How would I measure on task behavior?

QUESTION FOR INQUIRY: What would the difference be in the number of students staying on task in language arts class if the students were engaged in think-pair-share modes of instruction?

INDEPENDENT VARIABLE (ACTION)

Two teaching strategies will be implemented: traditional discussion mode, and think-pair-share modes.

DEPENDENT VARIABLE (DESIRED OUTCOME)

1. Number of students staying on task will increase.
2. Off task behaviors will decrease.

EDCI 488L
Beginning Teacher Seminar

Problem Solving Thinking Example

This problem solving example is based on the work of Cathy Pechnik.

PROBLEM: Children not staying on task in language arts class

Causes

Effects

- | | |
|--|--|
| 1. Work is not challenging enough | 1. Children misbehave: inattention, restlessness, aggression, talking. |
| 2. Work is too difficult | 2. Work does not get completed |
| 3. Expectations are not clearly defined; routine is not established. | 3. Quality of work decreases |
| 4. Too much teacher talk | 4. Learning is affected. |
| 5. Lack of student involvement | 5. Students are not meeting the objectives. |
| 6. Purpose of lesson is not clear | |

RESTATED PROBLEM: How can I motivate children to stay on task?

POSSIBLE SOLUTIONS

1. Have set routine for students to follow. Clearly define expectations.
2. Vary the kinds of assignments. Use more creative activities.
3. Change teaching procedures. Use cooperative learning: think, pair share.

Advantages:

1. Students will know what to expect from teacher if expectations are clearly defined. (1)
2. Students will stay on task if they enjoy and understand what they're doing. (2,3)
3. Student will learn and retain more through cooperative learning using think-pair-share.

Disadvantages:

1. More time must be spent on planning (2)
2. Noise level may increase with children engaging in cooperative learning (3)

PROBLEM SOLVING ASSIGNMENT

1. Choose one solution for the problem you have identified.
2. Justify your choice of a solution on the basis of your observations and from theory.
3. Present the principle(s) which underlie your solution.
4. Discuss your problem and choice of a solution with your cooperating teacher.
5. Try out your solution as soon as possible.
6. Evaluate your solution attempt

Describe (document) what happened:

How well did it work?

What was the change in behavior?

What was the change or difference in performance?

How did students respond?

Did the entire target group respond in the same way?

7. State your conclusion.

Do you need to restate the problem?

Are there additional causes/effects you need to consider?

How can you modify or refine the solution?

Do you want to try another solution?

For the whole group?

For part of the group?

8. State your intention for the next trial.

Due November 5, November 12, November 19, December 3.

Reformulation of page 2 of University of Maryland Problem Solving/Thinking

PEER COACHING GUIDE--PROBLEM SOLVING PROCEDURE

To help your partner use the problem solving procedure effectively, comment on whether she or he:

1. Formulated several problem statements
2. Selected a problem statement
3. Listed effects
4. Speculated about causes
5. Generated possible solutions
Generated a solution related to each cause -
6. Listed advantages of possible solutions
7. Listed disadvantages of possible solutions
8. Determined a preferred solution
9. Presented principle(s)
10. Stated an analogue
11. Formulated question(s)
12. Formulated a question for inquiry
13. Stated an independent variable (action)
14. Stated a dependant variable (outcome)

Appendix III
Supervision Training Materials

STUDENT TEACHER SUPERVISION

WORKSHOP MATERIALS

Catherine Flattery Favo
Catholic University of America
Fall 1988

SUPERVISION WORKSHOP
AUGUST 29, 1988

- I. INTRODUCTORY COMMENTS
 - A. Program goals- the development of reflective teachers-Linda Valli.
 - B. Purposes of supervision.
 - 1. An overview of purpose, content and process.
 - 2. Some research about the student teaching experience.
 - 3. Developmental Supervision by Carl Glickman.

- II. A PRACTICAL GUIDE TO STUDENT TEACHER SUPERVISION
 - A. Calendar and timeline.
 - B. Enhancing the relationship with the cooperating teacher.
 - C. Developmental stages in student teaching.
 - D. Instructional problems commonly faced by student teachers.
 - E. Instructional priorities at Catholic University.
 - F. Creating a form for written observations.

- III. OBSERVATION AND FEEDBACK PRACTICE SESSION
 - A. Videotapes.
 - B. Hypothetical Situations.

