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ABSTRACT

This paper addresses one major question: What unique perspectives and skills does the university researcher, in interaction with the teacher/practitioner, contribute to help a collaborative research/evaluation team identify its research and achieve its goal? Case analysis of a recently completed National Institute of Education Project (Action Research on Change in Schools) has generated several possible responses to this major question. These responses include how the university researcher: contributes to an effective and efficient group process; establishes a norm of support for risk-taking and role-changing; and broadens individual perspectives by probing the practitioners' experience bases. Other subquestions explored in similar fashion include: What responsibility does the researcher have to the reality and practicality of the research to be undertaken? What responsibility does the researcher have to limit the team's research to that which has generalizable results, and to identify and/or ignore side issues which are introduced? (BW)

ROLE ISSUES IN PRACTICAL COLLABORATIVE RESEARCH ON CHANGE IN SCHOOLS

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INTRODUCTION

The call to bridge the gap between education research and practice is long-standing. It has intensified in recent years in several forms. In the area of school evaluation, concern has focused on how evaluation research should mesh with the utilization of the results (Patton, 1978) in practice in the real contexts of the schools (Cronbach, et al., 1980). Evaluation research strategies geared specifically toward school improvement are developing (Klausmeier, 1982).

In the area of educational research and development, collaborative action research strategies are addressing: Improved classroom practice; refined educational theory; and teacher professional growth. In the areas of staff development, Arends, Hersch, and Turner (1980) predict that inservice education will remain a negative in teachers' existence unless a new paradigm is adapted which is more complex, interactive, and responsive. Howey (1980) reports that teachers in collaborative research projects refer to them as one of the most valid staff development experiences they ever encountered. Huling (1981) in IR & D at Texas Tech University reports that practitioners demonstrated significantly greater changes in concerns about the use of research findings and practices than those teachers who did not participate; they also demonstrated significantly higher research-teaching-development skills.

The analysis reported in this paper derives from a two year research project just completed. The project, Action Research on Change in Schools (ARCS), is the third in a series of NIE

sponsored research activities on collaborative action research. The three other projects include the original Interactive Research and Development on Teaching Study (IR & DT), (Tikunoff, Ward and Griffin, 1979), the Interactive Research and Development on Schooling Study (IR & DS), (Griffin, Lieberman, and Jacullo-Noto, 1983), and the IR & D projects by Huling (1981). In the ARCS project, university researchers collaborated with the staffs of two public middle/junior high schools. The Michigan team consisted of five teachers from the same middle school, one university researcher, and a research assistant who also documented meetings. In the New Hampshire team were four junior high teachers, one part-time administrator, from the same school, a university researcher, and a graduate research assistant/documenter.

ARCS teacher participants were selected to represent a variety of developmental stages based on scores from the following three empirical measures: The Defining Issues Test of Moral Judgment (Rest, 1974), the Washington University Sentence Completion Test of Ego Development (Loevinger and Wessler, 1970), and the Paragraph Completion Test of Conceptual Complexity (Hunt, et al., 1973).

Although previous studies have involved both teachers and university researchers in collaborative action to define questions and conduct research, this study was unique. The characteristics of teachers according to their developmental stage scores were used to examine individual teacher participation in and perception of issues related to the collaborative research process.

A variety of data sources were used to record and monitor the process of action research in each team. These included

1) audio recordings of all team meetings and transcripts of selected meeting tapes; 2) written documentation of all team meetings by participant observer (using Schatzman & Strauss method, 1973); 3) teacher logs; 4) pre-post questionnaires with participants, other teachers, and administrators; and 5) interviews conducted at crucial points in the research process with participants, school administrators, and other school staff members.

