DOCUMENT RESUME

ED 306 055 RC 017 045

AUTHOR Kleinfeld, Judith; Noordhoff, Karen
TITLE Teachers for Rural Alaska (TRA) Program. Part A: Project Portrayal. Part B: Program Assessment Report. Part C: Practice Profile. Final Report.
INSTITUTION Alaska Univ., Fairbanks. Center for Cross-Cultural Studies.
SPONS AGENCY Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE 22 Jul 88
NOTE 84p.
PUB TYPE Reports - Descriptive (141) -- Reports - Evaluative/Feasibility (142) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Cross Cultural Training; Cultural Awareness; Higher Education; *Preservice Teacher Education; Program Content; Rural Schools; *Secondary School Teachers; Small Schools; *Teacher Education Programs; Teaching Skills
IDENTIFIERS Alaska; Cross Cultural Teaching; *Reflective Inquiry; *Teachers for Rural Alaska

ABSTRACT

Teachers for Rural Alaska is a fifth year program leading to secondary teacher certification and focusing on preparation for teaching in small village high schools with predominantly Native populations. Emphasizing a reflective inquiry orientation, the program aims to develop teachers who (1) can identify crucial problems and dilemmas in rural, cross-cultural teaching situations; (2) have a wide repertoire of teaching strategies; (3) use the research base to develop strategies; (4) can tailor instruction to culturally different students; and (5) habitually reflect upon and learn from their own practices. The program features use of master teachers to provide a classroom-based perspective, reflective seminars linked to an apprenticeship, coursework focused on concrete teaching problems, use of lengthy "teaching cases" to develop reflective inquiry skills, assessment of prospective teachers through videotaped teaching samples, and distance-delivered coursework during student teaching in rural villages. The 27 teacher education students participating in the program's first and second years showed dramatic changes in their development as teachers, reflecting program goals. The three-part report contains 10 references, 6 tables of program evaluation results, the coding system for analysis of teaching videotapes, and a checklist for monitoring 14 program components. (SV)

TEACHERS FOR RURAL ALASKA (TRA) PROGRAM

Final Report to the Office of Educational Research and Improvement,
U.S. Department of Education

PART A: PROJECT PORTRAYAL

PART B: PROGRAM ASSESSMENT REPORT

PART C: PRACTICE PROFILE

July 22, 1988

Prepared by

Judith Kleinfeld, Project Director
and
Karen Noordhoff, Assistant Project Director

Center for Cross-Cultural Studies
University of Alaska Fairbanks
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TEACHERS FOR RURAL ALASKA: PROJECT PORTRAYAL

When Tom Jamison* entered our fifth-year teacher certification program for students preparing to teach in Eskimo and Indian villages, we asked him and our other students to hit the ground teaching.

"Prepare a ten-minute lesson," we told them, "something you think would be appropriate for Eskimo and Indian students in a small village high school. Choose any lesson you want. We'll be videotaping you. We'll also be asking you why you chose this particular lesson, how you planned it, and what concerns about teaching your lesson raised in your mind."

Tom chose to teach a lesson on the food chain. He sat down on a table with a large white pad in his lap. He began drawing a diagram of the food chain. He kept his eyes on the pad, the fellow students, and began a ten-minute monologue:

> TJ: I guess what I want to talk about -- one way to talk about that in relating to this, that specific relationship, is through something called a food chain. And when we normally think about food, I think you and I kind of think about the way we just want to satisfy our taste buds, and we might talk about a big three-quarter pounder or a bag of Doritos, or something like that. But when we talk about food chain, I like to refer and think of food as energy and, um, little packets of energy that are used to fuel a machine, and that would be a living organism....

Now why was Tom lecturing in such a disjointed way? He knew better. He had been a recreation director in an Eskimo village for several years. He knows that, when talking to Eskimo students who have trouble with English, a teacher has to use clear language and get to the point. Yet, his opening speech is so convoluted, so full of pronouns and parentheses, that the other graduate students can barely figure out what he's trying to teach. And why is Tom making references to a three-quarter pounder? He knows that no Eskimo village has a McDonalds. Tom has master's degrees in two scientific fields. Can't he explain the concept of energy transfer in a food chain in a clearer and more concrete way?

When we asked Tom about how he planned this ten-minute lesson and what he was trying to teach, he had little to say: "I chose this topic because it's one of those simple, basic topics that kind of just go on and on...." He saw no problems with the lesson. He had no plans for doing

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* This is a pseudonym.

anything different next time. The lesson, he said, had raised no particular issues he wanted to reflect on.

At the end of the Teachers for Rural Alaska program, we asked Tom and our other students to do it again.

Tom walked to the blackboard with energy and confidence. He drew on the board a diagram of a village steam bath. Getting together for a steam is an important social and political event in many Eskimo communities. He turned to the class:

TJ: Your assignment was to go into and take a steam bath, and I wanted you to make as many observations as possible about what the state of water was at various times according to the temperature...

...So, what was it like when you first walked in, when you came in to load up the stove?

S: There was water in it, I put water in the pan.

TJ: You put water in the pan ---- which -- the pan here?

S: On the stove.

TJ: But before, when you first walked in, did you notice anything about water in the steam?

S: Frost on it.

This time Tom's instructional purposes were clear and his language was crisp. He had asked students to make observations of water as a solid, liquid, and gas in the steam bath. He was developing a concept through direct observation and discussion. He was helping them formulate from their own experience an important scientific principle -- that temperature affects the state of matter. Tom was teaching not only scientific content but also the scientific method -- making careful observations and searching for patterns. He had grounded the lesson in a familiar event of real interest to students. They were curious about what they had seen: Why, for example, did the steam disappear when the door was opened?

This time when we asked Tom about his purposes, planning process, and the issues the lesson raised for him, he had a lot to say. He talked about the concepts he was trying to develop through the steam bath example. He discussed how to teach students to make careful observations. He talked about teaching next the concepts of condensation and evaporation in a way students could understand and then discussing how both western scientists and Native Alaskans predicted the weather. He emphasized the importance of "honing in" on objectives, structuring lessons in small parts, and including visual examples and demonstrations.

I. PROJECT DESCRIPTION AND EVOLUTION

Teachers for Rural Alaska is a demonstration project intended to pioneer a new approach to preparing excellent teachers for multi-cultural contexts. The project focused specifically on the preparation of teachers for small rural high schools in Eskimo and Indian villages. These schools demand highly competent faculty--teachers who can teach a wide range of academic subjects to high school students of enormously varied achievement levels and teachers who can create trust between the public school and a minority community wary of the western cultural domination that the school symbolizes. The teaching problems our students face in rural villages with Eskimo and Indian populations have much in common with the teaching problems teachers face in inner city schools with Black and Hispanic populations. Teachers for Rural Alaska has developed an approach to teacher preparation useful in many universities emphasizing the preparation of teachers for culturally diverse schools and for minority communities.

We began the program with a few general ideas of where we wanted to go. We wanted first of all to collaborate with excellent teachers in designing a teacher education program. We wanted to create a program that would reflect the knowledge and experience of master teachers who were successful in multi-cultural classrooms, not just the priorities of university professors. Second, we wanted to create a teacher education program that was a "program" with focus and clear purpose. Teacher preparation needed to be more than a collection of isolated courses. Third, we wanted a program that would help teachers design instruction well adapted to culturally diverse contexts. We wanted to sensitize teachers to the political and ethical issues, as well as the technical teaching issues, that minority communities present.

Finally, we wanted a teacher education program that was intellectually demanding and exciting. Real teaching is enormously demanding and exciting. What instructional goals make sense for students who are probably going to spend their adult lives in a village of 500 people who do subsistence hunting and occasional construction work and who are beset by alcoholism? How should you handle Matt, the basketball star whose classroom career is devoted to making bird-calls now that the basketball season is over? What should you do about Tommy, who is the brightest and most creative student in your class and who cannot master standard English no matter what you try? What about Alice, who is very bright and should go to college but who lives in a traditional Eskimo family where women are expected to stay at home and care for the family? Such problems demand enormous creativity and intelligence and energy. Why should teacher education be an intellectual wasteland when teaching itself is so difficulty and complex?

When we began the Teachers for Rural Alaska program, these goals were vague and abstract. Three years later we developed a project much more successful than we had thought possible. Specifically, we have accomplished the following:

1. Documented substantial changes in our students' teaching abilities--their conception of teaching problems, their use of research knowledge in teaching, and, above all, their sensitivity to the cultural context --the background knowledge, vocabulary, frame-of-reference, and communication styles of culturally diverse students

2. Institutionalized the Teachers for Rural Alaska Program at the University of Alaska Fairbanks during a period of resource shortage in the Department of Education

3. Developed a model of teacher education that is having great influence on the traditional elementary and secondary programs at the University of Alaska Fairbanks and in teacher education programs elsewhere in Alaska

4. Made important contributions to the national dialogue on the reform of teacher education--specifically on the use of narrative cases in teacher preparation, on the conceptualization and measurement of "reflective inquiry" as a model for teacher education, and the centering of a teacher education program around the concrete teaching problems and dilemmas

We briefly describe the evolution of the Teachers for Rural Alaska program during the planning year, the first experimental year, and the second consolidation year.

The Planning Year

We spent the first year of the project working with university faculty and school districts to develop knowledge of the project and support for it. Many meetings were held with university faculty to explain the project and solicit ideas. We asked rural school districts if they would be interested in the graduates of such a program and whether they would consider an "internship" approach that would continue teacher education into the first year of rural teaching.

These early efforts were only moderately successful. University faculty were suspicious of the project, viewed it as an implicit criticism of the traditional education program in which they taught, and grudgingly supported it. School districts expressed great interest in employing graduates of such a program and were willing to work with the university in arranging an internship year. NEA-Alaska, however, opposed the internship year since beginning teachers would be reporting to two masters --the university and the school district--and the internship year might not count towards tenure.

The major achievement of the first year was a summer workshop in which the three faculty members responsible for developing the Teachers for Rural Alaska Program met with master teachers in rural schools to develop a program design. Participants discussed how they themselves had actually learned to teach. They identified the knowledge, skills, and dispositions that they believed rural teachers should possess. They specified the kinds of academic and clinical experiences important to developing such knowledge, skills, and dispositions.

These master teachers warned us about the mistaken approaches teacher education programs had taken in the past. "Give me a teacher who knows one method of teaching reading and can use it well!" said one of our master teachers as an example. "Most teacher education programs teach students ten ways of teaching reading and they can't use a one of them. Teach them how to do something so they can get started."

About half of the master teachers who participated in this summer workshop remained active collaborators. Some came to the university during the school year and taught blocks of coursework. Some gave joint presentations with us at conferences. Teachers were surprised to see that their ideas were taken seriously and implemented in the program. Many had expected the summer workshop to be no more than a "window dressing" legitimizing what university professors had wanted to do all along. Informally, these teachers have become a source of political support for the program and added to its reputation.

Year 1: The Experimental Year

We began the first year of the program with a basic plan that had developed from the summer workshop. Teachers for Rural Alaska would not be organized around the traditional sequence of foundation courses, methods courses, and student teaching. Instead the program would center around the concrete problems of teaching specific subjects to Eskimo and Indian students in small high schools. The program was divided into blocks. The first and last blocks were "bookends" focusing on the social and cultural context. The central blocks dealt with subject matter--the teaching of English and the development of literacy, the teaching of mathematics, the teaching of social studies and Native studies, and the teaching of science. In its focus on subject matter teaching and how teachers must transform subject matter, the project anticipated Shulman's (1987) emphasis on the neglect of subject teaching in traditional teacher education program in favor of generic teaching methods. The TRA program did include instruction in generic teaching skills--models of lesson planning, motivation, classroom management, evaluation--but these skills were a secondary emphasis in each subject matter block.

In addition to daily university seminars, students participated in clinical experiences. We selected a middle school with a reputation for academic excellence and a "team" organization which divides a large,

impersonal school into small groups of about five teachers and a hundred students. We designed the central clinical experience as tutoring culturally different students both in the classroom and after school. Such experiences, we thought (incorrectly) at the time, would give our students some understanding of students' developmental levels and conceptual errors and enable them to practice teaching with a focus on the academic task before they became overwhelmed with classroom management issues.

During the first year, in short, the fall semester centered on daily university seminars combined with tutoring as the major clinical experience. The spring semester was devoted to student teaching in a rural village. Two field delivered courses supplemented student teaching and gave students an opportunity to analyze and reflect systematically on the student teaching experience. Students returned to the university for a concluding week of seminar work. With the exception of student teaching, this program was a radical departure from the traditional teacher education program. In order to meet certification requirements, we wrote a memorandum to the department head detailing the program and showing how the program included the traditional coursework included in foundation and methods courses. On student transcripts, the names of the traditional courses appeared with grades assigned. Thus, we did not have to seek course approvals for experimental courses during our first year.

We evaluated our first year's progress by a number of qualitative and quantitative measures. We did a careful analysis of changes in the ways our students were teaching and in the ways they thought about teaching through videotaped teaching samples at the beginning of the year, the end of the fall semester, and the end of student teaching. We analyzed student journals. We met with teachers at the middle school to talk about "pluses and wishes" in the program. We asked students to describe the advantages and limitations of the program.

On the basis of this information, we concluded that 1) the university seminars and subject area block organization made sense to us and our students but that 2) the clinical experience centering on tutoring needed to be entirely revamped. Our students made dramatic gains on our videotaped measures of changes in their teaching over the year. Their discussions of teaching both in these teaching samples and in papers indicated that they were applying the concepts presented in the seminar blocks. Both our students and the cooperating teachers, however, felt that the clinical experience was of limited value. Our students were primarily being used to help students with homework after school. Most junior high school students did not want to stay after school and had no way to get home. Further, our students were not taking advantage of the opportunities that the school offered to see expert teachers in action.