- IV. SELF-ANALYSIS: THE SELF AS SUPERVISOR
 - A. Achievement, Power and Affiliation Scale.
 - B. Supervisory Belief Inventory.

OBJECTIVES

This workshop seeks to:

1. Provide technical information regarding the duties of supervision: schedules, observations, meetings, evaluations.
2. Introduce the supervisors to some University goals and priorities: the conceptual framework for teacher education, educational priorities that the University would like to see student teachers practice.
3. Present some ideas and theories of supervision that will promote the development of reflective educators.
4. Model some types of supervisory feedback and give participants the opportunity to begin to develop their own supervisory style, including a self-designed observation form.
5. Give participants the opportunity to assess their own strengths, weaknesses and beliefs regarding supervision and education in general.
6. Make supervisors aware of the developmental levels and needs of student teachers and cooperating teachers.

SUPERVISION CONSISTS OF
PURPOSES

1. To help the student teachers to become reflective practitioners.

PROBLEM-SOLVERS
SELF-DIRECTED
COMBINE OBSERVATION AND THEORY TO GUIDE
EVERY DAY PRACTICE
SYSTEMATIC AND QUESTIONING
MINDFUL OF BROAD SOCIAL AND ETHICAL
CONSIDERATIONS

2. To support and guide the student teachers and cooperating teachers as they attempt to meet the university's requirements.

3. To provide the student teacher with opportunities for growth and information that enables a maximal amount of development.

4. To evaluate the student teacher's performance.

CONTENT

1. The conceptual framework for reflective practice.
2. The educational priorities of this particular teacher education program.
3. The locally determined curriculum.

PROCESS

1. Weekly observations and feedback conferences.
2. Evaluation meetings.
3. Goal setting sessions.
4. Feedback on the situation analysis activities.

DUTIES

In the beginning...

1. Supervisors and Field Placement Coordinator hold orientation meeting with student teachers.
2. Supervisors and Field Placement Coordinator hold orientation meeting with cooperating teachers and school principals.
3. Supervisor may want to meet with each cooperating teacher/student teacher team individually for a more detailed orientation session.

Throughout the semester...

1. Meet with Dr. Blum once a week to discuss progress of each student teacher and plan weekly seminars.
2. Assist in leading weekly seminars.
3. Observe student weekly and then meet with student teacher (and cooperating teacher as much as possible).
4. Review student teacher's lesson plans at each visit. Assist with planning as requested or needed.
5. Read and respond to student teacher's situation analysis activities.
6. Meet with cooperating teacher and student teacher for regularly scheduled evaluations.
7. Meet regularly with the cooperating teacher for informal evaluation and goal setting.

The Grand Finale...

1. Hold final evaluation conference.
2. Collect and deliver final teacher evaluation forms and letters of recommendation from cooperating teachers. You may need to remind cooperating teachers that these need to be completed before the end of the grading period.
3. Compose and deliver your own evaluation letter for each student teacher.

SOME RESEARCH ABOUT THE STUDENT TEACHING EXPERIENCE

Purpose: To allow the pre-service educator to apply the skills, knowledge and values that he or she has acquired through prior training and experiences.

Players: The student teaching triad consists of the student teacher, cooperating teacher, university supervisor. Ideally, this is a cooperative venture, with all three members working together towards common goals.

1. McIntyre (1984) Operationally, the university supervisor and cooperating teacher rarely spend much time working together and rarely concentrate on the same area of development.
2. As the semester progresses, the attitudes and performance of the student teacher become more like those of the cooperating teacher. (Iannacone, 1963; McIntyre, 1984)
3. The cooperating teacher exudes the greatest influence over the student teacher during the field experience. Student teachers who are placed with teachers who are at lower stages of professional development may experience retarded growth, and in some instances, may not progress at all.
4. Cooperating teachers do not review student teachers' work critically. There is a tendency to avoid critical evaluations and negative remarks. For whatever reasons, they do not take the time to observe student teachers and offer quality feedback that is designed to improve classroom performance.
5. The university supervisor can play an important role in shaping the student teaching experience. They act as coaches, motivating the student teachers to maintain their positive attitudes and ideals, to persist in incorporating theoretically sound and creative elements into lessons, and in offering constructive criticism tempered with suggestions and advice.
6. Student teachers prefer a more directive approach to supervision at first. As knowledge, confidence and competence increase, more collaborative and non-directive approaches are favored.