Over a period of two years, meeting weekly on-site in the schools, the teams identified and developed research questions that were seen to address their concerns most effectively. As a result, teachers developed their own research questions, conducted appropriate studies, and worked toward programmatic changes. Both teams involved all staff members in their research activities which focused on evaluation studies of school-based scheduling issues and their impact on curriculum and instruction. The New Hampshire team specifically focused on the relationship between teacher morale and job satisfaction and a number of organizational changes and practices occurring at their school. The Michigan team included parents and students as well as staff members in examining their school's current scheduling practices and philosophy.[1]

Although the effects of the collaborative research activities on the individual teacher participants in this project have been investigated (Oja, 1983), the role interaction of the team researcher and the crucial balance between "research" and "school

[1]Copies of each team's final report on their research studies can be obtained from the Collaborative Action Research Projects office at the University of New Hampshire, Durham, NH 03824.

practice" has not been analyzed.

OVERVIEW

This paper addresses one major question: What unique perspectives and skills does the university researcher, in interaction with the teacher/practitioner, contribute to help a collaborative research/evaluation team identify its research and achieve its goal?

Case analysis of a recently completed NIE Project ("A Two Year Study of Teacher Stages of Development in Relation to Collaborative Action Research in Schools" by Oja and Pine, 1984) has generated several possible responses to this major question. These responses include how the university researcher: Contributes to an effective and efficient group process; establishes a norm of support for risk-taking and role-changing; and broadens individual perspectives by probing the practitioners' experience bases.

Other subquestions explored in similar fashion include: What responsibility does the researcher have to the reality and practicality of the research to be undertaken? What responsibility does the researcher have to limit the team's research to that which has generalizable results, and to identify and/or ignore side issues which are introduced?

QUESTIONS TO BE INVESTIGATED IN THE ROLE OF THE RESEARCHER

There are a number of questions related to how the role of researcher affects the collaborative research team process and

outcome. In fact, many of the issues about action research which the teachers in the Action Research for Change in Schools Project debated in the final phase of this project were the elements which originally attracted them to the team. This is to be expected when one considers that ACTION RESEARCH is:

- a participatory form of inquiry which leads to effective action.
- the systematic collection of data to bring about change.
- applied research which actively involves the researcher in the cause for which the research is conducted. (Bogdan and Biklen, 1982, p. 215).

In analyzing the researcher's role in this project, the following questions address each of the components in the above description of action research:

What specific skills can the university researcher contribute to help a collaborative research team identify its research and achieve its goal?

The university researcher brings unique perspectives and skills to help a collaborative research team identify its research focus and achieve its goals in the research task, research process, and group process. (The research process consists of the steps taken by the team in carrying out its research tasks, while the group process includes the patterns of interaction developed as the team works through its research process). Although interaction patterns tend to be site and group specific, there are prerequisite skills and understandings of the university researcher that are generalizable across action research teams.

One prerequisite skill is the university researcher's knowledge of group process strategies. The university researcher's role is strengthened when the researcher is able to deal effectively with the group process roles teachers assume during the collaborative research effort. For instance, the university researcher can facilitate the group process by: asking clarifying questions; focusing the group on tasks; recognizing a blocker to suggestions; setting boundaries; building a common cause, and raising relevant school context issues. (See Table 1)