Year 2: The Consolidation Year

Since the seminars and block organization appeared to be effective, we maintained this feature of the program during the second year and fine-tuned it. We reflected on this feature of the program and tried to conceptualize more clearly for ourselves and other teacher-educators the model of teacher education we were developing. This effort at conceptualization led to several papers on "reflective inquiry" in teacher education, the tradition to which our program is most closely linked. We were pleased to be selected as one of ten teacher education programs to be featured at the national Holmes Group meetings in January, 1988.

Our first effort at developing an effective clinical experience for our students, however, had not been fruitful. We attempted to think more carefully and systematically about what we expected clinical experience to accomplish and how to pursue these ends. As a result, we developed an entirely different approach to the clinical aspects of a teacher education program--an "analyzed apprenticeship." We placed students with master teachers in their subject areas as apprentices. Unlike traditional apprentices, however, we expected students to reflect with the master teachers on what was going on, rather than to imitate the master teacher's style. We started the clinical experience during the teacher inservice days at the beginning of the school year, so students would have the opportunity to observe and think about how a school culture gets established and maintained and how routines and rules get set up. For two periods each day, our students worked with their master teacher--helping with seatwork, grading papers, entering grades in computer programs, and gradually teaching lessons collaboratively and then independently.

This apprenticeship, we found, provided a relaxed and individualized introduction to teaching. The apprenticeship created numerous opportunities for our students to observe what expert teachers did, ask them why they were doing it, and try out various approaches with the security of an experienced teacher close by. The apprenticeship satisfied students' eagerness to "get down to business and learn to teach." At the same time, the experience provided a laboratory where students could test out and explore the concepts and alternative approaches to teaching discussed in the seminar.

In their evaluations, both our students and the cooperating teachers were enthusiastic about the clinical experience structured as an apprenticeship. Our students considered this experience one of the most important part of the program. Teachers appreciated the extra help our students provided and enjoyed the opportunity to share their expertise and socialize an enthusiastic young person into the profession. We consider the "analyzed apprenticeship" a critical feature of the teacher preparation model we have developed.

Our other major effort during the second year was to institutionalize the program. The Dean of our college is an active member of the Holmes Group and eager to move the Department of Education in the directions that the Holmes Group advocates. The Dean asked the education faculty to form a committee to work during the summer on the reform of teacher education. The Teachers for Rural Alaska program became an important focus of the committee discussions. Faculty were impressed with the quality of the students in the program. Project staff participated as committee members and the project director was charged with writing the report to the faculty. While the proposed program reflected the group's thinking, it also included essential features of the Teachers for Rural Alaska model. The new program was expanded, however, to prepare students for culturally diverse students in urban comprehensive high schools, not only small village high schools. This expansion of focus enabled the program to serve most post-baccalaureate students who had previously been forced to enter the undergraduate teacher education program as certification-only students.

The faculty approved the program. Courses were subsequently developed that followed the TRA model. The program was approved by the university-wide Academic Council and entered the catalog as a Department of Education program for post-baccalaureate students during the 1988-89 academic year.

Our success at institutionalizing this program occurred during a year of fiscal problems. Student enrollment in education programs is increasing and resources are declining. While hard statistics are surprisingly difficult to gather, a faculty of approximately 12 individuals are currently responsible for over 600 students, 93 courses, and 12 different undergraduate and graduate programs. The institutionalization of the program in this strained situation depended on a number of critical factors: 1) the strong support of the Dean and the head of the Department of Education 2) the power and energy of the project director and assistant director 3) lack of faculty awareness of how serious fiscal problems actually are and 4) the positive reputation of the program and quality of the students.

II. MAJOR ISSUES, STRATEGIES AND COLLABORATION APPROACHES

We anticipated that these three major issues would focus our efforts:

1. A Teacher Education Program Designed by Master Teachers as Well as Professors

2. A Teacher Education Program Organized Around Concrete Problems and Dilemmas of Teaching Specific Subjects to Culturally Diverse Students

3. A Teacher Education Program with Clear Purposes and Hard Indicators of the Achievement of these Purposes

We anticipated two other issues as problem areas that would be very difficult to address:

1. Providing First Year Teachers with an Internship Experience or Some Other Form of Supervised Support in Remote Rural Schools

2. Recruiting Native Students into a Post-Baccalaureate Program

We examine below the strategies through which we addressed these issues and their effectiveness.

1. A Teacher Education Program Designed by Master Teachers as Well as Professors

   We were determined to develop a teacher education program that would reflect master teachers' knowledge and experience in working in small rural high schools in culturally diverse communities. The university professors who teach education courses have had virtually no experience teaching in such schools and have sometimes had no teaching experience at all. Consequently, university coursework over-emphasizes abstract philosophical discussions of cultural change, presents romantic conceptions of village life, and stresses professors' particular research interests. Occasionally, practicing teachers are asked to teach education courses (an enormous budgetary savings since they teach a course at a small fraction of a university professor's salary). These teachers tend to be local teachers, who may themselves have had no experience in village high schools. They also tend to be detached from the university and have little knowledge of the entire teacher education program.

   Our first strategy designed to develop a teacher education program that reflected master teachers' knowledge was a summer workshop to which we invited five master teachers (selected by their colleagues as outstanding in a survey mailed to rural school districts) and three project staff. Facilitating the discussion was Sharon Feiman-Nemser of Michigan State University, who provided invaluable expertise and experience in the design of teacher education programs. This week-long seminar led to clear specification of the knowledge, skills, and attitudes important for rural teachers to possess; identification of clinical and academic experiences likely to be important; and identification of the errors made by other teacher education programs.

   The project director and assistant director took the workshop recommendations very seriously. Later in the summer, they developed the specific program integrating 1) the recommendations of the summer workshop 2) the research knowledge base in teacher education described in the original program proposal, and 3) traditional university coursework as reflected in course outlines on file in the Department of Education.

Our second strategy to incorporate master teachers' knowledge centered on the design of the seminar work. Each block presented a set of problems such as, "How can I teach science when most of my students can't read the textbook the district has assigned?" and "What type of science program makes sense when most of my students will not go on to college (but some may want to) and many will follow a subsistence hunting/occasional wage work lifestyle in a rural village? We brought to bear on these problems two streams of knowledge: the research knowledge base and the practical knowledge of expert teachers. These teachers were invited to the university and asked to teach several days of seminar work in each block. The program director and assistant director attended the teachers' seminars and helped students integrate the teachers' knowledge into the university program of study.

Our third strategy to incorporate master teachers' knowledge concerned the "analyzed apprenticeship"--which became the major clinical experience. As described previously, we used the practicum to create occasions for teacher education students and expert teachers to work collaboratively in classrooms. Student-teaching is typically a pressured experience where students must demonstrate their competence to perform the role of teacher and their suitability for future employment. The apprenticeship, in contrast, provides a relaxed introduction to teaching where the classroom teacher works with teacher education students in a collaborative fashion.

2. A Teacher Education Program Organized Around Concrete Problems and Dilemmas of Teaching Specific Subjects to Culturally Diverse Students

Traditional teacher education programs begin with social and psychological foundation courses, proceed to methods courses, and conclude with student teaching. Students tend to find the foundations courses boring and irrelevant to the practical problems of teaching. They tend to find the methods courses "Mickey Mouse busywork" without the intellectual seriousness expected in a university program.

As we were thinking though the problem of how to avoid these pitfalls and center the Teachers for Rural Alaska Program around demanding and creative professional work, we became aware of the "problem-centered" curriculum that some medical schools are experimenting with. Rather than sitting through lengthy lectures on traditional medical subjects, some medical schools had developed an approach to medical education that involved students working to understand and solve patient problems. In the process of trying to understand the patient's illness, students would cover much of the traditional medical education. With the problem-centered approach, students approached the work with intensity and purpose.

We adapted this approach to the Teachers for Rural Alaska program. Drawing on the teaching problems discussed by master teachers in our summer workshop and on our own experience with rural teaching dilemmas, we centered each block on a set of practical problems that our students could expect to face in rural classrooms. Blocks typically started by asking students to help define the key questions in teaching each subject area in a rural classroom. During the rest of the block, students read and discussed research literature bearing on these questions and heard practicing teachers discussing how they approached such problems in their classrooms. Each block ended with a take-home examination which posed the practical problems again in the context of a task that students would face as teachers---designing a science unit on matter when most students could not read the textbook, for example, or developing an approach for teaching English to students who spoke the dialect "village English."

Organizing the curriculum this way proved satisfying to students. While students complained about the difficulty and amount of the work, we received no complaints that the work was boring and irrelevant. As professors, we found the "problems and dilemmas" approach interesting and exciting. The concrete problems involved the "big" questions -- ("What stance should the school take toward pressing students to go to college and leave the village?")--but kept these questions focused on the actual tasks of teaching--("What does this mean for the issue of how I teach science?").

3. A Teacher Education Program with Clear Purposes and Hard Indicators of the Achievement of these Purposes

Conventional teacher education programs certify teachers as ready to teach when they have completed a required set of courses. Most programs do not have clear program purposes apart from the goals of individual courses and make no serious effort to measure the overall development of students as teachers. Performance-based teacher education programs are a major exception. Such programs typically specify teacher competencies which teacher education students must master.

Teachers for Rural Alaska, however, is based on the "reflective inquiry" model to teacher education as opposed to the performance-based model. Our commitment to reflective inquiry arises from the complexity and ambiguity of teaching problems in small rural communities. Villages differ dramatically from one another in their desire for western versus traditional education, their attitudes toward the school, their use of Native languages versus village or standard English, and the background knowledge students bring to the classroom. We can offer our students no rules or formulas or set of teaching competencies effective in this complex and constantly shifting cultural terrain. What we can offer our students are conceptual tools useful in thinking through the political, ethical,

and instructional issues each teaching situation presents. We can offer our students a range of instructional strategies and images of fine teaching. But, in the final analysis, students will be on their own. They must design an education that fits the cultural context.

These emphases make it difficult for our program to specify our educational purposes clearly and to measure our attainment of these purposes in concrete and convincing ways. Programs such as ours, which follow the "reflective inquiry" model of teacher preparation, appear soft and mushy compared to "performance-based" models. We have devoted substantial effort to defining our program goals in clear and specific ways and developing a way of measuring whether our students do or do not attain them. Invitations to present papers at the Houston Conference on Reflective Inquiry in October, 1987; the national Holmes Group meeting in January, 1988; the Association of Teacher Educators in San Diego in 1988 and the meetings of the Western Holmes Group in Boulder in 1988 all provided occasions for us to conceptualize our goals in ways interesting and useful to others.

As we enter the 1988-89 academic year, our goals are to develop teachers who can:

1) Define worthy educational purposes in multi-cultural teaching contexts. We want students to be able to identify the grounds on which they are selecting certain educational goals above others and be able to justify their goals in terms of the subject, their particular students, and the particular cultural setting.

2) Can analyze the critical features of an educational context and tailor an educational program to that context. We want students to be able to think systematically about students' background knowledge, vocabulary, communication styles, fears, needs, and interests; the political forces at work in the community; the culture of the school and community and the educational traditions of the community and school district; the world-views, values, and expectations of parents and students; the adult life-styles students will probably follow.

3) Possess a wide repertoire of teaching strategies, images of fine teaching, and bridging metaphors through which to connect students to subjects. We want teacher education students to have a "full closet"--a wide range of alternatives to draw upon when they seek to tailor instruction to the setting or when what they have already tried is not effective.

4) Possess the habit of reflecting on their teaching efforts. We want students who actively try to learn from their experience, who try to articulate for themselves principles and theories for action, and who look critically at their grounds for judging "what works."

We have developed a "videotaped reflective teaching sample" as a means of assessing the extent to which our students are developing the skills and habits of reflective inquiry in teaching and integrating the research knowledge base into practical teaching activities. This measure (described at length in Kleinfeld and Noordhoff 1988) asks students to teach a ten minute lesson that they consider appropriate for a small village high school and then to reflect on their purposes and approach in planning the lesson.

In addition, we evaluate students' attainment of our objectives through the examinations at the end of each curriculum block and at the end of the seminar following student-teaching. These exams present practical teaching tasks and asks students to develop a lesson plan, unit plan, or year-long curriculum appropriate to the cultural context.

4. **Problem Areas: Developing an Internship Year or Other Means of Supporting First Year Teachers and Recruiting Native Students into a Post-Baccalaureate Program**

Within the first planning year, we realized that the Teachers for Rural Alaska program could not make much headway with these two problems. The teacher's union opposed the concept of an internship year as we previously explained. We attempted to provide support to our first year's graduates through a field-delivered course but only one student enrolled. The demands of first year teaching proved too overwhelming for students to want to take on coursework. The political climate in Alaska is changing, and the Association of School Superintendents is now calling for an internship year. Sufficient political consensus may develop externally for us to try the internship approach again.

Graduating Native teachers is a primary program priority and we devote enormous effort to recruiting Native students. The reality of the situation is that very few Native students graduate from college and most Native graduates major in education. The pool from which we recruit Native students--college graduates who did not major in education and who are not already employed--is quite small. We are fortunate to have graduated three Native students among our total of 28 graduates. In addition to continuing intensive recruitment efforts, our primary strategy for dealing with this problem is to strengthen the undergraduate teacher education programs in which most Native students enroll through the diffusion of the principles under which the Teachers for Alaska Program operates.

III. MAJOR OUTCOMES

Students participating in the TRA program showed enormous changes in the ways they taught and in the ways they thought about teaching. Such changes were obvious in many areas--the quality of the lessons they prepared in the take-home exams over the year, their developing ability to take over the class in the fall clinical experience, their progress in mastering teaching tasks during student teaching.

As an indicator of such changes, we used videotaped teaching samples at the start of the program, the end of the first semester, and the end of the two semester program.