DEVELOPMENTAL STAGES IN STUDENT TEACHERS
J.J. Caruso, 1977.

I. ANXIETY/EUPHORIA

Great concern for acceptance and success, coupled with euphoria at the chance to work with students and apply past years of training.

II. CONFUSION/CLARITY

Complexity of the classroom confronts students as they attempt to fit into their position. Success with small groups or individual children help to give some sense of confidence.

III. COMPETENCE/INADEQUACY

Feelings of competence emerge at times, although student teacher still feels inadequate and overwhelmed when facing certain tasks.

IV. CRITICISM/NEW AWARENESS

Although still oriented towards survival, s.t. begins to be more concerned with the children and other professional issues. Critical analysis of the cooperating teacher, the classroom, and their own performance begin to surface.

V. MORE COMPETENCE/GREATER INADEQUACY

Concern for survival lessens. Ready to take over and confidence increases. So does frustration as student teachers are not able to realize all of their own goals and do not perfect their skills as they think they should.

VI. GUILT/LOSS

Feel that they should have done more, will miss the students, teacher and experience. In some instances, s.t.s feel anxious about returning to campus, starting a career etc.

SOME SUGGESTIONS TO ENHANCE THE RELATIONSHIP BETWEEN THE
UNVIERSITY SUPERVISOR, COOPERATING TEACHER AND STUDENT
TEACHER.

1. Orientation meeting between the university supervisor, cooperating teacher and student teacher held very early in the semester.

Expectations, observation procedures, scheduling details, preliminary goal setting.

2. Post-observation meetings should be scheduled so that the cooperating teacher can also attend, especially at the start of the semester. We have found that this increases the quality of the feedback offered by the cooperating teacher, especially when they are novices or unfamiliar with this program.

3. Use conferences to set goals and develop instruments that reflect these goals. The cooperating teachers can use these to collect data and monitor performance in a consistent and easy manner. (See example)

4. Arrange to meet the cooperating teacher or talk with them informally and without the student teacher. The appraisal of performance is sometimes more candid and more productive suggestions for improvement will surface.

CLINICAL SUPERVISION

Is helpful in stimulating growth and development, influencing teacher behaviors in the classroom, fostering the selection and development of good instructional approaches and materials, balances helping with evaluating, assists teachers in solving problems they encounter.

- 1) Pre-observation conference- Set goals for the observation.
- 2) Classroom observation- Watch and record data as determined in previous step. (Observation form or instrument is advisable.)
- 3) Analysis and strategy- Plan for conference, analyze data.
(A good time to plan to include elements of the conceptual framework.)
- 4) Supervision conference- Discuss and problem-solve
- 5) Post-conference analysis- Evaluate the proceedings.

Some possible difficulties with observation-

1. Problems being objective while gathering data.
2. Being in the wrong mood may cloud perceptions.
3. Physical distance.
4. Psychological distance.
5. Inappropriate participation ie. conversations with other teachers, students.
6. Untoward behavior- to single out one child for observation.
7. Teacher may overacknowledge the supervisor.

It is important to realize the effects that a supervisor's presence may have on teachers and children. The supervisor, cooperating teacher, and student teacher may want to discuss observation procedures at the beginning of the semester. They may want to consider where the supervisor should sit during observations, whether the supervisor should be introduced to the class and whether supervisor/student interactions should be limited.

DEVELOPMENTAL SUPERVISION

Carl Glickman (1984) writes that supervision should respond to teachers as changing adults with developmental differences and varied life experiences. The task of supervision is to determine the developmental level of each teacher and then adapt the supervisory approach accordingly. The ultimate goal is to increase teacher control over supervision to develop effective teachers who thoughtfully assess their own actions and explore new possibilities through cooperative and independent endeavors.

Teachers developmental levels can be determined by assessing their levels of commitment and abstraction. See Figures I and II for a more detailed explanation.

Directive orientation- supervisor controls the content and decisions of supervisory interactions.

Collaborative orientation- Supervisor shares ideas but accepts teacher input and negotiates outcomes.

Non-directive orientation- Supervisor acts as a facilitator who listens, clarifies and reflects during teacher controlled encounters.