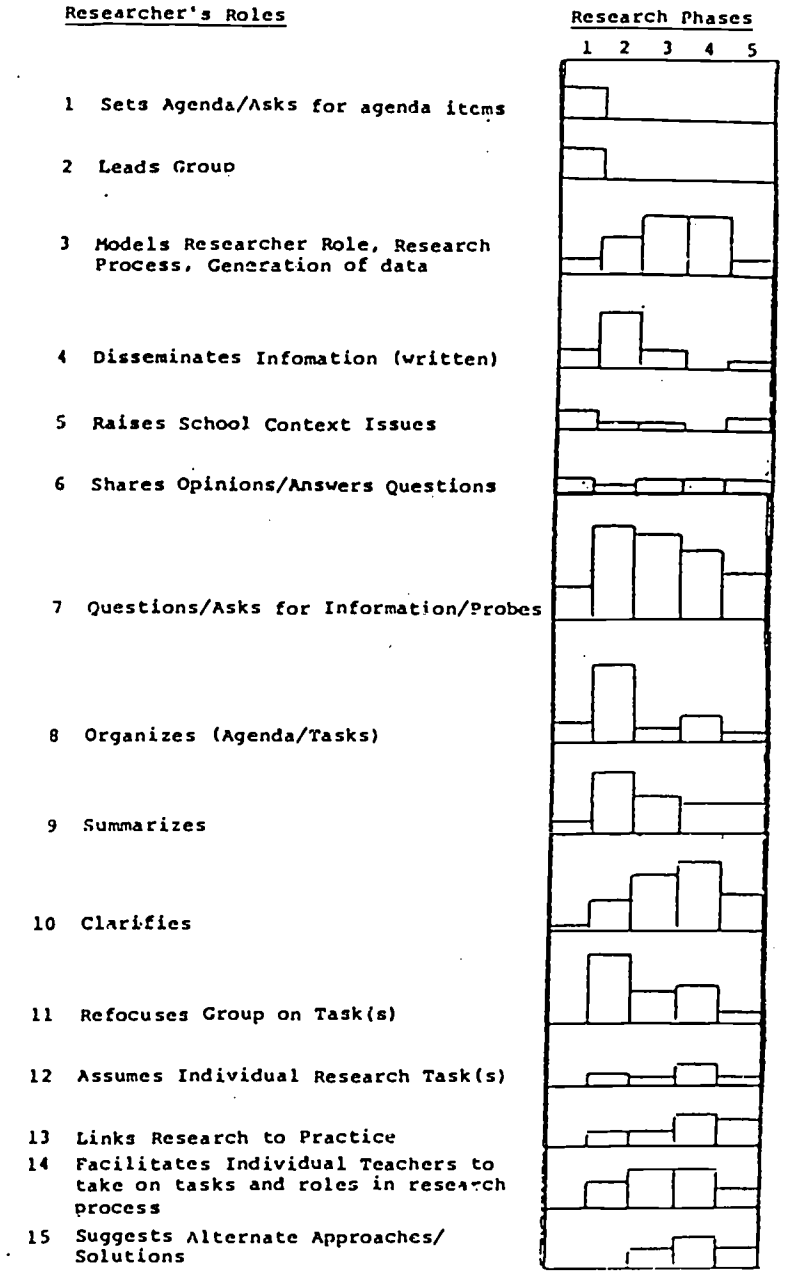
A second prerequisite is the university researcher's skill in the areas of both qualitative and quantitative research methodology. Most experienced teachers will have had courses in quantitative research skills only, as part of the traditional statistics for education courses required for Bachelors and Masters degrees. However, to pursue rigidly this one set of research skills reduces the possibilities for meaningful research and subsequent action by teachers involved in collaborative action research. In the second year of the ARCS Project, for example, the researcher clarified this need: "...we need to combine our quantitative data with qualitative descriptions which support it."

A third prerequisite is that the university researcher subscribe to the philosophy of collaborative action research so that the characteristics which define such research are congruent with the researcher's values. Equally important is the desire of the university researcher to join a collaborative action research team. Since such individuals already agree with the characteristics of action research listed in Table 2, they consequently

Table 1

Frequency Of University Researcher's Roles And Interventions On A Collaborative Action Research Team*

10-81 through 6-83



*Roles are listed chronologically according to when the role/ intervention was introduced or assumed by the university researcher.

Table 2

TEACHER PERCEIVED SCHOOL AND ACTION RESEARCH CONTEXTS

School Context (Permanent System)	Action Research Team Context (Temporary System)
1. Change initiated and managed from the top	1. Change initiated and managed from the bottom, middle and top
2. Hierarchial principal managed	2. Non-hierarchial self-managed
3. Information generated for management - management information system	3. Information generated for everyone - problem solving information system
4. Norm of mutual tolerance	4. Norm of collegiality
5. Norm of convention	5. Norm of experimentation
6. Power concentrated at the principal's office	6. Power diffused in the team
7. Teachers handle limited specific roles and functions	7. Teachers handle different roles and functions, roles exchanged
8. Assignment of tasks to teachers	8. Teachers develop their own tasks
9. Teachers' roles defined and structured	9. Teachers' roles overlapping and flexible
10. Individual "private cycle" of problem solving in the classroom	10. Group "public cycle" collaborative problem solving outside the classroom
11. "Behaviorally" busy setting - reactive thinking - cognitive economy	11. A setting of pause - reflective thinking - cognitive expansion
12. Directed and reactive inquiry	12. Participatory and collaborative inquiry
13. Immediate, concrete, "in-classroom" perspective of classrooms and school	13. Detached "out of classroom" perspective of classrooms and school
14. Short term and quick "on demand" problem solving	14. Sustained deliberate inquiry
15. Recipe knowledge	15. General programmatic knowledge