We developed a system for coding these teaching samples based on the specific purposes of our particular program. We want to develop teachers who reflect on the instructional goals they choose and select goals carefully with the structure of knowledge in the academic subject, the background and skills of the students, and the cultural context of the community clearly in mind. We want to develop teachers who can justify their goals and articulate the grounds on which they choose particular goals and not others. We want to develop teachers who are aware of the research base in such areas as reading comprehension, student errors, classroom management, and conceptual development and who can apply this research knowledge in day-to-day lesson design. We want to develop teachers who are aware of the cultural context--political issues in Native communities, culturally different communication styles and forms of emotional expression, students' background knowledge and frame-of-reference--and who can take this cultural context into account in instruction.

With these goals in mind, we developed a coding system to measure changes in the ways in which students taught and thought about teaching. After establishing satisfactory levels of inter-rater reliability, a master rural teacher coded the data from the first and second year's groups of students. Both groups of students showed strong and consistent growth in:

1. Conceiving of the fundamental teaching problem as organizing a learning environment in which students are active participants in learning as opposed to perceiving teaching as fundamentally a problem of organizing large quantities of information and presenting it to students in logical ways

2. Applying research knowledge and research-based conceptual frameworks (e.g. Hunter lesson design, writing process, schema theory) to practical teaching tasks

3. Thinking carefully about the bases on which they choose instructional goals and developing lessons with multiple purposes (academic content, cultural appropriateness, reasoning and analytic skills, self-esteem)

4. Tailoring lesson to the cultural context--taking into account culturally different students' vocabulary, sociolinguistic styles, background knowledge and frame-of-reference, interests and anxieties, specific academic problems and needs

5. Reflecting on teaching issues and problems--possessing the conceptual frameworks and vocabulary to analyze education problems

In technical research terms, our use of students' videotaped reflective teaching samples as a measure of program success has substantial limitations. First, we did not have access to a "comparison group"--comparable students who had participated in a traditional teacher education program. Thus, we cannot conclude that the Teachers for Rural Alaska program was more successful than alternative types of teacher education. Second, these videotaped teaching samples suffer from the artificiality of the teaching situation. Teaching one's peers in a university classroom is not the same as teaching adolescents in a rural village. Third, we have only three teaching samples, taken at the beginning of the program, the end of the fall semester, and the end of student teaching. To achieve reliable measurement, we should have multiple measures of teaching performance at these three points in time--an emphasis on measurement not feasible in a small program devoted primarily to instruction.

While we recognize that we are not justified in drawing the conclusion that the Teachers for Rural Alaska Program itself created such changes in students' approach to teaching, we nonetheless think the program did so. Our confidence stems from 1) students' direct references to program work in explaining their changed approach to teaching and 2) consistency between what was presented in the program and how students taught. Students often referred by name to specific master teachers or classroom sessions or experiences during student-teaching in explaining why they had taught the videotaped lesson in a particular way. The change in most students from the beginning of the program to the end was so specific and so dramatic that we find it hard to believe that such changes would have occurred in the absence of the Teachers for Rural Alaska Program.

IV. IMPLICATIONS FOR OTHERS

The Teachers for Rural Alaska program stresses the importance of adapting instruction to a context. We emphasize to our students that every teaching situation is different and the task of a professional, as Schon (1983) argues, is to frame educational problems in specific, concrete situations and develop instructional designs appropriate to this specific context. Thus, we do not advocate picking up our "model" of teacher preparation and transplanting it elsewhere. To do so would violate the spirit of our work and the principles on which it is based.

What we can offer other teacher-educators is a set of principles and guiding ideas that they can adapt to their own context. We can offer them the excitement and satisfaction of creating their own designs for teacher preparation. Our work is useful as a source of provocative ideas.

1. Use of Expert Teachers in the Design of a Coherent Teacher Education Program

   In most teacher education programs, students receive the bulk of instruction from university professors who are many years away from their teaching experience if they ever taught at all. While practicing teachers sometimes teach particular courses, these teachers typically do not participate in program formation and have little knowledge of what is occurring in the teacher preparation program as a whole.

   The Teachers for Rural Alaska program used a group of master teachers, nominated by their colleagues, to work with university professors, in designing a teacher education program with coherence and focus. The program reflects teachers' expertise concerning the knowledge, skills, and dispositions that students need to teach effectively. Since master teachers teach in the program in collaboration with university faculty, the "wisdom of practice" in Shulman's (1987) term becomes an important stream of knowledge. Students learn to apply both research knowledge and practical teaching knowledge in addressing teaching tasks.

   Other teacher-educators could use similar groups of master teachers to assist the university in re-thinking conventional programs of teacher education. Since universities call upon many teachers to assist with student-teaching and other clinical experiences, this approach should be relatively easy to implement. The use of master teachers and professors in collaborative program development is a feasible approach in harmony with the culture of the university and the schools.

2. A Teacher Preparation Program Centered Around Concrete Teaching Problems and Dilemmas

   Students in teacher education programs typically complain that coursework is either too theoretical and abstract to be useful or too classroom-bound and concrete to be of intellectual interest. By centering class work around concrete practical problems and dilemmas of teaching particular subjects to certain kinds of students, a teacher education program can overcome this tension. Real teaching dilemmas--"How do I respond as a teacher to students who use a non-standard dialect of English?" "Should I attempt to teach in ways that make quiet and conventional girls more assertive and aggressive?"--are of great intellectual interest. Such dilemmas place the larger questions in the context of actual teaching decisions. Practical

teaching dilemmas create a meeting ground between the abstract philosophical questions in teaching and the mundane classroom problems.

Other teacher-educators could use a "concrete problems and dilemmas" focus for an entire teacher preparation program, as we have done, or they could use this focus in single courses. Developing an integrated, focused teacher education program centered around important teaching problems in the contexts in which students are likely to teach would be ideal. But this model demands a level of faculty consensus that is difficult to develop outside of small team-based alternative teacher preparation programs. Nonetheless, individual teacher-educators can use the "problems and dilemmas" approach in foundation courses to give concreteness and practical point to the philosophical issues raised or psychological principles discussed. "Problems and dilemmas" can also be use in methods courses to transform these courses from a "grand tour of methods" to the much more important problem of figuring out how to teach certain subjects well to a particular group of students.

3. Use of "Teaching Cases" as a Means of Developing Reflective Inquiry Skills

Our program has pioneered the use of teaching cases modeled after the case method used at the Harvard Business School. These cases give teacher education students practice in identifying crucial issues in complex, ambiguous teaching situations, considering the problems from the perspectives of different participants, and thinking through the risks and consequences of alternative decisions and strategies. We have produced three lengthy teaching cases dealing with cross-cultural teaching problems which are being requested by teacher-educators throughout the country. Both the published cases and our particular use of case methods to develop students' skills in reflective inquiry offer approaches useful to other teacher-educators.

4. Analyzed Apprenticeship as an Approach to Clinical Experience

While teacher preparation programs across the country are requiring more and more time in practicum experiences in schools, many programs are not clear about what they expect this clinical experience to accomplish. Students are placed in classrooms with only the vaguest idea of why they are present and what they are expected to learn.

We have developed an approach to clinical experience that has proved to be quite satisfying for both teacher education students and cooperating teachers. We place students in classrooms to help out the teacher in a "teacher aide" role. We request the teacher to talk with the students about particular instructional topics--choosing

educational goals, dealing with classroom routines and classroom management, working with special education students, and so forth. We also request the teacher to allow the student to present a unit--several days of lessons--in the classroom and to give the student commentary on the strengths and weaknesses of the unit.

Teachers appreciate this approach to clinical instruction because they receive the services of an eager student who will help them with routine tasks, such as grading work and xeroxing materials. Since they have received help, they do not feel over-burdened when they are asked to reflect on teaching problems with students. Quite the contrary, they enjoy the opportunity to share and display their professional expertise.

Students find this approach quite satisfying as well because they are involved immediately in actual teaching. They can use the classroom as a laboratory to test out and explore the concepts and methods presented in seminar work. The apprenticeship offers them the opportunity to learn to teach in a relaxed, cooperative fashion with considerable direct supervision. Student-teaching is typically a pressured experience which places great premium on the ability to perform competently in the role of teacher.

Using clinical experience as an opportunity for such an apprenticeship is a strategy that has wide applicability to other teacher-education programs. We use the apprenticeship in an especially intense and focused way--beginning the apprenticeship at the start of teacher in-service days several weeks before the university semester. This early start allows our students the opportunity to observe and participate in the crucial first days of school where the school culture is re-established and routines are introduced. While many teacher preparation programs would find such an early start inconvenient, the basic approach of an "analyzed apprenticeship" could occur at other times during the academic year. The approach is of great value for teacher education students and offers teachers much-needed help with the multiple demands of the classroom.

5. Assessment through Videotaped Reflective Teaching Sample

We have used videotaped reflective teaching samples at the beginning, mid-point, and end of our teacher preparation program as a way of forcing ourselves to define our goals clearly and as a means of measuring the development of our students in careful and systematic ways. One of the great advantages of videotaped reflective teaching is that it has important instructional--not only evaluative--purposes. Students analyze their own videotapes as a means of reflecting on their own teaching difficulties and growth as teachers. They typically find the experience quite satisfying because they see a

vivid demonstration of how much they have progressed as teachers from the beginning to the end of the year.

Other teacher-educators may find a similar videotaped teaching sample a useful way to measure student development. We have used this measure as a means of assessing student development as a result of an entire program experience. Teacher-educators frequently do not conceive of education coursework as a program requiring careful assessment of progress. Programs with such a wholistic orientation, however, may find our measure of considerable value. Performance-oriented programs particularly may find our measure valuable as a way of using post-teaching questions in a videotaped teaching sample as a means of examining the development of reflective orientations, not only specific competencies. Our coding system provides a useful guide. Other programs should adapt our system, however, to their particular emphases.

INSTITUTIONALIZED FEATURES OF PROJECTS

The Teachers for Rural Alaska Program will continue at the University of Alaska-Fairbanks as the recommended program for students with a baccalaureate degree who are seeking teacher certification at the secondary level. The program director and assistant director will remain in these roles. The resources required to support the program will come from the Department of Education budget and (in progressively lesser amounts each year) from the Center for Cross-Cultural Studies, the unit with the responsibility for research and demonstration projects. Since the director of the project has assumed the role of the head of the Department of Education, institutional support for the project over the next two years is reasonably secure.

The program has not only been institutionalized as a discrete model. It has also provided a source of ideas and alternatives for teacher education faculty who are re-considering the elementary and secondary programs currently offered at the University of Alaska-Fairbanks. The head of the Department of Education has established committees to reconsider the professional sequence in teacher education. Faculty members in these committees frequently refer to the TRA program itself or to key program ideas as deliberations proceed. We expect that a revised professional preparation program will incorporate important TRA principles and ideas.

VI. OVERALL STRENGTHS AND WEAKNESSES AND "LESSONS LEARNED"

Since we have dealt with these issues in earlier sections of this paper, we will briefly summarize here. Our major achievement has been to design a focused teacher education program designed to prepare teachers for multi-cultural contexts, an innovative curriculum carefully designed to accomplish this purpose, and an evaluation system demonstrating that

students have developed as teachers in the ways the program intended. Specifically, we have designed a teacher education program that prepares students well for the particular problems and dilemmas of teaching in small village high schools with Eskimo and Indian students during a period of intense political turmoil and cultural change. Our major weakness has been our inability to organize a feasible way of supporting teachers during their first-year teaching experience.

Apart from the implications for others already discussed, the major lesson we have learned is how much a small faculty team can accomplish with determination, energy, and imagination. We see similar small teaming arrangements devoted to organizing alternative teacher education programs as feasible and inexpensive ways for universities to initiate change in teacher education. To involve an entire faculty in reform efforts is difficult, given university traditions of faculty independence. But small teams of compatible people are feasible to organize and can accomplish an enormous amount. The ideas disseminated throughout the faculty are as important as the actual program reforms.

VII. PRODUCTS AND DISSEMINATION ACTIVITIES

We have prepared the following products through the TRA project. Most were done with some help from other funding sources.

A. Cases

We have produced three cases which present cross-cultural teaching dilemmas for students to analyze and interpret.

1. Carey, R. A. (1988). Harassment in Lomavik: A Case Study. In J. Kleinfeld (Ed.), Case Studies in Cross-Cultural Education. Fairbanks, AK: Rural College, University of Alaska.

2. Anonymous. (1988). The Teacher Who Came to Rivertown: A Case Study. In J. Kleinfeld (Ed.), Case Studies in Cross-Cultural Education. Fairbanks, AK: Rural College, University of Alaska.

3. Finley, P. (1988). Malaise of the Spirit: A Case Study. In J. Kleinfeld (Ed.), Case Studies in Cross-Cultural Education. Fairbanks, AK: Rural College, University of Alaska.

These teaching cases are modeled after the cases used at the Harvard Business School. Each presents a complex, ambiguous rural teaching situation in which all the important information is not known and much known information is unimportant. These cases develop students' abilities to 1) spot issues and frame teaching problems, 2) consider alternative strategies for dealing with problems, and 3) anticipate the consequences and risks of alternative courses of action.

Each of these cases, attractively printed and bound, is available for classroom use both in Alaska and elsewhere in the nation. These cases were discussed in the Holmes Group newsletter and we have received 19 requests for them.

In addition to the cases, we have prepared a paper on the use of cases in teacher preparation programs that will appear in a forthcoming book edited by Judith Shulman of the Far West Educational Laboratory:

> Judith Kleinfeld, "Learning to Think Like a Teacher: The Use of Teaching Cases"

This paper details our educational purposes in using the case "Malaise of the Spirit." It shows how this case can be used to teach education students how to frame and analyze educational problems and how the case enlarges students' repertoire of strategies for dealing with such problems.