Appendix IV
Reflection/Conceptual Level Assessment Tools

STUDENT EVALUATION PROCESSES: (for students' performance on action research project)

A. DESCRIPTION OF THE PROBLEM

(1) Fully analyzes situation using all aspects of the framework: 3 levels of reflection, alludes to dilemmas, across all commonplaces

Provides specific documentation of concrete instances of the problem and generalizes to an all inclusive statement of the problem.

Differentiates between observations and inferences.

Describes problem from multiple perspectives of those involved.

(2) Refers to all aspects of the framework but does not develop all aspects fully.

Documents specific instances but fails to generalize to inclusive statements of the problem.

Presents a general statement of the problem without providing specific documentation.

Does not describe problem from all perspectives

(3) Does not coherently express or analyze the problem.

Does not use conceptual framework to express or analyze the problem.

Does not document specific instances of the problem.

Describes/defines situation from one dimension- an egocentric viewpoint or perspective.

B. WHY THIS PROBLEM WAS OF CONCERN

(1) Discusses problem in context of important social, developmental or educational goals.

Recognizes opposing viewpoints but clearly establishes some priorities over others with convincing arguments.

Uses technical, interpretive and critical thought to examine why problem is of concern.

Demonstrates knowledge of the purposes and consequences of educational practices.

Acknowledges how the context influences the situation.

(2) Discusses multiple reasons, but with no sense of priority.

Uses only interpretive and technical thought to formulate or express concerns.

Fails to acknowledge opposing viewpoints.

Does not recognize all consequences of educational practice.

Alludes to a dilemma or issue in education and takes a stand on that issue without adequately presenting the reasons for taking that position.

- (3) Approaches or formulates concerns from only one level of reflection

States how problem influences only one commonplace.

Does not recognize or associate the problem with a dilemma or issue in education.

Uses unsupported personal belief statements to formulate concerns.

Presents concerns from an egocentric perspective.

C. EFFECTS, CAUSES, SOLUTIONS

- (1) Generates a complete, related and plausible set of effects, causes, and solutions which consider factors of context, subject matter, teacher and student.

Formulates a legitimate and practical set of advantages and disadvantages to all solutions that acknowledge opposing viewpoints.

- (2) Generates a partial range of effects, causes and solutions but not all effects link to a cause which then link to a solution.

Fails to identify the pertinent advantages and disadvantages to solutions.

- (3) Generates a narrow range or incomplete list of effects, causes and solutions

Causes, effects and solutions do not exhibit a clear relationship to each other.

Not able to generate advantages and disadvantages to each solution.

D. SOLUTION TRIALS

- (1) Can see adverse effects of solutions and/or better solutions and modify strategies through systematic observation and analyses.

Rationally justifies choice of solution in terms of coursework and worth of strategies as indicated by advantages and disadvantages.

Monitors, documents and evaluates the effects of solutions using all three levels of thought, across all commonplaces, and without bias.

Modifies judgments with new evidence.

- (2) Partially justifies or randomly selects multiple solutions.

Provides limited documentation and evaluation.

- (3) Tries only a narrow range of possible solutions
Does not justify choice of solutions

Fails to monitor, document and evaluate implementation of solutions.

E. REFLECTION: CHANGES IN THINKING

- (1) Recognizes influences of or interrelationships among the four commonplaces.
Shows evidence of thoughtful evaluation of one's own perspective (e.g.) modifies judgement with new evidence, acknowledges possibility of error or recognizes another perspective.
- (2) States personal beliefs or tells of changes in thinking without specifying supporting observations or reasons.
- (3) Fails to acknowledge any change in thinking.

F. LITERATURE REVIEW

- (1) Shows evidence of critically evaluating and comparing literature.
Related Lit. addresses critical, interpretive and technical aspects of the problem.
Literature is related to all commonplaces as specific to this situation.
Mentions opposing viewpoints in the literature.
- (2) Introduces appropriate literature but does not relate it to the specifics of the situation.
- (3) Does not introduce adequate amounts of information.
Innaccurately interprets or applies literature.

G. PHILOSOPHY OF EDUCATION

- (1) Articulates a consistent philosophy with scholarly support that is illustrated by many examples from the situation analysis activity.
- (2) Partially develops a consistent philosophy that is lacking in scholarly support or specific examples from the specific situation.
- (3) Philosophy statement is inconsistent and lacks scholarly support or documentation.