(Developed by Gerald J. Pine, 1983)

do not need a whole perspective twist in order to collaborate and to provide appropriate team leadership during the various phases of the research task. Teacher perceived school and action research contexts, and the action research team as a temporary system within the permanent system of the school is discussed further in Pine (1983).

Each of these three prerequisite understandings/skills, therefore, enable the university researcher to immediately focus on addressing the three joint outcomes of collaborative action research: refined educational theory, improved school practice, and individual personal/professional development.

How can the university researcher contribute to an effective group process so that support exists for all members of the team, practitioners as well as researchers, to risk changes in their thinking and practice as a result of the action research process?

The university researcher as a regular team member can contribute to an efficient and effective group process by using knowledge of group process skills and group problem solving skills to build a supportive system in which all members can risk changes in new learning, in perceptions of their roles and contexts, and in initiating changes in daily practice.

In the current action research project under analysis, the role of the university researcher, like individual teacher's roles, changed in accordance with the interpersonal and task demands which characterized each phase of the research project. This role, even more than those of teacher team members, reflected both the researcher's interventions and the position accorded to

her by others in the group. Figure 1 summarizes this researcher's roles and the interventions she introduced during the two years of the project. As this Figure illustrates, the degree of structure in action research seems to fluctuate as both time and research tasks change.

To what extent, then, does a collaborative researcher need to be flexible and capable of probing the teacher's experience base?

Such flexibility appears to be most evident in the researcher's ability to initiate interventions and to adapt his/her roles as facilitator, supervisor, and research model to meet the developmental, professional and context specific needs of the teachers involved. This flexibility in roles has been deemed as a crucial variable by Grimmett (1983); Theis-Sprintall (1981); Joyce (1980); and others who have researched the roles of supervisors and teachers. "Flexibility and adaptability have come to be regarded as significant criteria of both teaching and supervisory effectiveness" (Grimmett, 1983). However, the flexibility of the team researcher has not been investigated in collaborative action projects to date. Likewise the researcher's ability and frequency of probing questions is not well documented even though such probing is necessary in order to clarify research problems, and to determine that these problems are mutually defined by all team members. Through probing questions, researchers learn about the contexts so crucial to teaching/learning conditions, while teachers learn to specify their problems in more systematically researchable terms.

What interventions seem most effective in achieving the goals of collaborative action research?

Figure 1

Roles and Interventions of the University Researcher

Year 1

- o Leads Group
- o Sets agendas
- o Raises school context issues

- o Disseminates written info
- o Questions/asks for info
- o Organizes (agenda/tasks)
- o Summarizes
- o Refocuses discussions back to research task

- o Questions
- o Clarifies
- o Summarizes
- o Explains Research Process →
- o Provides information on research design
- o Facilitates individual teacher roles

o Shifts some responsibility ----------
to team members for setting
agendas and making decisions

Phase 1

Problem identification related to discussions of school context.

Phase 2

Survey of staff to help in problem identification.

Phase 3

Research design and development.

Year 2

- o Models researcher role ----------
- o Links research to practice ----------
- o Questions/probing
- o Clarifies
- o Focuses group on task
- o Facilitates individual teacher roles
- o Suggests alternate approaches or solutions

o Shifts some research authority
to other team members ----------

- o Questions
- o Clarifies
- o Summarizes
- o Suggests alternative approches
- o Initiates and directs initial data analysis

- o Edits final report

Phase 4

Data collection and how to analyze data.

Phase 5

Data analysis and presentation of results at national/local conferences and in final report with recommendations to staff and principal.