B. Papers Presented at Conferences

We have prepared the following papers on our conceptual framework and program for presentation to colleagues at national conferences:

1. Karen Noordhoff and Judith Kleinfeld, Rethinking the Rhetoric of "Reflective Inquiry": What This Language Came to Mean in a Program to Prepare Rural Teachers, Paper presented at the Houston Conference on Reflective Teaching, October, 1987. (Publication forthcoming).

2. Judith Kleinfeld and Karen Noordhoff, The Teachers for Rural Alaska Program, Presentation of the program at the national Holmes Group meeting, Washington, D.C., January, 1988. (We were proud to have been chosen as one of ten exemplary teacher education programs across the nation to be featured at this conference.) (Publication forthcoming).

3. Judith Kleinfeld and Karen Noordhoff, Videotaped Reflective Teaching as an Evaluation Too , Association of Teacher Educators, San Diego, California, February, 1988.

4. Judith Kleinfeld and Karen Noordhoff, Re-Thinking Teacher Education Programs: What are the Right Questions, Paper to be presented at the meeting of the Western Holmes Group, April, 1988. (Publication forthcoming).

C. Other Dissemination Activities

In addition to presenting formal papers, we have engaged in other dissemination activities:

1. Presentation of the TRA program to the Board of Regents at the University of Alaska.

   The Board of Regents was interested in and supportive of this program. They were particularly intrigued by short segments from our videotaped reflective teaching examples which show dramatic examples of the way TRA students changed from the beginning to the end of the program.

2. Presentation of the TRA program at the Alaska Holmes Group Conference, February, 1988.

   We presented the TRA concepts to faculty from the University of Alaska at Fairbanks, the University of Alaska at Anchorage, and the University of Alaska at Juneau at a statewide conference.

3. Informal dissemination

   We have worked with colleagues at the University of Alaska at Juneau, the Prince William Sound Community College, Sheldon Jackson, and rural education centers about applying TRA concepts at their institutions.

SUMMARY: INFLUENCE OF PROJECT TO DATE

The Teachers for Rural Alaska program has had strong influence on teacher education programs within Alaska. It has become an important source of ideas for University of Alaska-Fairbanks teacher educators. We have received requests to help develop similar approaches to teacher education from the University of Alaska-Southeast and from Prince William Sound Community College.

Our influence on the national level is much more difficult to assess. Colleagues have written to us and requested copies of our cases and copies of papers on the use of cases, videotaped reflective teaching samples, and the re-thinking of teacher education programs. Our program was featured at the national Holmes Conference in Washington, D.C. in January, 1988. Our program created great interest at the western Holmes Group meetings in Boulder in April, 1988. Our Dean told us that he had received many favorable comments about the program from his colleagues in the western region. The spread and influence of ideas is difficult to assess. We find the most persuasive evidence of the influence of our ideas when colleagues introduce our ideas as their own.

During the coming year, we plan to write papers for national journals on the basic ideas developed through the Teachers for Rural Alaska Program. We are particularly interested in thinking through the question of how the program implicitly conceptualizes preparation for teaching in multi-cultural contexts and prepares teachers for these contexts. With the increasing "majority of minority students" in the nation's classrooms, the question of how to prepare teachers for minority cultural contexts has become increasingly central for teacher preparation programs across the country. We have much to contribute to this issue.

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TEACHERS FOR RURAL ALASKA (TRA) PROGRAM

Final Report to the Office of Educational Research and Improvement,
U.S. Department of Education

PART B: PROGRAM ASSESSMENT REPORT

July 22, 1988

Prepared by

Judith Kleinfeld, Project Director
and
Karen Noordhoff, Assistant Project Director

Center for Cross-Cultural Studies
University of Alaska Fairbanks
Fairbanks, Alaska 99775

I. MAJOR QUESTIONS

Teacher education programs are generally considered to be a weak area of the university. The programs are reputed to lack intellectual rigor, a scientific knowledge base, and clear objectives. Students enrolled in teacher preparation programs are considered to be weaker than those in other university programs. Furthermore, these students are widely held to view teacher education courses as poor preparation for teaching.

This project attempted to develop an innovative approach to teacher education that would attract high quality students, provide intellectually demanding academic preparation, use the research literature on teaching to advantage, and prepare students for the concrete problems and dilemmas of teaching. The project focused on the preparation of fine teachers for an unusual context--Eskimo and Indian students attending very small rural high schools. It sought to prepare Eskimo and Indian teachers for these schools as well as non-Native teachers. A fifth-year certification program, Teachers for Rural Alaska (TRA) emphasized a combination of seminar work and apprenticeship experiences to develop teachers who could tailor instruction to a particular cultural context.

Most teacher education programs follow a conventional sequence of courses: foundation courses followed by methods courses followed by student teaching. Teacher education programs typically have no guiding focus or clear objectives that unite disparate courses. The course content is determined by tradition and by the idiosyncratic interests of particular faculty members.

During the 1970s, the major innovation in teacher education programs consisted of performance-based or competency-based approaches (Bradley, 1978; Jones, 1979). These programs typically list a series of specific behaviors or competencies supposedly research-validated as relating to higher achievement test scores. Target teacher behaviors might be clarity of presentation, use of higher order questions, or use of praise. The teacher education program attempts to teach students these specific skills through discussions of the research base, demonstrations, and practice through micro-teaching sessions.

Such performance-based approaches to teacher education are still paramount in many teacher education programs--driven in large part by state efforts to achieve accountability in teacher education. Researchers, however, are increasingly calling the performance-based model into question (Tom, 1984; Zeichner, 1983). The research base validating these skills is not strong and consistent. It is increasingly recognized that effective teaching is much more than a collection of specific teaching skills. Good teachers must think in critical and complex ways about the goals of teaching--what should they teach, what should they emphasize, and why. Good teachers must do more than emit a pre-specified behavior, such as "asks higher order questions." They must decide what kinds of questions are

appropriate for this subject area and with this group of students. Teaching is a complex activity which requires reflection upon goals, means, and context.

In response to this increased emphasis on teacher decision-making and adaptation to context, many teacher education programs have developed a "reflective inquiry" orientation as opposed to a "performance-based" orientation (Zeichner, 1983; Ross, 1987; Feiman-Nemser, 1980). Such programs emphasize the complexity and ambiguity of teaching situations, the importance of making artful decisions, and the significance of a critical, inquiring stance toward classroom life and the activity of schooling. The term "reflective inquiry" refers to a variety of different approaches to teacher education which share an emphasis on teacher decision-making and inquiry as opposed to teacher behavior and skills.

The Teachers for Rural Alaska Program (TRA) exemplifies the reflective inquiry emphasis in teacher education. Such an emphasis is necessary in programs designed to prepare teachers for unusual cultural contexts--such as teaching Eskimo and Indian students attending small, rural high schools. The teacher behavior and skills identified as "effective" in majority culture settings or in schools with low income Black and Hispanic students do not necessarily apply to Native American students. Teachers must deal with cultural differences in communication styles, values, and world-views--issues that are not considered in performance-based approaches to teacher education. Teachers must also show extraordinary inventiveness in figuring out how to provide a high quality education in unusual school settings--such as a high school that may only have two teachers and 15 students.

"Reflective inquiry" is a broad banner which brings together teacher education programs with many different interpretations of what reflective inquiry means. TRA has operationalized "reflective inquiry" in terms of the special cultural context the program is preparing teachers for. The program specifically attempts to develop teachers who (1) can identify the crucial problems and dilemmas in rural, cross-cultural teaching situations; (2) have a wide repertoire of teaching strategies and images of fine teaching; (3) use the research base in developing teaching approaches; (4) can tailor instruction to students of a different cultural background, and (5) who habitually reflect upon and learn from their own practice.

This final report presents our assessment of this program after one planning year and two years of operation. We focus on two major outcome questions and three major implementation questions. The outcome questions are:

1. What impact does the Teachers for Rural Alaska project have on prospective teachers' ability to (a) formulate crucial problems and issues in rural, cross-cultural teaching, (b) to adapt instruction to the cultural context, (c) to use the research base in developing

approaches to teaching, and (d) to reflect upon and learn from their own practice?

2. To what extent does a fifth year program like Teachers for Rural Alaska succeed in increasing the number of minority students--specifically Eskimo and Indian students--who become teachers?

The implementation questions are:

1. What instructional content characterizes a program emphasizing a reflective approach to teacher education in the context of preparing teachers for multi-cultural situations?

2. What instructional processes characterize such a program?

3. What do students perceive to be the benefits and limitations of an apprenticeship approach to the practicum aspects of a teacher education program?

II. PROGRAM DESCRIPTION

Teachers for Rural Alaska is a fifth-year teacher education program which leads to secondary teacher certification in two university semesters. The program focuses on the preparation of teachers for an unusual and demanding cultural setting--small village high schools with a predominantly Eskimo and Indian population.

Teachers in these schools are frequently a non-Native minority in an Eskimo or Indian community of a few hundred people. Many communities are having difficulty achieving a satisfactory blend of traditional hunting and fishing life-styles with modern wage employment. Communities are frequently beset with problems of alcoholism and high rates of suicide, especially among young men. Many community people view teachers and schools with ambivalence. Education offers a path to well-paid employment and the skills necessary for Native control of their own affairs in the modern world. At the same time, education represents the power and authority of the intrusive majority world increasingly encroaching upon traditional village life. Education also draws students away from village life and values.

In such communities, effective teachers must be able to make sense of situations that they may be quite unfamiliar with--not only with the ways Eskimo and Indian students act in the classroom but the response of the community outside the classroom. Often eager teachers, trying hard to adapt to the cultural context, make serious mistakes (Lipka, 1986). One teacher, for example, tried to gain favor with the community and teach students research techniques by doing a class research project documenting

use of subsistence foods. The community became infuriated because they suspected the teacher of using their own children to spy on them and to report hunting and fishing violations to the Department of Fish and Game.

In the rural Alaska context, teachers must also be able to manage extremely small, multi-grade classrooms. In a mathematics classroom, for example, two students may be studying Algebra I; one student may be studying geometry; and four may be working in Business Mathematics. The "competencies" identified in the literature on teaching effectiveness may apply in a very general way to these culturally different classroom settings but they do not necessarily apply or may require substantial adaptation. A primary teaching task is to reflect on the particular cultural context and the research literature and to figure out how to tailor instruction to students' frame-of-reference, values, interests, motivations, and expected adult life-styles.

In the TRA program, students enter as a cohort group at the beginning of the fall semester. During the fall semester, students attend a daily seminar accompanied by an apprenticeship experience with a master teacher at a local public school. During the spring semester, students do 12 weeks of student teaching in a small rural high school. Student teaching is accompanied by two distance-delivered courses which require students to analyze the community and classroom context. The program concludes with a seminar at the end of student teaching in which students reflect upon their experience and develop teaching approaches for the following year.

III. SAMPLE

The participating students consisted of 13 fifth-year teacher education students during the 1986-87 year and 14 students during the 1987-1988 year. Admission was selective. Students were admitted on the basis of varied life experiences, interpersonal skills, diverse academic background, interest in teaching in rural villages, and undergraduate grade point average of 2.5 or greater.

Of the total group of 27 students, 3 were Alaska Native. Of the group, 16 were men, and 11 were women.

IV. METHODOLOGY

Measuring Impact on Students

In order to evaluate the impact of the program on students' abilities to formulate issues, use the research base, and develop conceptual frameworks important in rural cross-cultural teaching, our primary assessment method was a videotaped "reflective teaching sample." This measure asked students to teach a 10-minute lesson and then to reflect on the lesson just taught.

When students entered the program in the fall, they were asked to prepare a 10-minute lesson which they considered appropriate for village Eskimo and Indian students in small high schools. Students taught this lesson to their classmates (other teacher education students). After teaching the lesson, students were asked a series of questions designed to clarify their goals, pedagogical knowledge, conceptual frameworks, and ability to reflect on their own practice.

The questions were: (1) Why did you choose this particular lesson? (2) What did you think about as you planned this lesson? (3) What, if anything, would you do differently if you taught this lesson again?

Both the teaching and the answers to these questions were videotaped. This constituted the baseline measure.

To assess change, this procedure was repeated at two points--after the fall semester and at the conclusion of the program. The mid-point measure allowed us the opportunity to evaluate the effects of the portion of the program that emphasized academic seminar work. The end-of-the-year measure allowed us to evaluate the effects of the portion of the program that emphasized student teaching.

The two later reflective teaching samples also included the question: In what ways, if any, did the TRA program affect your teaching?

At the conclusion of the program, students reviewed all three videotaped teaching episodes and wrote a paper analyzing their own development as teachers.

The coding system for the reflective teaching sample is described in the section on instrumentation.

Measuring Minority Participation

Student ethnicity was assessed in the application form and surveys administered during the program.

Measuring Project Implementation of Reflective Inquiry Content and Processes

Project implementation was measured through program records. These included program course outlines and course materials, examinations, teaching cases and other special materials produced for the program, student placement records, and student journals. The project director also kept a journal of key program events.

Measuring Project Implementation of Apprenticeship Experience

The effects of the apprenticeship experience were assessed through written student evaluations of the apprenticeship; student analyses of the teaching units they prepared, taught, and revised during the apprenticeship; and participating teachers' comments on each student.

Since the apprenticeship experience was developed primarily during the second year program, this data is drawn entirely from the second year cohort group.

V. INSTRUMENTATION

The major instrument used to assess the impact of the program on students is the videotaped reflective teaching sample.

A coding guide for the videotaped teaching sample was developed on the basis of the objectives of the TRA program and preliminary viewing of the first cohort group's teaching at the beginning, mid-point, and end of the program. A copy of the coding instrument is attached as Appendix I.