John's teacher has called a conference with his parents to discuss his progress. The teacher states that she cannot give John a passing grade for the course because he has not turned in the second of two assignments that make up the quarter's grade. John spends extreme amounts of time on some assignments, extending them well beyond what is required. As a result John gets high marks on completed assignments but 0's for unattempted assignments. For example, one assignment required that students read a local newspaper account of a major fire that had occurred 15 years ago and outline the facts. There was suspicion of arson for profit by an influential group of business men, but no substantive proof could be found. After carrying out this assignment, John chose to go interview people involved in the case who were still living in the town and report and contrast viewpoints after a 15 year time lapse. As a result he didn't complete the other assignment associated with the unit which was to review the account in another local newspaper and look for contrasts in views.

John's parents argue that the teacher should recognize John's initiative, self-direction and that what he accomplished in his extension was similar to the second assignment. Therefore, his grade on the first assignment should be his grade for the term.

Whose position would you take? Why? Please list as many reasons as you can think of?

I take the teachers side.

① The teacher has assigned more than one problem. Therefore John doing only one is not following directions.

② GRADING John on only one assignment is not fair to those students who did both. John, knowing of both assignments chose not to complete the second one, but instead, is the first to the best of his ability. The other students

Appendix VI
Beginning Teacher Problems Suggest Areas
For Preservice Program Improvement

BEGINNING TEACHER PROBLEMS SUGGEST AREAS
FOR PRESERVICE PROGRAM IMPROVEMENT

by

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April 1988

BEGINNING TEACHER PROBLEMS SUGGEST AREAS
FOR PRESERVICE PROGRAM IMPROVEMENT

Beginning teachers experience more classroom problems than experienced teachers do and they experience them more profoundly. Four particularly knotty problems, illustrated in the following examples, are those of isolation, imitation, transfer, and technique.

Because Patrice needed additional experience, she was told to delay her student teaching. In the interim, she would be assigned another practicum. Patrice resisted this directive because she did not want to be isolated from her friends, who would all be student teaching before her. When Elizabeth began student teaching, she imitated her cooperating teacher's practice of taking off test points for inappropriate classroom behavior--even though she had just finished studying the principle of logical consequences.

In the first month of student teaching, Mona followed the school district's competency-based curriculum item by item. She failed to transfer skills she had developed her junior practicum year in creating integrated teaching units. And, like many of her peers, when Carol developed her first social studies unit her initial questions were technical: How can I keep this fun and exciting? How much group work should I include? More peripheral to her concerns were questions about the importance of the content, how much 'reality' to include, how to avoid an ethnocentric bias, etc.

Unfortunately, teacher education programs often contribute to these problems by their structure of sequenced coursework followed by fieldwork, their content emphasis, and their minimal supervision of practice. Though some

drastic changes in teacher education approaches have been proposed, this program structure has remained remarkably stable over time. Given this stability, program adaptations within a traditional structure seem to be a sensible strategy to improve the preparation of beginning teachers.

Through a three year grant from the U.S. Department of Education, we have been making changes in an undergraduate elementary education program to minimize beginning teachers' problems. We are working on the problem of isolation by collaborating with local educators in professional development schools, on the problem of imitation by using a reflective approach to teacher preparation, on the problem of transfer by more rigorously defining fieldwork expectations, and on the problem of technique by incorporating a normative emphasis throughout our program components. This article describes those problems, changes we've made to overcome them, and what we've learned in the process.

The Problem of Isolation

Isolation affects all teachers, who work with colleagues much less than other professionals do. Lack of peer contact often leads to job dissatisfaction and impedes professional growth (Little 1981). This problem affects student teachers in particular. Once most of their coursework is complete, student teachers are often sent out alone to schools they know little about and with which the university has little contact. Although they work closely with a cooperating teacher, they are cut off from peers, from the university, and often feel isolated within their cooperating school where they know few teachers and are not often incorporated into the social organization of the school.

To address this problem of isolation, one of the first goals we set in our teacher education improvement project was to establish long-term relationships with cooperating schools, not just with cooperating teachers. We decided to group students in select schools and found local school systems cooperative in assisting us with this effort. With other Holmes Group members, we call these professional development schools (1986).

Professional development schools can help alleviate isolation in three ways. They can cut down on isolation from peers since student teachers are assigned to schools in groups. This enables students to function as an informal support group to each other and, more formally, to do peer coaching. Secondly, they can minimize isolation within the school because they are more oriented toward regularly incorporating student teachers within their social structure. Professional development schools also reduce isolation from the university. Since the number of cooperating schools is decreased, university presence can be more extensive. There can also be more communication between cooperating teachers and teacher education faculty about goals and expectations, so students are not cut off from their own professional development.