Analysis in the Oja and Pine project suggests the researcher's most frequently used interventions were questioning, clarifying, summarizing, organizing, focusing group on tasks, explaining, disseminating ideas on research process, facilitating individual teacher roles, linking research to practice, and suggesting alternate approaches and solutions. Teachers with different developmental perspectives responded differently to these interventions. The following examples taken from the ARCS Project documentation illustrate how both the researcher's natural style and planned interventions were supportive for some teachers, challenging for others, and sometimes ineffective in meeting an individual teacher's developmental needs.

In Phase 3, for example, the transitional* teacher continues to tell the researcher, "You know better than the team about the needs for our research." This teacher views the researcher as the leader and decision maker for the group and continually defers to her greater knowledge. Later he says, "I know why teachers don't do research...without you, (the university researcher) I'd never be able to carry this through." At this point, the university researcher intervenes: "So you feel teachers need a university researcher or an outsider as a team member?" The teacher clarifies: "Well the end point is being able to do research at a local level, but we'll always need others to help us out."

*The author has utilized the terms conventional, transitional, goal-oriented and self-defining to describe four different teacher perspectives. They correspond respectively to the conformist, self-aware, conscientious, and individualist stages of development defined by Jane Loevinger (1976). See Oja (1980) for a concise review of adult development theories as they apply to teacher/staff development. See Appendix A for brief comparison of stages of development.

This comment seems to justify the need for using an outside researcher. Also, according to the team meeting transcript, this supportive intervention encouraged greater participation by this teacher for the rest of the meeting.

In a subsequent team meeting, a self-defining teacher says, "Operating in a group slows the research process down. If we'd focused on individual projects, it would have been easier." The university researcher responds: "It seems we are trying to place some pieces into a larger context...first we decided to survey teachers, then made a decision to work on the schedule relating to teacher morale, and then focus just on morale. There is a progression we've followed that led us to this point." While this teacher is aware of how group process affects task accomplishment, is he also aware of the long term advantages that successful group process has over efficient short term task accomplishment? Further, does this teacher's stated view of group process illustrate a time when the university researcher should intervene? If so, should such an intervention be pursued with the individual teacher or with the group?

In Phase 4, a self-defining teacher generates printouts and group analyses, and attempts to put conclusions in writing. "How do we derive our cutoffs: High, medium, low?" The university researcher discusses this process individually with the teacher. Here the researcher seems responsive to the teacher's questions in a highly individualized fashion, an example of a differentiated intervention designed to challenge his developmental level. In a similar intervention, the researcher facilitates a goal-oriented

teacher's understanding of interpersonal issues. Noting that this teacher took a much more active role in meetings when a particular conventional stage teacher was absent, the researcher confronts the goal-oriented teacher and asks for a clarification of her feelings. To enhance their interaction and the success of this individual intervention, the researcher shares her own perceptions regarding ways of dealing with teachers at the conventional stage.

One final example illustrates the researcher's intervention in a conflict situation during a team meeting. A goal-oriented teacher confronts a transitional teacher regarding his apparent lack of responsibility in assuming and completing tasks. Attempting to defuse the transitional teacher's defensiveness, the researcher clarifies: "I am hearing that you (goal-oriented teacher) feel a sense of responsibility to this task and that you are receiving no help from one team member (transitional teacher)." It is interesting to note that this intervention caused both the goal-oriented teacher to immediately move forward on task, and the transitional teacher to interpret the researcher's comment as supportive of only one of them. It is important at this point to consider what alternative interventions the researcher might have introduced to assist both teachers at different developmental stages to resolve their conflict.

Since collaborative action research is itself a developmental process, each intervention facilitates teacher's skill in solving his/her own problems. Group facilitation was the primary focus of the researchers in the ARCS project. While the examples cited

above illustrate the researcher's intervention in relation to individual developmental stages, the following question addresses team growth and development in the research process.

Can a researcher on the team model appropriate skills, so that as the group coalesces, the teachers then employ their own skills in decision making and group facilitation?