The coding guide consists of five dimensions:

Dimension 1: Can spot problems, issues, critical features of rural, multicultural teaching situations

> This area examines the students' conception of teaching issues. Does the student conceive of the fundamental problem of teaching as organizing large quantities of information and presenting it in a logical way or does the student conceive of the fundamental problem as developing active student learning of the material?

Dimension 2: Reflection on goals and lesson design

This area examines the extent to which students have reflected on what constitute worthwhile goals in teaching rural Eskimo and Indian students and the appropriateness of the goals to the cultural context. For example, what is the nature of the students' rationale for selecting the lesson?

This area also assesses the extent to which students have used research-based concepts and techniques in planning and presenting the lesson.

Dimension 3: Lesson tailored to cultural context

This area examines the extent to which students explicitly think in designing the lesson about the vocabulary level of rural students, their background knowledge or frame of reference, their interests, fears, anxieties, and confidence.

Dimension 4: Skillful performance of teaching

This area examines the smoothness and confidence of students' delivery of the lesson.

Dimension 5: Ability to learn from practice

This area examines the extent to which students have a reflective, experimental stance toward teaching and pose problems for reflection on their own.

Most of the coding was done by a research assistant, a rural teacher nominated by colleagues as a master teacher. To assess coder reliability, the project director and rural teacher coded teaching samples from the first year cohort--three samples at the baseline, three samples at the mid-point, and three samples at the end of the program. Inter-rater reliability of 88 percent was reached, and the research assistant then coded the remaining reflective teaching samples.

A few samples of videotaped teaching are missing due to student absences, postponement of student teaching, or failure to return the videotape to the project. We have a range of 22 to 26 student observations on each variable. For convenience, we note on tables the average number of observations on each variable -- 24 students.

Since both the first year's student group and the second year's student group showed changes of similar direction and magnitude, we combined the two groups in the final data analysis.

VI. RESULTS

A. STUDENTS' DEVELOPMENT DURING THE TEACHERS FOR RURAL ALASKA PROGRAM: ANALYSIS OF THE VIDEOTAPED REFLECTIVE TEACHING SAMPLES

The students who participated in the Teachers for Rural Alaska Program showed dramatic changes in their development as teachers. (Tables may be found in back of report.) These changes centered on what they thought to be the central problems in teaching a lesson, their use of the research base in teaching, how they adapted instruction to the cultural context, the balance they sought between academic and culturally relevant lessons, and the development of an increasingly reflective orientation toward teaching.

While these changes are encouraging, we are aware of several important limitations in using videotaped reflective teaching samples as a method of assessing student change. First, the videotaped reflective teaching sample is an artificial situation. Students did not have the opportunity to use the natural cues that occur in a classroom--students losing interest or assuming a puzzled look--to modify their lessons in progress. In their self-analyses, many students commented on this problem and on the general difficulty of preparing a lesson for village high school students and teaching it to fellow graduate students.

Second, the teaching sample is only one instance of teaching at a particular point in time. Reliable measurement would require several measures--an approach that is not feasible in a program devoted fundamentally to instruction rather than research.

Finally, we cannot be entirely confident that the changes in teaching that we have observed on these three teaching samples are due to the Teachers for Rural Alaska program rather than to natural student maturation. Nor do we have a comparison group that enables us to conclude that the Teachers for Rural Alaska program is more effective than a conventional teacher education program.

On the other hand, the specificity of the changes we observed and their close relationship to TRA program emphases suggest that the TRA program indeed accounts for most of the change. Further, in their self-analyses of change, students themselves attributed particular changes in their teaching approach to specific experiences in the TRA program. It is the close resemblance between what we taught and what students did in their lessons that makes us confident that the program accounted for most of the change.

1. Formulating Important Problems and Issues in Multi-Cultural Teaching: Student Changes

The most dramatic change we observed among TRA participants centered on their view of the fundamental problem in teaching. At the start of the program, students saw their primary instructional problem as organizing information in a logical fashion and transmitting it as fast as possible to students. We call this style the "Thanksgiving dinner" approach to teaching since it reminds us of stuffing a turkey. The cook knows that he should not pack the turkey with stuffing or the stuffing will not be light; nonetheless, the cook cannot resist shoveling in any stuffing left in the pan.

By the mid-point of the program, about half the students came to realize that the fundamental instructional problem is not transmitting information but creating a learning environment where students want to learn and are actively involved in the lesson (Table 1). By the end of the program, 92 percent expressed this insight and created lessons where students are actively involved--writing a poem, carving a kayak, creating a story from hieroglyphic symbols.

When they analyze their three videotapes, most students remark on this enormous change in how they approached teaching. As one expressed it:

> My goals and objectives over the three tapes changed considerably. In the first tape, my teaching objectives were vague even to me and not expressed to the students at all. My goal was to pump out as much information as I could in the time allowed with no consideration given to the students. My main concern was myself, not if the students were paying attention or understanding the materials. In the second tape, my goals and objectives were a little better but still not made obvious to the students. Again, I tried to cram as much information into the lesson as possible with little consideration of the students' interest or understanding. In the third tape I clearly stated my objectives and even wrote them on the board so that the students knew exactly what was expected of them....My lesson design changed throughout the three tapes from a "telling" of information to a Madeline Hunter lesson design which I learned through TRA...

Students also showed substantial change in how they conceptualized the issue of choosing instructional goals (Table 1). At the start of the program, most students did not think much about instructional goals. In choosing their sample lesson, they taught something that seemed to them vaguely culturally relevant or something they were interested in. The program emphasized the complex conceptual, political, and ethical issues involved in setting educational goals in villages where many Native people hold ambivalent attitudes toward Western schooling

and traditional lifestyles. By the mid-point, students showed enormous change in the sophistication of their thinking about how to set goals. They began to think systematically about goal alternatives rather than to accept goals from the teacher's guide and to consider and re-consider the issue of academic versus local cultural emphases. Many students brought up this issue in their final self-analyses concerning how they had changed over the year:

> I have not resolved the debate about what the proper mix of localized, culturally relevant curriculum and Western-oriented material should be. I feel that students need to become culturally literate but at the same time I recognize that making material culturally relevant increases motivation and is important for the preservation of Native cultures.

2. Adapting Instruction to the Cultural Context: Student Changes

At the start of the program, some students had absorbed the "common wisdom" about the importance of cultural relevance. Their notion of what was culturally relevant, however, was extremely limited. It meant teaching lessons about the traditional culture or contemporary village life. Since most students had little experience in the villages, their attempts to be "relevant" were sometimes incorrect. One student, for example, taught a lesson on how to start a car in winter without realizing that most village families get around by snowmachine, not automobile. Other students lectured at interminable length on subjects like how to build a kayak--regardless of whether kayak-building was important in the village in which they might be teaching. Students felt that they should somehow "relate" to students and "show respect for their culture"; the result was too often a lesson without academic content.

At the middle of the year, students had experienced TRA seminars which emphasized the importance of adapting instruction to the cultural context--but which did not transmit the simple-minded message that cultural relevance was equivalent to lessons on the traditional culture on contemporary village life skills. The program director and assistant director steered clear of this interpretation of cultural relevance. Nonetheless, the general emphasis on the cultural context heightened students' awareness of cultural issues and resulted in even a greater proportion of lessons (40 percent) chosen for cultural reasons (Table 2).

The student-teaching experience in rural villages changed students' views. They developed a much more realistic notion of the academic curriculum in small rural high schools and how a lesson fit into a sequence of lessons. They worked with cooperating teachers who took academic aims seriously. By the end of the program, students' emphasis on narrow cultural rationales for lessons had dropped back to

about the original level (20% to 25%). Most students (92 percent) taught lessons with clear academic goals--teaching a historical concept like the Great Depression or teaching a mathematical concept like how to figure out the formula for the lateral area of a cylinder. Not only did students' academic emphases increase. The complexity of students' goals increased. An increasing proportion of students taught lessons with multiple goals--academic content, critical thinking skills, observational skills, the development of self-confidence, the nurturing of new interests.

Emphasizing academic content did not mean that students had given up the idea of the importance of adapting instruction to the local context. Quite the contrary, what had changed was their definition of what it meant to adapt to the local cultural context. Almost a third of the students chose goals relevant to rural students' special academic needs--such as expanding their general world knowledge or teaching students to understand what they read rather than merely decode words (Table 2). Limited world knowledge and difficulties in reading comprehension are central problems among Indian and Eskimo high school students in small, isolated villages.

TRA students had also developed the idea that adapting to the cultural context could mean teaching academic content with the cultural background of students in mind. Over the year, students showed steady gains in teaching lessons which took into account students' vocabulary level, background knowledge and frame-of-reference, communication styles, and emotional needs (Table 3). The student who taught a lesson on the depression, for example, related the concept of the economic depression to everyday feelings of depression in the village and what it means to be "down." The student who taught the lesson on the lateral area of a cylinder unfurled the label of a dog food can to show students visually that the lateral area of a cylinder amounted to nothing more than a common rectangle. Students used visits to the steam-bath--an important institution in Eskimo villages--to teach observation skills and the principle of how matter changes into solid, liquids, and gases depending on the temperature of the air. In short, students' notions of what it means to be "culturally relevant" changed from a naive view that the content of the lesson should center on the local environment or traditional culture to the view that the lesson could develop understandings about science, social studies, and other academic subjects in culturally appropriate ways.

Students were not as aware of the changes in their thinking about what it means to be culturally relevant as they were about other changes in their teaching. Nonetheless some tried to formulate this insight. As one explained:

> In the first two tapes the only specific context I took into account was the student's physical environment (glaciers, volcanoes, earthquakes). In the third tape I considered who I

would be teaching this lesson to. I considered the fact that they were ESL students with a limited vocabulary being given a college prep class. This consideration reflects my experience in dealing with ESL students during my student teaching experience in Kwigillingok.

3. Applying Research Knowledge to Instructional Decisions: Student Changes

Students showed great development in their ability to apply research-based knowledge and instructional frameworks based on research (like the Hunter lesson design model) to instructional decisions. As might be expected, most students entered the TRA program having virtually no notion of how to apply research-based information to teaching. A few had picked up scattered remnants, such as comments from friends about the writing process. The program exposed them to research on reading comprehension, schema theory, student errors, classroom management, student motivation, and other topics. By the end of the program, virtually all students had incorporated the research knowledge base into their lesson plans (Table 4).

Students were especially impressed with schema theory and the way it helped them to understand the importance of relating unfamiliar academic concepts to culturally different students' frame-of-reference and knowledge base. They also found extremely valuable the Madeline Hunter lesson design model. This model gave them a useful heuristic for moving from a "teaching-is-transmitting-information" model to a model of teaching that takes into account such matters as student motivation, understanding, and need for models and practice.

When students entered the TRA program, many felt that they had bright and creative ideas about teaching but did not know how to put a lesson together. What the Hunter model offered them was a scaffolding on which to hang their teaching ideas. As one student put it:

> In conclusion after watching these tapes, I would say the missing link is now there...how to get ideas and concepts across in an organized manner. I have watched good teachers and envied them. They know something I didn't know and I wanted it. ...One of the main things I wanted to learn was how to organize a lesson. I knew there had to be different parts to a lesson but could only think of an opening, introduction, body and conclusion. There just had to be some formula to teach that I could learn and adapt to my personality. I think I now have it.

We suspect that students will let go of the Hunter model as they develop greater confidence and teaching experience. For beginning students, however, it functions as an important conceptual framework.

4. Developing the Habit of Reflective Inquiry: Student Changes

After students had taught their first lesson at the beginning of the TRA program, we asked them what issues their lesson raised for them and what improvements they might want to make. We were astounded that only 35 percent of the students could articulate any such issues or possible changes (Table 5). Students lacked the conceptual framework and vocabulary to think productively about teaching. Most of the initial lessons were extremely weak--mere lectures--and yet students had no way of thinking about what they had done and how it might be strengthened. They could not analyze their experience because they had no analytic tools.

One of the major accomplishments of the TRA program has been to provide students with a vocabulary and set of concepts for thinking about teaching. The program also communicated to students the attitude that expert teachers continually reflect on and revise their teaching. By the end of the program, over 90 percent of the students articulated teaching issues they were thinking about after concluding their videotaped lesson (Table 5). In their concluding self-analyses, virtually all students showed strong reflective orientations--analyzing such issues as how a teacher adapts to a cultural context, the proper mix between academic instruction and instruction relevant to the local context, and how to increase student motivation (Table 5).

5. Developing Teaching Confidence: Student Changes

Only toward the end of the program did we begin to understand and appreciate how students' development of self-confidence as teachers led to more flexible, student-centered, and improvisational teaching styles. The master teacher who coded the videotapes thought that TRA students' initial teaching samples showed generally confident and smooth teaching behavior. The coder found some growth in smoothness and ease of teaching but the change was not overwhelming (Table 6).

Students saw the situation very differently. Many said they were extremely nervous during their first attempt at teaching:

> Before I began this program, I was terrified about getting up in front of a group and speaking. I would get nervous, my voice would tremble, I would talk fast, not look at the audience, and my hands would shake. This is exactly how I felt during my first tape. The second tape was a little better, but I was still very nervous. By the time I was done student teaching, I felt very confident about speaking in front of a group and actually enjoyed it. When we did our last video, I was eager to get up and do it and did not feel nervous in the least bit.

Several students said that it was their initial lack of confidence that made them choose a lecture style. They knew "what to do" as long as they were standing up and talking. It was coming to understand the students and the cultural context that gave them the security to let go of the lecture--where they were in control--and use teaching styles where they allowed themselves to be open to the students and the situation. As one student put it:

> In the first tape I was nervous but well-prepared. My assurance was based on my ability to lecture on the material presented. In the second tape my confidence included some background knowledge about my "students." This gave me the self-confidence to try the motivation strategies..The confidence I observed (in my third lesson) made me realize how much my teaching style has changed. I now feel enough certainty and assurance to allow a lot more creative and spontaneous activities to take place. I think that this confidence was based on the strategies learned in the TRA program. I feel that I have learned how to use what I observe and hear from the students to confidently present a creative lesson that will interest them.