We have, however, had some difficulties with the professional development school concept. One is that it is not always easy to find a school with a critical mass of good teachers able to devote the substantial time and effort needed to supervise different cohorts of student teachers. Another difficulty is that even if these schools are found, the teachers are not permanent: they are promoted to administrative positions, take sabbaticals and leaves, transfer to other schools, move out of the area, etc. Some simply need a periodic respite from the demands of being mentors. Nonetheless, we have found the potential of these relationships so great, we remain committed to the concept

by continuously searching for new teachers and new schools to supplement our pool.

The Problem of Imitation

Beginning teachers generally claim that student teaching was the most valuable part of their preparation and that the cooperating teacher was the person from whom they learned the most (Feiman-Nemser and Buchmann 1985; Griffin 1983). But this adulation in itself is a problem. Too often student teachers simply mimic or copy their cooperating teachers' behavior. They do not understand the reasons behind those actions and use those behaviors in inappropriate ways. Moreover, like Elizabeth, they rarely consider that that behavior might conflict with research or theory based principles taught in education courses.

When student teachers merely imitate their cooperating teachers they have difficulty teaching on their own because they have not developed a consistent, internalized philosophy of instruction, have not found a style for which they are well suited, and cannot adapt their behavior to new and different situations.

The widespread use of competency based approaches to teacher education can contribute to this problem by focusing on rote behaviors to the exclusion of the rationale of the behavior or alternatives to that behavior. To break from an imitative model, we developed a reflective model of teacher education.

This orientation focuses more on teacher thinking than on behavior. Though teacher behavior is ultimately important, teacher preparation needs to focus more on developing thinking so beginning teachers can engage in consciously informed action rather than impulsive or non-reflective action. We made changes in education courses to promote students' ability to stand apart from the self

and critically examine both their own actions and the context of those actions (Berlak and Berlak 1981).

Foundations of Education, for example, is taught socratically and constructed around broad questions such as: What is education? What does it mean to teach? What is the social impact of schooling? Students conduct group projects, analyzing five aspects of controversial issues: the precipitating situation, the historical context, the philosophical issues, the social impact, and the impact on the teaching profession. In our Classroom Management course students analyze teacher behaviors in problem cases, explaining why those behaviors are not effective, what principles of classroom management are violated, and what better alternatives could be chosen. In Psychology of Education students keep reflective journals on their tutoring experiences and in Reading, Language and Literature are required to generate reflective questions from readings which were discussed in each class.

The Problem of Transfer

Presuming that teacher education programs equip beginning teachers with all the skills, knowledge, values, and experience they need to be successful teachers would be foolhardy. However, the literature suggests that, like Mona, beginning teachers often fail to use the knowledge they do have. They fall back on childhood memories of teachers or become overly dependent on the mandated curriculum, rather than use professional knowledge to guide their practice.

To help students overcome this problem of transfer, professional knowledge must become more powerful. There must be collaborative agreement between university and field personnel on program goals and expectations regarding curriculum organization, instructional methods and management strategies. There

must be clearly established ways of helping students draw upon prior knowledge in their student teaching experience.

As in many teacher education programs, the loose linkages between university and field based components of our program exacerbate the problem of transfer. We are working to overcome this problem by developing supervision approaches, workshops and materials consistent with and explicit about our expectations for student teachers. We also enlist university supervisors and cooperating teachers in establishing and helping student teachers carry out those expectations.

For example, in keeping with a reflective teaching orientation, we expect students to analyze their own practice. Cooperating teachers developed an evaluation form which students fill out themselves. The students then meet with their cooperating teachers who discuss their judgments. To further encourage reflection, cooperating teachers and university supervisors hold pre-observation conferences in which the student teacher identifies an area of concern about which he or she would like feedback.

Three other changes we have made to overcome the problem of transfer are the identification of instructional priorities, the creation of a conceptual framework for the program, and an action research project to be completed during the student teaching semester.