As a team establishes itself and becomes comfortable with operating norms, members develop a clearer understanding of their research project, and do not need the university researcher to control the group process. Instead, the researcher can be used by the team as a resource person to provide knowledge and direction in research methodology and research standards.

For example, Phase 3 of the ARCS project began when team members asked the university researcher to bring in model research designs. This marked the first time the team had requested the university researcher's help as a researcher. In Phases 3 and 4, the university researcher's role tended to be that of research authority, a role based on her greater knowledge and experience in the field of educational research, rather than on her status as university faculty member. During this phase, the university researcher presented the team with information about kinds of research (qualitative versus quantitative) and research designs (research and development, comparative research, evaluation research, etc.). Because she initiated the agendas at team meetings, the university researcher also directed this newer focus on specific research design at the beginning of Phase 3, moving the team from one issue to the next and openly pulling tangential

discussions back to the task. Team members also assumed researcher roles and began to ask the university researcher questions about the reliability and validity of data collection tools. They also asked the researcher about the external validity of their project as a whole, techniques for data analysis, and the expectations others would have about their project. As the teachers became more confident in their research roles, they also began to assume task and process leadership roles in the group. During Phases 3 and 4, the university researcher shifted some of her research authority to others, just as she had previously shifted control of group processes and decisions back to the team. As a result, the team analyzed the surveys and wrote those sections of the report together. Individual team members also assumed positions of research authority in this phase as a result of their greater understanding of the project and their developing ease with research. The university researcher's actions provided them with space within the group process to take on those tasks and positions as well as positive reinforcement and the encouragement to do so.

At the beginning of Phase 5, the university researcher once again took a more directive role, similar to the one she had assumed at the onset of Phase 3. She began to model some of the methods of data analysis. During several meetings, she presented her findings and led the team into analysis of pre and post test results of a school survey they had administered. Her modeling at this point in the project provided an impetus for the team to assume responsibility for data analysis, just as her modeling

in Phase 3 gave the team the background it needed to make decisions about research design and questions. In both cases, once providing the catalyst, she stepped back, working within the group rather than leading it. These specific interventions served to move the group forward on its task. Because roles in the group had become fluid and because the university researcher had indicated her desire for the team to arrive at its own decisions in Phases 1 and 2, her modeling at the beginning of Phases 3 and 5 was accepted as natural and helpful and not as an imposition of power or an attempt to control the group process or research process.

Throughout the five phases, the university researcher's roles changed to meet the team's interpersonal needs and research task demands. As team members began to get to know one another, establish trust, and develop norms, she provided an agenda and a meeting structure. As they worked to identify a researchable problem and appropriate data collection tools, she summarized what they had done and refocused discussions. When the team indicated their readiness to concentrate on research design and research questions, she provided information and modeling so they could become more skillful. Also the university researcher shifted process and task responsibility to other team members whenever possible. These decisions and actions left room for team members to assume the process and task responsibilities which arose in each phase. Thus, while many of the university researcher's roles and interventions arose out of the interpersonal and task demands of each phase, they also affected the process

the group experienced and contributed to the personal and professional value team members attributed to the entire collaborative research process.[2]

Perhaps the next question to be considered is whether researchers approach steps in the research process differently from teachers?

Although one approach is not better than others, a variety of different approaches perhaps illustrates individual definitions of "collaboration", "research", and "usable research results". When understood, both teacher perspectives and the concept of "readiness in new learning" can enhance the collaborative research process, guarantee effective interventions, eliminate the gap between researcher and practitioner, and help insure the utilization of the research results in practice.

Analysis in the Oja and Pine project, for example, suggests that articles from the literature reviews were not used by practitioners until later in the research project, and in fact, were best used only when practitioners had specifically asked for them. On the other hand, early in this project, practitioners talked about field observations, expert's opinions, and their own teacher histories of experience on the job as important methods of clarifying the research question as well as collecting appropriate data once the question was specified. However, until this team was ready to concentrate on its research design and question, the university researcher could only help them maintain a sense

[2]An indepth analysis of the teacher's participation and roles taken on in the group process, in addition to the researcher, is presented in Smulyan (1983).

of what they had done to that point. Neither she nor other team members could direct the task until the team had chosen to address it.