In sum, the videotaped teaching samples suggest strong student growth in the areas that the program emphasized--the ability to frame educational problems, careful reflection on instructional goals, adaptation to the cultural context, use of the research knowledge base, and reflective stance toward teaching. While we cannot be certain that the program itself caused this development, such a conclusion seems reasonable. The students changed in the areas the program emphasized. Further, the changes did not occur primarily during the student-teaching experience. They were not merely results of actual teaching experience. The changes during the first semester were as strong and striking as the changes during the student-teaching experience.

B. PARTICIPATION OF MINORITY STUDENTS

Of the 27 students enrolled in the TRA program, only 3 students were Eskimo or Indian. All the others were Caucasian students.

C. IMPLEMENTATION OF REFLECTIVE INQUIRY CONTENT

"Reflective inquiry" can easily become a "buzzword" in teacher education programs--a word without specific operational meaning. Worse, it can mean coursework that degenerates into student "bull sessions" on educational issues usually from a stance highly critical of schools.

It is therefore of great importance to define clearly the content of a teacher education program directed toward reflective inquiry. We have operationalized reflective inquiry in terms of the following program content:

1. Clear goals emphasizing the development of the attitudes and skills of reflective inquiry; goals serve as organizing focus for entire program.

2. Coursework organized around reflection on concrete problems and dilemmas of teaching.

3. Research knowledge base taught in terms of reflection on how research applies to the problems and dilemmas of teaching.

4. "Wisdom of practice" knowledge base taught in terms of reflection on how teachers go about dealing with these problems and dilemmas in their classrooms.

5. Reflection on adapting instruction to different contexts--especially small rural high schools in Eskimo and Indian communities.

Component 1: Reflective Inquiry as a Clear Organizing Program Focus

The TRA program is based on clear unified objectives. Based on Schon's (1983) concept of the importance of "reflection-in-action," the program attempts to develop teachers who (1) can identify the crucial problems and dilemmas in ambiguous, complex teaching situations; (2) can adapt teaching to a particular cultural context; (3) have a wide repertoire of teaching strategies and images of fine teaching; (4) can spin out the probable consequences and risks of alternative teaching decisions; and (5) can learn from their own practice.

These goals are publicly stated in program descriptions and discussed in the introductory seminars. Since the project director or assistant project director attended all seminar sessions, key project staff repeatedly emphasized these goals during presentations made by other faculty or visiting mentor teachers.

While the TRA program made these goals a unifying focus of seminar work, the program was not as successful in making these goals an important aspect of students' practicum experiences. Teachers who worked with TRA students in the apprenticeship experience sometimes asked for more clarification concerning what was expected of them and of the apprenticeship experience. The apprenticeship experience provided students with the opportunity to learn a variety of teaching strategies, observe fine teaching, and talk with master teachers about

concrete teaching problems. However, these goals were not made as explicit in the apprenticeship as they were in the seminar.

The organizing focus of the TRA program was even less clear to the cooperating teachers who supervised student teaching. Due to the distance between the university-based program and the small rural schools in which students were teaching, little communication occurred between the program and most cooperating teachers. In addition, the placement of student teachers and supervision of them was carried out during the second year by the Department of Education's Practicum Office. Key staff in this office were not especially familiar with the TRA program.

Component 2: Coursework Organized Around Concrete Problems and Dilemmas of Teaching

Instead of the traditional sequence of foundations courses and methods courses, the teacher education curriculum is organized around the concrete practical problems of teaching a particular subject to particular kinds of students in a particular milieu. Each block of coursework begins with the discussion of such problems and dilemmas as "How can I teach science to Eskimo students when most of them cannot read the textbook that the district has assigned? Should I ignore the textbook and use the local environment to teach science? If I ignore the textbook and use the local environment to teach science, am I putting students at a disadvantage in university work? If I teach science using the local environment, am I familiar enough with the culture to avoid violating cultural norms and values? Should I be teaching students to read or at least to read a science textbook?"

Seminar outlines indicate that these questions formed the basis of the five thematic units in the program. Readings in each thematic unit were keyed to these questions. Examinations did not concern abstract academic issues. Examination questions asked students for lesson designs which dealt with the problems and dilemmas in each thematic unit and for the justification of these lesson designs.

Component 3: Research Knowledge Base Applied to Concrete Problems and Dilemmas

Teacher education programs typically present the research base of effective teaching (primarily process-product research) and then consider the classroom applications of the research. The discussion proceeds from "theory into practice." In our view, this movement is in the wrong direction. The key issue in teaching is not how to apply research in the classroom but how a classroom issue can be illuminated or resolved through research.

The TRA program presented research in terms of its applicability to the problems and dilemmas which organized the thematic units. For example, the reading unit started out with a series of questions about why rural Indian and Eskimo students had great difficulty in understanding what they read. Students were then asked to read research articles on reading comprehension. In examinations, they were asked to develop an approach to teaching a freshman English class in a rural high school and to use the research base to justify their decisions. This use of research is evident in course outlines and examination questions.

Component 4: "Wisdom of Practice" Knowledge Base Brought to Bear on Concrete Problems and Dilemmas

As Shulman (1987) points out, experienced teachers have a sophisticated knowledge of teaching that is both in advance of the research base and also not easily captured in research following the positivistic tradition. The TRA program invited rural teachers, nominated by colleagues as master teachers, to teach for 1-3 days in the TRA programs and present their teaching approaches, rationales, specific classroom practices, and representative student products.

During the first year of the program, nine master rural and five local teachers presented during the seminars. Due to the need to increase the amount of time students needed to reflect on these presentations, we reduced the number of visiting teachers during the second year of the program to five master teachers. Prior to presentations, the project director and assistant project director suggested particular issues we would like the teachers to address. These issues took into account the concrete problems and dilemmas organizing the seminars.

Component 5: Emphasis on Teaching Content in a Particular Context--Small High Schools in Indian and Eskimo Communities

TRA students are being prepared for a highly unusual teaching context--small high schools of fewer than 100 students in isolated rural communities with large numbers of Eskimo and Indian students. A theme that integrated the entire program was how teachers should present content in this cultural and institutional context. In seminar presentations, the project director and assistant director emphasized that no rulebook was available and that teachers must, above all, avoid imposing stereotypes of "Eskimo" and "Indian" values or learning styles on students. The teaching task was to reflect upon the particular context and to develop instructional approaches responsive to the specific context.

Small high school issues and issues in teaching Eskimo and Indian students were presented through a variety of means: readings, use of rural teachers who had instructed in these settings, case studies dealing with rural Eskimo and Indian communities, special curriculum developed for the program, examinations emphasizing rural teaching issues, emphasis on teaching Eskimo and Indian students in the apprenticeship experience, student teaching placements in rural communities, and distance-delivered coursework which required students to analyze the small high school and culturally diverse community contexts.

Implementation of Reflective Inquiry Instructional Processes

The TRA program used four major instructional processes to develop a reflective stance among teacher education students:

1. Reflective Seminars Linked to an Apprenticeship
2. Teaching Cases
3. Self-analyzed Videotapes during Student Teaching
4. Distance-delivered Coursework during Student Teaching

Component 1: Reflective Seminars Linked to an Apprenticeship

The primary instructional mode in the TRA program was a small seminar organized around analysis and discussion of educational problems. The seminar met 4-5 half-days each week. Unlike a lecture course, the seminar is the instructional mode most conducive to developing active reflection among students.

In addition to the seminar, students were apprenticed to master teachers at a local school for two months. The apprenticeship provided opportunities for students to observe the passions and commitments that characterize fine teachers and to think through concrete problems and dilemmas of teaching. Further analysis of the apprenticeship experience occurs below.

Component 2: Teaching Cases

"Teaching cases" were a major tool that the TRA program used to develop students' abilities to spot crucial issues in cross-cultural teaching situations and to think through the risks and consequences of alternative approaches to dealing with them. Three teaching cases were developed specifically for the TRA program: Harassment in Lomavik, The Teacher Who Came to Rivertown, and Malaise of the Spirit.

Each case presents a complex teaching problem in a culturally different context. All the needed information is not known and much known information is irrelevant. The student's first analytic task is to formulate the crucial issues in the cases--not only immediate difficulties but also fundamental, long-term problems. The student's second analytic task is to appraise the particular course of action that the teacher in the case followed. The student's third task is to identify an array of potential strategies that might be used in such a situation and to assess their possible risks and consequences.

Students read these cases and wrote a two-page paper on these topics prior to classroom discussion. After class analysis of the case, students wrote a longer paper on the same issues. Informal comparisons of these two sets of papers indicated substantial growth in students' ability to spot issues and develop potential strategies. We note, however, that we have no index of the transfer of this analytic skill to new situations.

Component 3: Self-Analyzed Videotapes During Student Teaching

Instead of extensive conferences with university supervisors, TRA students were required to videotape their own teaching during student teaching and to reflect on audiotapes about the strengths and weaknesses of their lessons. This program approach grew out of practical necessity. With student teachers in remote villages accessible only by small planes, the program found it impossible to visit them more than twice during their student teaching experience. The videotaped teaching was sent to university supervisors who commented on it in lieu of more extensive visits.

While a pragmatic adjustment to the context, this process also supported the program's emphasis on reflective inquiry. Students were required to assess their own teaching rather than responding primarily to the issues raised by their university supervisor.

Component 4: Distance-Delivered Coursework Accompanying Student Teaching

During student teaching in remote villages, TRA students took distance-delivered coursework intended to develop and clarify the conceptual frameworks they can apply to rural teaching issues. These two courses were: ED610--Education and Cultural Processes and ED615--The Social Organization of Classrooms and Learning.

These courses centered on activities which required students to reflect upon their own classrooms and the larger community context in which their classrooms are embedded. Students, for example, set up peer teaching groups and observed cultural teaching and communication

styles when Eskimo and Indian students taught each other. Another exercise required students to follow up recent high school graduates (most of whom were not in college or employed) and think about the graduates' experience in terms of the issue of what a small rural high school in an Eskimo or Indian community should be preparing students for.

D. IMPLEMENTATION OF "ANALYZED APPRENTICESHIP" EXPERIENCE

While the TRA program focused on the development of a "reflective inquiry" perspective, the program recognized the importance of developing teaching skills. Students need to develop not only the ability to think about and describe good teaching but also the ability to put it into practice. The apprenticeship experience provided students with opportunities to observe fine teachers, their classroom practices, and their ways of thinking about teaching.

The apprenticeship experience occurs during the first half of the fall semester in a local Fairbanks middle school which has a relatively large population of minority students. The school is known for its excellent teaching staff and principal. Several teachers have been named Teachers of the Year and the principal has been recently honored as Principal of the Year. This school's teaming model also exemplifies some of the conditions and best practices found in Alaska's small rural high schools. This practicum consists of three phases (described below) and requires students to spend a total of about 125 hours (equivalent to approximately 20 full-days) in clinical activities at the school.

Clinical Activities

Phase I (late August) brings TRA students into the middle school two full days as participant observers in school staff meetings and pre-school activities followed by two full days observing students' first days of school. TRA students viewed this experience positively, even though it required them to begin classes earlier than other university students.

Phase II, occurring in late September, involved TRA students in the middle school for a full week. They were paired with subject matter teachers and worked as assistants in classrooms, attended team meetings each day, and shadowed one student to gain a sense of the students' perspective on the school day. TRA students' experiences were shaped, in part, by observation guides focusing on teachers' learning objectives, instructional routines and the use of classroom space, and youngsters' views of the school experience.

Phase III maintained the pairings from Phase II over four weeks. Each morning, TRA students would assist their mentor teacher in whatever ways the teacher deemed important to the classroom's functioning during the first two periods. Most frequently, mentor teachers report having TRA

students correct papers and maintain records, monitor seatwork, and get materials ready. The amount of interaction with students and number of "stand-up" teaching opportunities varied widely for TRA students from classroom to classroom.

This practicum experience is intended to function as an "analyzed apprenticeship." We have chosen this image for two primary reasons. First, in keeping with the program's orientation to reflective inquiry, we ask TRA students to act as "participant observers" in the school and in the subject matter classrooms to which they are assigned. Students learn, for example, distinctions between descriptive and interpretative modes of observations. Second, we characterize the experience as an analyzed "apprenticeship" because students work as an assistant to the teacher in their subject matter areas, participating in teaching activities as directed by the teacher, in much the same way as an apprentice might in learning a craft.

Thus, this middle school practicum develops novice teachers' conceptual frameworks and initial craft knowledge. It provides novice teachers with positive and exemplary models of teaching practice. One student summed up the feeling of many others when she exclaimed, "The climate of the school was terrific, very positive. The experience gave me enthusiasm for teaching." Further, the practicum provides a motivating foundation for the consideration of research and theory in the daily campus seminars. In the Teachers for Rural Alaska program practical experience is the starting place for learning about teaching; it is to be understood with the aid of theory and research. As one especially articulate student put is, "The [middle school] apprenticeship was one of the best parts of the TRA program. It helped me form a realistic scheme for understanding the material presented in the seminars and a chance to gain confidence and skill in actual teaching."

Central to the practicum is an ungraded assignment to design, implement and evaluate a 3-5 day "mini-unit" (see appendix II). This activity reflects the program's continuing emphases on the contexts of teaching and the metaphor of "design" to define teaching activities.