One of the reasons why knowledge fails to guide practice is that student teachers, cooperating teachers, and university supervisors are not always clear about the knowledge and skills the university views as central. While competency based programs list discrete behaviors to be observed and evaluated, we have listed broad concepts we want students to consider in their planning and self-evaluation. Students are encouraged to use this list when they

identify areas of concern for their pre-observation conferences. Using Shulman's (1987) knowledge base categories, we have listed such priorities as planning lessons within coherent units which integrate subject areas; selecting good literature for children which is non-sexist and represents other cultures; extending reading instruction across the school day; and recording systematic and objective observations for school record keeping purposes.

In addition to these instructional priorities, a conceptual framework can assist students in building upon and using knowledge. As Garman (1984) has argued, teachers and supervisors need a common framework and a common language which pictures teaching in a manageable way. The three-dimensional conceptual framework we have developed is broad enough to be used in every course and teaching situation and is in keeping with the program's reflective orientation. Like a number of other reflective teacher education programs it draws upon Schwab's notion of curriculum commonplaces (1973), Van Manen's levels of reflection (1977), and Berlak and Berlak's dilemmas of schooling (1981). These three dimensions of the conceptual framework provide the focus, process, and issues for reflection.

From our students' perspective, the major change we have made in the program thus far is the addition of an action research project during the student teaching semester. Using what we call a situation analysis & ide, students are required to identify and resolve a classroom problem. They have selected problems like group or individual off-task behavior, low achievement, lack of student motivation, a fragmented, objective-driven curriculum, and gender inequity in math lessons.

This assignment demands reflection on problems of practice, drawing on relevant research and theory for solutions, and integrating knowledge across

coursework and field experiences. It forces students to broaden their approach to problems, to see the interrelationship of factors, and to see their own role in creating and resolving problems. In written evaluations, students say the activity teaches them two important lessons: that they can question anything in the classroom and need not take anything for granted; and that they themselves have the ability to improve the classroom. It is an initial experience of empowerment, critical to gaining the confidence to become a reflective and self-renewing teacher.

The Problem of Technique

When pre-service students are asked what kinds of questions they think are important to consider about teaching, they overwhelmingly respond with technical questions, with questions about how to do something. They want quick answers and expect a definite set of rules to follow to become good teachers. This desire for prescription is a fourth problem of beginning teachers.

Though the point is disputed, we question whether good teachers develop by rule following. First of all, teaching is so complex and so situation specific that although empirical research might provide a few guidelines or concepts to consider, these fall far short of being specific rules to follow in every situation (Shulman 1986). Second, prescribing rule-following behavior disparages teachers' intellectual capacities (Fenstermacher 1980), creating dissatisfaction and a tendency for the best and the brightest to leave teaching. And third, a rule following, technical orientation downplays the normative aspects of teaching. Even though most teacher educators acknowledge the moral and ethical base of teaching, by and large training is technical.

Some teacher educators argue that as neophytes, beginning teachers cannot be expected to focus on more than technical aspects. Our concern is that

technical proficiency can become an unending quest, that one's technique would never be good enough. Conceivably, a teacher would never be ready to focus on broader, ethical issues of teaching, or to consider alternatives to dominant forms of practice. A related concern is that consistent technical thinking might actually reduce students' ability and desire to think more broadly and ethically about teaching (Van Manen 1977).

To encourage students to think about teaching in broadly normative rather than in technical rule-following terms our conceptual framework embeds technical thinking ("how to" thinking) in its normative base (Why is this important? What or whose goals and values are being promoted? Is this worthwhile? Worthwhile for whom? Might there be adverse consequences to a particular course of action? Etc.).

The conceptual framework expands consideration of important educational questions beyond the introductory foundations class, to ensure that issues and values occupy a central place throughout the students' program. In their Classroom Management course, for example, students must consider what values (individualistic, competitive, cooperative, etc.) different types of classroom arrangements promote and whom those values benefit. In methods courses, students are required to defend the purpose of the teaching units they create in contrast to other purposes and approaches. They must explain why this content is important to teach in this way to this group of students.

Conclusion

Beginning teachers have numerous problems from which we selected four to guide changes in our teacher education program. Other teacher educators might view other problems as more critical, or other solutions to the problems we selected. Regardless of the specific problem selected, we have found the

identification of beginning problems of practice to be a useful way of approaching the revitalization of teacher education.

Author's Note: Funding for this project was received from the U.S. Department of Education Office of Educational Research and Improvement (OERI), Contract No. 400-85-1062. Further information is available from the author.

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