In collaborative research projects, therefore, researchers may perceive outcomes and goals differently from teachers. At least two diverse groups of experienced teachers, each working within their own school settings, chose to research long range goals designed to improve teaching and learning conditions. Both university researchers originally perceived classroom concerns as more appealing to teachers than research geared to broader issues of school improvement. However, teachers in both the New Hampshire and Michigan school based teams selected scheduling as a research topic because they felt this topic affected so much of the teaching and learning conditions in their lives at school. Yet, selection of more global issues can present researchers with real problems in defining the research question(s) and in specifying results.

What responsibility then does the researcher have to limit the team's research to that which has generalizable results, and to assist this team in linking research to practice?

Teachers involved in the ARCS Project desired to work on research topics geared to visible school improvement. If these research teams had been initiated as part of a continuing school-based project (rather than a two year project), teachers might have been more willing to accept smaller research goals or to postpone investigating related topics to another year. For example, one group of ARCS teachers determined to plan a pilot

project, when a survey of teachers and students was sufficient for the scope of their research effort. In another instance, a history of change in one school was a sufficient piece of research, but the teachers desired to investigate this topic in much greater depth. These examples illustrate a continuing dilemma for the university researcher. Do the benefits of collaborative action research teams (to individual teachers and researchers, to understanding of school problems, to school staffs, and to the improvement of school practice) outweigh the lack of generalizability so often criticized in action research?

As they plan research geared to school improvement, collaborative action researchers feel a responsibility to have teachers talk about the real context of decision making, staff collegiality, and the subtle and overt mechanisms of change in their school. One team in the Oja and Pine study, for example, decided that the culmination of their research project would be a recommendation to the principal regarding scheduling. The realization that this recommendation may/may not be heeded, increased their concern that the principal and other school staff be informed and involved much earlier in the research process if they were to feel some ownership and commitment to the results. The issue of principal involvement in the ARCS Project proved to be a crucial variable in influencing the teachers' ability to transfer their research into practice. (This issue is analyzed further in the ARCS final report, Oja, 1983). The principal and school leaders play a key role in insuring the success of a school-based action research project, and in subsequently implementing the recommendation of

such a project for school improvement. Therefore, one of the university researchers' major concerns is not only limiting the teams research, but also initiating and sustaining a collaborative process for linking research to practice.

SUMMARY

This paper has discussed a number of questions arising in the role of the university researcher on a collaborative action research team. Examples were presented to illustrate dilemmas the researcher faced in contributing to group process; understanding school context issues; facilitating teachers to take on research tasks; linking research to practice; and suggesting alternative approaches to research questions.

Although recent reports (A Nation at Risk, High Schools...) emphasize the need for site specific school or district level collaboration, they do not describe a process for involving teachers in investigating the application of research to practice.

Collaborative action research projects similar to the one described in this paper offer one alternative to achieving the school-based problem solving suggested by these national reports for educational reform.

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Appendix A

COMPARISON OF STAGES OF DEVELOPMENT

ARCS TEACHERS STAGES OF DEVELOPMENT	Stages of Development: Ego Development Loevinger	Moral Development Rest, Kohlberg	Cognitive Development Piaget	Conceptual Development Harvey, Hunt, Schroder	Interpersonal Development Selman
	Presocial	Preconventional (Stages 1 & 2)	Sensori/Motor	Unilateral Dependence	Unilateral Relations
	Symbiotic				
	Impulsive		Preoperational		
	Self-Protective Transition		Concrete Operations	Negative Independence	Bilateral Partnerships
CONVENTIONAL	Conformist	Conventional (Stages 3 & 4)			
TRANSITIONAL	Self-Aware Transition		Concrete/Formal Operations	Mutual Dependence	Homogeneous Relations
GOAL-ORIENTED	Conscientious				
SELF-DEFINING	Individualistic Transition	Post-Conventional (Stages 5 & 6)			
	Autonomous		Full formal Operations	Interdependence	Pluralistic Relations
	Integrated				