In discussing what students learned from the apprenticeship experience, we rely heavily on written analyses of the mini-unit. We analyze responses in the following categories:

1. Finding out about the nature of teaching
2. Coming to know students and using that knowledge
3. Designing lessons and discovering their value
4. Testing strategies
5. Learning craft knowledge and teachers' perspectives
6. Improvising in teaching

1. Finding Out About the Nature of Teaching

Half of our students volunteered that the mini-unit activity allowed them to "see" what teaching was like, built their confidence in their abilities to teach, and reinforced teaching as their profession of choice. One student wrote, "This was the first time I actually taught. What I liked best about the experience is that it gave me a chance to actually 'see' what teaching is really like and how hard it is to teach, to get the information out to the students, and all of the other activities that are associated with the art of teaching."

2. Coming to Know Students and Using that Knowledge

Half of the TRA students described ways in which the practicum experience helped them to better understand the students with whom they worked. About students, they mention coming to know individual characteristics, personalities and learning styles as well as youngsters' background knowledge and ways of thinking relative to subject matter. TRA teachers tended to learn about their students primarily as a result of their experiences grading papers and keeping records along with having worked with individuals and small groups prior to the whole class mini-unit. For instance, one TRA science teacher stated, "I had learned a lot about the students' behavior and levels of academic achievement through participation in grading their homework, tests, and lab exercises, and through tutoring and coaching students during class and at lunch. This exposure to the students allowed me to develop a rapport with them and use their individual strengths and weaknesses in my lesson design."

According to some TRA students, the practicum also pushed them to view school activities from the perspective of the middle school youngsters. They mentioned the value of following one youngster through the day during Phase II as one method that helped them to understand the social importance of school to their students. Other TRA teachers also learned to look at their assignments from the learners' point of view.

3. Designing Lessons and Discovering their Value

Trying out the Hunter lesson design framework. As requested, our students used and/or adapted the Madeline Hunter lesson design elements and framework for their mini-unit.

Valuing lesson organization. Important to the students was the value they began to assign to the structure that carefully thought out lessons might provide for both the teacher and students. A TRA student in the social sciences remarked, "I learned that I need to be more organized in terms of my lesson plans. I need to sit down and actually think about how I plan to get the different ideas across. I need to think about what kinds of questions the students will have. I

need to think about the different tools that I can use that will aid in the lesson (visuals, lecture, games, etc.)"

Communicating clear directions. One-third of the TRA teachers stated that they had become concerned about the clarity of their directions and/or their assignments during the course of the mini-unit. One TRA science teacher summed up the view, recognizing that "the clearer a student is on how to proceed with an assignment, the more time he or she will spend in learning activities and less time spent in asking procedural questions."

4. Testing Instructional Strategies

Two-thirds of the TRA students viewed the mini-unit assignment as an opportunity to try out instructional strategies they were learning during the on-campus seminar. In other words, they used their field placements as settings or "laboratories" in which to "test" such strategies.

5. Learning Craft Knowledge and Teachers' Perspectives

Learning strategies. TRA students sought craft knowledge from their mentor teachers. For instance, TRA students initially planned their mini-units in concert with their mentor teachers and reported that they received and used specific suggestions from their mentor teachers (e.g., using wait-time, giving of explicit directions, pacing of lessons, timing of quizzes).

TRA students observed their mentor teachers' instructional routines, which had been developed over years of exemplary practice. While we believe that most TRA students paid close attention to their mentor teacher's overall classroom approach, several students noted that they explicitly modeled their own lessons after the instructional routines of their teachers.

Learning the way teachers think. Our students also learned how a teacher might analyze and interpret her youngsters' responses to instruction, based on her several years of teaching the same concept to groups of pupils.

6. Improvising in Teaching

TRA students' thinking and ability to modify and improvise within lessons appeared to be limited during the mini-unit. When they did change their lessons or activities, they did so in response to what they observed their students doing or not doing. Several TRA students, for example, modified study or observation guides because of the difficulties their students had in using them.

Most TRA students struggled with the pacing of material and lessons in light of learning objectives in relation to both students and time. One student concluded, "I learned that I must pace myself with the way students learn." Other tried to assess "how much material could be covered in one class" and "how much students can assimilate." They found out how much time particular students take to complete a worksheet or activity, when they had spent too much or not enough time on safety procedures in a lab, when an activity should have been scheduled for two days instead of one so that students could realistically understand the concept rather than simply complete the activity.

Conclusions

We view the early field practicum and mini-unit assignment as an intensive --rather than extensive--experience (Dewey, 1904). Overall, this assignment introduced and reinforced for our students (1) the need to adapt lessons to contextual factors and (2) the need to plan and organize lessons with care while improvising to adapt to the context. All Teachers for Rural Alaska students viewed the 6-week middle school practicum as an invaluable learning experience and many suggested that the experience be lengthened.

DISCUSSION

The TRA program succeeded in implementing a reflective inquiry teacher education program and in developing a reflective inquiry perspective in students. As the analyses of videotaped teaching samples indicate, students showed changes in their conception of the fundamental problems of teaching, their integration of the research knowledge base into their lesson designs, their ability to take into account cultural issues such as vocabulary level and frame of reference, and the development of a reflective, analytic stance toward teaching.

While these changes in students' conceptual framework occurred, we remain troubled by the disjunction between "how teachers think about teaching" and "how well teachers actually teach in the classroom." A program such as TRA, with its strong reflective inquiry focus, places substantially more emphasis on verbal analysis of teaching than it does on teaching performance. In our experience, many teachers--including master teachers whom we invited as presenters--instructed in highly appropriate and effective ways but found it very difficult to verbalize the conceptual basis of their teaching. We are concerned that the "reflective inquiry" focus does not give sufficient recognition either to performance or to the intuitive knowledge that characterizes highly expert performance.

This problem became especially apparent when we coded the performance of students in videotaped reflective teaching samples. In some cases, the student demonstrated a knowledge of a research-based practice (such as the need to provide an "anticipatory set") or an important cultural adaptation (such as teaching important life-skills in a rural context), but their teaching performance did not evidence that they had actually translated this knowledge into appropriate behavior.

We find the emphasis on "reflective inquiry" as the focus of a teacher edu. 'on program to veer too far in the verbal, analytic direction and seek to steer a more moderate course with an emphasis on skillful performance as well as conceptual frameworks.

A second troubling issue concerns the effectiveness of a fifth-year teacher education program, such as TRA, in increasing the number of minority teachers. In states where four-year teacher education programs have been abolished, this issue may be less important. In a state such as Alaska, however, where undergraduate as well as graduate teacher education programs are available, the potential of fifth-year programs is limited for increasing minority representation in the teaching force. Despite intensive recruitment efforts, TRA was able to attract only three Native students of the 27 total student enrollment.

The basis of this situation lies in the small number of Native students who graduate from college and the even smaller number who graduate from college in a field other than education.

While we remain convinced that teacher preparation on the graduate level is far better than undergraduate preparation, the reality of the situation is that undergraduate teacher certification will continue to be available in a state such as Alaska. The principles of teacher education that the TRA program developed can be applied to an undergraduate as well as a graduate program. We have made efforts to develop an undergraduate seminar especially attractive to Native education students that will use TRA principles.

IMPLICATIONS FOR IMPROVING TEACHER EDUCATION

The Teachers for Alaska program has developed an approach to the improvement of teacher education that has both local and national significance. The program was featured as one of ten exemplary teacher education programs in the national Holmes Group meeting in January, 1988 in Washington, D.C. The program has received requests for information about its design and curriculum materials from other Alaska institutions and teacher education programs outside the state. Teacher education programs which share the TRA program's empha.s on preparing teachers for

culturally diverse classrooms are especially interested in the TRA approach.

We summarize below features of the TRA program which have implications for the reform of teacher education.

1. Use of Expert Teachers in the Design of a Coherent Teacher Education Program

   The TRA program successfully used a group of master teachers, nominated by their colleagues, to work with university professors in designing a teacher education program with coherence and focus. The teachers brought a classroom-based perspective to the program that the university professors needed. The resulting program merged the research knowledge base with the "wisdom-of-practice" knowledge base and applied both sources of knowledge to concrete teaching problems and dilemmas.

2. Clear Definition of "Reflective Inquiry" in Program Design and Evaluation

   "Reflective inquiry" programs stand opposed to competency-based teacher education programs but often lack clear definitions of reflective inquiry. The TRA program developed a clear operational definition that served as the organizing focus of diverse classroom and practicum experiences.

3. Concrete Teaching Problems and Dilemmas as the Program Focus

   Following recent trends in medical education, the program uses concrete teaching problems and dilemmas as the organizing focus of coursework. Each block of coursework poses a series of practical problems and dilemmas concerning the teaching of a particular subject to particular kinds of students. The research knowledge base and the "wisdom of practice" knowledge base are then applied to these problems by means of readings, presentations from both university professors and expert teachers, and practicum assignments. Students find this organization of a teacher education program very satisfying since it shows them at once the practical applications of what they are learning. This organization also models the intellectual process of problem-solving in teaching--beginning with a concrete problem and seeking out perspectives and potential strategies from a variety of sources.

4. "Teaching Cases" as a Means of Developing Reflective Inquiry Skills

   The program has produced three lengthy teaching cases, with the content and teaching approach modeled after the case method at the Harvard Business School. These cases give teacher education students practice in identifying crucial issues in complex, ambiguous teaching

situations, considering the problems from the perspectives of different participants, and in thinking through the risks and consequences of alternative decisions and strategies. Teacher education programs are beginning to experiment with various forms of narrative materials--case studies, teacher portraits, anecdotes with commentary--as a means of developing a reflective orientation among students. Our teaching cases provide an important model of one form of narrative materials and also provide useful curriculum in teacher education programs with a cross-cultural orientation.

5. Assessment through Videotaped Samples of Reflective Teaching

An important contribution of this project is the development of a quantitative method for assessing the development of reflective teaching--the videotaped reflective teaching sample. Prospective teachers are asked to prepare a 10-minute lesson appropriate to a particular group of students. After teaching the lesson to fellow classmates, they are asked a series of questions designed to reveal their thinking concerning choice of goals, choice of means, and issues requiring further thought. Both the sample of teaching and students' answers to the questions are recorded on videotape. This project has developed a coding system which measures reflective attitudes in a cross-cultural teaching context. This assessment method provides an important evaluation model for teacher education programs with a reflective orientation.

In sum, the Teachers for Alaska program has met with considerable success. We have developed an innovative, research-based teacher education program that has been institutionalized at the University of Alaska. We have contributed in significant ways to the reform of teacher education both within Alaska and on the national level.

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Table 1

FORMULATING IMPORTANT PROBLEMS AND ISSUES IN MULTI-CULTURAL TEACHING: CHANGES IN TRA STUDENTS' ABILITIES

	Program Start	Program Mid-Point	Program End
Sees fundamental teaching problem as creating active student involvement, not presenting information	12%	50%	92%
Reflects on issues involved in setting goals in rural multi-cultural contexts	21	67	92

N=24
Source: Teachers for Rural Alaska Program Assessment Report, August, 1988

Table 2

DEVELOPMENT OF ACADEMIC EMPHASES:
CHANGES IN TRA STUDENTS' ORIENTATIONS

Rationale for Goal Choices	Program Start	Program Mid-Point	Program End
Academic reasons	48%	68%	92%
Local cultural reasons	20	40	25
Special academic needs of culturally diverse students	8	4	33
Intellectual process/ Affective goals (reasoning and observation skills, self-confidence)	24	28	50

N=24
Source: Teachers for Rural Alaska
Program Assessment Report,
August, 1988

Table 3

ADAPTING INSTRUCTION TO THE CULTURAL CONTEXT:
CHANGES IN TRA STUDENTS' ABILITIES

	Program Start	Program Mid-Point	Program End
Takes into account culturally different students' vocabulary	12%	31%	46%
Takes into account culturally different student communication styles	4	39	67
Takes into account culturally different students' background knowledge and frame-of-reference	28	62	83
Takes into account culturally different students' fears, anxieties, confidence levels	0	4	21
Takes into account culturally different students' interests	44	42	46

N=24
Source: Teachers for Rural Alaska
Program Assessment Report,
August, 1988

Table 4

APPLYING RESEARCH KNOWLEDGE IN INSTRUCTIONAL DECISIONS:
CHANGES IN TRA STUDENTS' ABILITIES

	Program Start	Program Mid-Point	Program End
Research-based knowledge and conceptual frameworks inform instruction	17%	92%	100%
Lesson planning uses Hunter or other models stressing student motivation, need for review, and so forth	8	89	96

N=24
Source: Teachers for Rural Alaska
Program Assessment Report,
August, 1988

Table 5

DEVELOPING HABITS OF REFLECTIVE INQUIRY:
CHANGES IN TRA STUDENTS' ABILITIES

	Program Start	Program Mid-Point	Program End
Discusses two or more changes important to make in teaching lesson or otherwise evidences strong reflective orientation	35%	60%	91%
Final self-analysis identifies several important issues as continuing to focus inquiry	Inapplicable	Inapplicable	95

N=24
Source: Teachers for Rural Alaska
Program Assessment Report,
August, 1988

Table 6

SMOOTHNESS AND EASE OF TEACHING:
CHANGES IN TRA STUDENTS' PERFORMANCE

	Program Start	Program Mid-Point	Program End
Generally smooth, confident teaching	76%	81%	100%
Inconsistent teaching	0	8	0
Generally disorganized teaching	24	12	0

N=24
Source: Teachers for Rural Alaska
Program Assessment Report,
August, 1988

APPENDIX I

TEACHERS FOR ALASKA PROGRAM
CODING SYSTEM FOR ANALYSIS OF VIDEOTAPED REFLECTIVE TEACHING SESSIONS

Instructions to Coder:

First watch all three tapes (early September, December, and May). Then read the teacher education student's own self-analysis of her or her own development. Take all four sources of information into account in coding. Complete a separate coding sheet for each of the three teaching sessions. The final coding sheet has one additional quesion based on the salf-analysis.

These measures require coder analysis and judgment. In order to achieve high reliabilities and keep important coding categories "clean," each coding category asks you to make siple judgements: Did you observe the particular reflective process or teaching action? id you not observe it? Did you observe it only in a fleeting, undeveloped form? If you are unsure of your judgment, use the "unsure" category.

DIMENSION 1: CAN SPOT PROBLEMS, ISSUES, CRITICAL FEATURES OF RURAL, MULTICULTURAL TEACHING SITUATIONS

___ 1. CONCEPTION OF TEACHING

___ a. Teaching is telling. Student teacher conceives of fundamental problem of teaching as organizing large quantities of information and presenting it in a logical way. This conception can be inferred from a presentation that consists almost entirely of lecture and teacher presentation. May start with a few questions, but doesn't continue. Information pace is typically fast and the student expresses concerns about covering the material. Emphasis on visual displays such as charts and diagrams sometimes occurs. This initial conception of teaching may also be stated directly in student's self-analysis of change.

___ b. Learning Requires Active Student Involvement. Student teacher conceives of fundamental problem of teaching as organizing a learning environment in which students are active participants. This conception can be inferred from a presentation that emphasizes student activities--such as creating a poem in a group or figuring out scientific principles from a demonstration. This conception may also be directly expressed in student teacher's self-analysis of change. Student teachers usually conceptualize this understanding in terms of the importance of student involvement, hands-on learning, and motivation.

___ c. Unclear, mixed. Student teacher conceives of teaching primarily as a problem in presentation of information but has begun to recognize need for some student involvement. This conception can be inferred from a presentation that consists predominantly of lecture but has a few opportunities for student questions or responses intermixed. This conception may also be stated directly in student teacher's self-analysis of change. This conception also may be inferred from a presentation where student says the next step is participation.

___ d. Unsure

___ 2. RESEARCH AND CONCEPTUAL FRAMEWORKS INFORMING TEACHING

___ a. Presence of research-based strategies and conceptual frameworks. Can be inferred directly from presentation (e.g. draws web on board, organizes reciprocal teaching group) or from direct references to research or conceptual framework. FOR EXAMPLE:

1) Hunter lesson design

2) Writing project processes

3) Reciprocal teaching

4) Emphasis on schema theory, background knowledge, students' frame-of-reference

5) Emphasis on Bloom's taxonomy, reasoning skills, higher order thinking

6) Webbing

7) Other (write in) _____

___ b. No reference to research-based strategies and conceptual frameworks

___ c. Unsure

DIMENSION 2: REFLECTION ON GOALS AND LESSON DESIGN

___ 3. ACTIVELY CONSIDERS GOAL RATIONALES AND ALTERNATIVES

___ a. Direct reflection on issues involved in setting goals particularly in a rural, multi-cultural context. Student teacher elaborately discusses alternative goals, provides a rationale for choosing particular goals. Can be inferred from responses to questions following teaching activity or from discussion of goals in self-analysis.

___ b. Little or no reflection on goals, gives simple reason

___ c. Unsure

___ 4. NATURE OF RATIONALE FOR GOAL CHOICES (check all that apply as an index of multiple, layered goals)

___ a. Student teacher chooses lesson for self-oriented reasons (familiar, done it before, "easy beginning lesson")

___ b. Student teacher chooses lesson for academic reasons (basic concept in subject)

___ c. Student teacher chooses lesson for local cultural/rural context reasons:

1) Understanding of traditional cultural heritage

2) Important life-skill or coping skill in rural area

3) Understanding local environment-principle illuminates local situation

___ d. Chooses lessons because of rural students' special academic needs (such as reading comprehension)

___ e. Student teacher chooses lesson in order to achieve intellectual process/affective goal

1) Developing reasoning skills, observation skills, analytic skills, reading skills

2) Developing self-confidence, enjoyment of area, new interests

5. COMPLEXITY OF PLANNING PROCESSES

___ a. Student teacher plans primarily by arranging information in logical sequence. Can be inferred from presentation and from response to question about planning and from self-analysis.

___ b. Student uses or attempts to use lesson design plan such as Hunter's or other models that take into account issues of motivation, review, etc.

___ c. Unsure

DIMENSION 3: LESSON TAILORED TO CULTURAL/LOCAL CONTEXT

6. STUDENT TEACHER EXPLICITLY TAKES INTO ACCOUNT: (Check all that apply)

___ a. Vocabulary of students

___ b. Speed of talk, pacing

___ c. Background knowledge or frame of reference of students

___ d. Students' fears, anxieties, self-confidence

___ e. Student interests

___ f. None

DIMENSION 4: SKILLFUL PERFORMANCE OF TEACHING

7. SMOOTHNESS AND SKILL OF TEACHING

___ a. Generally smooth, confident teaching

___ b. Generally disorganized teaching

___ c. Teaching inconsistent

___ d. Insufficient evidence

DIMENSION 5: ABILITY TO LEARN FROM PRACTICE

___ 8. REFLECTIVE ORIENTATION TOWARD TEACHING

___ a. Volunteers two or more important changes might make in lesson or did make in lesson taught before, or otherwise shows strong reflective emphasis

___ b. Little or no mention of possible change or issues being reflected upon

___ c. Unsure

___ 9. SELF-ANALYSIS ONLY: REFLECTIVE, EXPERIMENTAL STANCE

___ a. Several important issues or experiments mentioned in self-analysis as having focused or continuing to focus reflective activity. DO NOT COUNT as separate items a group of nested, inter-related questions on one dimension

___ b. Mentions 1 or 2 minor issues or experiments for continuing reflection

___ c. Unsure

COMMENTS: (Strengths and weaknesses of presentation for rural students)

TEACHERS FOR RURAL ALASKA (TRA) PROGRAM

Final Report to the Office of Educational Research and Improvement,
U.S. Department of Education

PART C: PRACTICE PROFILE

July 22, 1988

Prepared by

Judith Kleinfeld, Project Director
and
Karen Noordhoff, Assistant Project Director

Center for Cross-Cultural Studies
University of Alaska Fairbanks
Fairbanks, Alaska 99775

PRACTICE PROFILE

PROJECT: TEACHERS FOR RURAL ALASKA

I. PROJECT DEMOGRAPHICS

Student Characteristics:

During the first two years of program operations, this teacher education program has been organized as a cohort group of approximately 14 students. Virtually all students have completed their baccalaureate degrees. Students are selected on these criteria:

1) varied life experiences, especially in multi-cultural settings
2) practical skills
3) diverse academic backgrounds
4) academic average of at least 3.0
5) strong interpersonal skills

Such skills and background experiences, research shows, are especially conducive to teacher success in small Eskimo and Indian villages.

Teacher Characteristics:

The program is organized and administered by two university faculty. The director of the program has a research background and is especially interested in cross-cultural research. The assistant director's field is teacher education. These two faculty members organize the sequence of seminars and practicum experiences, do some seminar teaching, advise students, and prepare exams. Five additional university faculty teach seminars in their fields of specialization. Five master teachers, who teach in small rural high schools, travel to the university and teach in the seminar. Students also work with a master teacher in their subject area in an apprenticeship arrangement during the practicum experience.

School/District Characteristics:

The major school district involved is the local public school district near the University of Alaska Fairbanks. The program is centered in an exemplary junior high school with a multi-cultural population. Students also participate in practicum experiences in a small, rural school district. In addition, students do their student teaching in rural districts with small high schools and Eskimo and Indian populations. The number of districts varies depending on student numbers.

Program Characteristics:

This is a fifth-year teacher education program which leads to secondary teacher certification in two semesters. The program has a strong reflective inquiry focus. It concentrates on the preparation of teachers for multi-cultural settings, especially very small high schools in Eskimo and Indian villages.

II. IMPLEMENTATION REQUIREMENTS

Costs:

The University of Alaska organized the program with about $25,000 of outside funding. Aside from the salaries of the faculty who administer the program, the only additional program cost is compensation and travel for master teachers who instruct in the program.

Training:

Extensive discussion occurs with master teachers and university faculty to make sure that their presentations contribute to the conceptual focus of the teacher education program -- reflective inquiry concerning practical problems and dilemmas of teaching particular subjects to students with a culturally different background.

Materials/Equipment:

No special requirements.

Personnel:

The program requires a program director (1/2 time), assistant program director (1/2 time), adjunct university faculty and master teachers (2-5 days each), and a secretary (1/2 time).

Organizational Arrangements:

Teachers for Rural Alaska is a program option in secondary school certification. This option is available to full-time graduate students in the College of Rural Alaska.

PRACTICE PROFILE: TEACHERS FOR RURAL ALASKA PROJECT

PART III: COMPONENT CHECKLIST

ORGANIZING AND MAINTAINING PARTNERSHIPS

Component 1: Teachers Design Program		
(1)	(2)	(3)
Master teachers define content and method of program in collaboration with university faculty.	Master teachers offer advice on content and method but program is primarily designed by university faculty.	University faculty design teacher education program.

Component 2: Faculty Collaboration		
(1)	(2)	(3)
Special program faculty request most other teacher education faculty to teach their specialties.	Special program faculty request a few teacher education faculty to teach their specialties.	Special program faculty do all university teaching in program.

PRACTICE PROFILE: TEACHERS FOR RURAL ALASKA PROJECT

PART III: COMPONENT CHECKLIST

RECRUITMENT AND SELECTION PROCESS

Component 3: Student Recruitment		
(1)	(2)	(3)
Students selected on specific criteria related to teaching success in rural schools: varied life experience, practical skills; interpersonal skills, diverse academic background.	Students selected on some criteria related to rural teaching success.	Students selected on academic characteristics or open admissions.

PRACTICE PROFILE: TEACHERS FOR RURAL ALASKA PROJECT

PART III: COMPONENT CHECKLIST

INSTRUCTIONAL CONTENT

Component 4: Reflective Inquiry Focus		
(1)	(2)	(3)
Program has clear goals--to develop teachers who (1) can identify crucial problems in complex teaching situations; (2) have a wide repertoire of teaching strategies and images of fine teaching; (3) can spin out consequences and risks of teaching decisions; (4) can tailor instruction to culturally diverse contexts.	Program uses rhetoric of reflective inquiry but goals are murky.	Program has competency-based focus.
Component 5: Teaching Problems and Dilemmas as Organizing Focus of Coursework		
(1)	(2)	(3)
Program organized in thematic blocks focused on concrete practical problems of teaching a particular subject to particular kinds of students in a particular milieu.	Program discusses problems and dilemmas but does not use them as organizing focus.	Traditional sequence of foundations and methods courses.

Component 6: Research Knowledge Base and "Wisdom of Practice" Knowledge Base Brought to Bear on Problems and Dilemmas		
(1)	(2)	(3)
Research base introduced as a source of useful perspectives for problem solving. Master teachers present their classroom practices in dealing with these problems.	Research is related to practice but starting point is research with "theory into practice" sequence. Occasional use of teachers as guest speakers.	Research is detached from problem-solving. No use of master teachers.
Component 7: Small Schools Focus		
(1)	(2)	(3)
Program emphasizes methods of organizing schools and curriculum important to small rural schools--such as course rotation or project-centered curriculum.	Program briefly discusses small schools' issues.	Program does not deal with small schools' issues.
Component 8: Eskimo and Indian Students Focus		
(1)	(2)	(3)
Program emphasizes Native American cultural context and importance of tailoring instruction to background knowledge, motivations, adult lifestyles of students.	Program briefly discusses Native American issues.	Program does not deal with Native American issues.

PRACTICE PROFILE: TEACHERS FOR RURAL ALASKA PROJECT

PART III: COMPONENT CHECKLIST

INSTRUCTIONAL PROCESSES

Component 9: Apprenticeship with Master Teachers Linked to Seminars		
(1)	(2)	(3)
A 3-hour-per-day seminar is linked to a 2-hour-per-day practicum in which students are apprenticed to master teachers in their subject areas.	Practicum experience consists of observation and occasional assistance to teachers.	Coursework not connected to practicum.
Component 10: Use of Teaching Cases		
(1)	(2)	(3)
Program uses case studies on teaching dilemmas, modeled after Harvard Business School cases.	Program uses some case materials but not elaborate teaching cases.	Program does not use case materials.
Component 11: Self-Analyzed Videotapes During Student Teaching		
(1)	(2)	(3)
Program requires students to videotape their teaching during student teaching and analyze their own practice.	University supervisor asks students to analyze their own practice but generally sets agenda.	University supervisor takes a directive approach in student teaching conference.

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Component 12: Distance-Delivered Coursework Accompanies Student Teaching		
(1)	(2)	(3)
Students take distance-delivered courses which require them to analyze their own classrooms and larger community coursework.	Some formal reflective activities accompany student teaching.	No formal reflective activities accompany student teaching.

PRACTICE PROFILE: TEACHERS FOR RURAL ALASKA PROJECT

PART IV: STUDENT EVALUATION PROCESSES

STUDENT EVALUATION PROCESSES

Component 13: Videotaped Reflective Teaching Sample		
(1)	(2)	(3)
Students do a videotaped baseline 10-minute lesson (teaching Eskimo and Indian students) and respond on videotape to questions designed to reveal the conceptual frameworks they are bringing to teaching. Videotaped reflective teaching is repeated at mid-point and end of program.	Students complete written measures designed to reveal the conceptual frameworks they are bringing to teaching.	No formal evaluation method is used.

Component 14: Examinations Dealing with Instructional Tasks		
(1)	(2)	(3)
Examinations center on design of instructional activities for particular classroom problems.	Some exam questions are based on design of instructional activities.	Exam questions focus entirely on academic knowledge and conceptual issues.