

THE COLLABORATIVE PROCESS IN ACTION RESEARCH

By

Lisa Smulyan
Swarthmore College

This paper describes and analyzes the collaborative process of an action research team which carried out a two-year project in a New Hampshire junior high school. The project was one of several collaborative action research studies funded in the last ten years by the National Institute of Education. This study used qualitative methods of data collection and analysis to show that an action research team experiences phases of development which consist of both research and interpersonal tasks and issues. The team's group process influences the way in which they carry out their research (research process), the research project and its outcomes, and the staff development experienced by participating practitioners.

During the past ten years, educational researchers and practitioners have turned to collaborative action research as one way of conducting more context-based, qualitative research and to improve staff development and school practice (Clifford, 1973; Mishler, 1979; Mosher, 1974). Action research, a term first used in the 1940s by Lewin (1948) implies the application of tools and methods of social science to immediate, practical problems defined by practitioners. Collaboration, an essential element of action research, means that all participants in an action research group are expected to share in setting research goals, designing the research project, collecting and analyzing data, and reporting results. Collaboration provides a supportive setting which allows participants to experiment with change and draw on the insights, perspectives, and skills of colleagues from school and university (Corey, 1953; Tikunoff, Ward, & Griffin, 1979). Today's collaborators often include teachers and administrators, university faculty, research and development center staff, and federal agencies which provide funding and guidance.

Although those reporting on previous action research projects have recognized the importance of collaboration and discussed some of the problems involved in implementing it (Ferver, 1980; Hord, 1981; Pine, 1981), few have discussed the process of collaboration or how that process affects the resulting research project and staff development. The purpose of this study is to describe and analyze the collaborative process of one action research team in New Hampshire. The New Hampshire project was one in a series of collaborative action research projects funded by the National Institute of Education. The project, *Action Research on Change in Schools* (ARCS) brought together five teachers from a junior high school and two university

researchers from the University of New Hampshire. These teachers and researchers met weekly over a two-year period as an action research team to identify and study a researchable problem in their school (Oja & Pine, 1983). The analysis of this research team's process is derived from ethnographic data gathered over the two years of the project and uses relevant theories of group dynamics to explain the group's experiences.

METHOD

Qualitative methods of data collection and analysis were used to explore and describe the collaborative process of this action research team. Data were collected through participant observation, interviews with team members, and teacher logs. Each of these sources contributed a different view of the group. In previous studies of action research projects, investigators have relied on reports from participants and tapes of team meetings for data. In this study, a research assistant/participant observer on the team performed the data collection tasks, utilizing a method of documenting team meetings presented by Schatzman and Strauss (1973) and adapted for this study. During the meetings, the research assistant recorded detailed observations of verbal and non-verbal interaction. Following each meeting, the observations were expanded and, under separate notation, theoretical notes — consisting of comments on events, actions, observed patterns, and methodological items — were entered.

Teachers were interviewed five times during the course of the project on their perception of the project, its goals and outcomes, their roles and the roles of others in the project, and their understanding of collaboration and action research. Data gathered through interviews were compared to observations and interpretations of the group process gathered through participant observation. In the interviews, teachers discussed their feelings about the processes in which they were engaged and how they saw the project developing. Their interpretations added greater depth to the picture of the group process by refuting, validating, or clarifying observed patterns.

Teacher logs provided a third source of data. Team members were asked to keep a log in which they noted their reactions to events occurring in their school and to the team process and project. Some team members used the log to discuss general educational issues; another used it to describe daily events and concerns; another used it to reflect on the project. Logs provided insight into teachers' perceptions.

Data analysis. Through the process of triangulation, the use of diverse sources and forms of data which support, validate, or contradict one another, the data in this study were analyzed for themes and patterns in the collaborative process. Preliminary analysis of the data suggested salient

patterns and questions which were used to focus further data collection. As validated patterns continued to emerge from the data, they were incorporated into a general description of the collaborative process of the action research team. The description derived from the triangulation and integration of data sources was consistently checked to ensure that it accurately reflected collected data (Becker, 1951; Glaser & Strauss, 1967).

RESULTS

This study found that the collaborative process of an action research team is a dynamic process. As the project moved forward, research tasks changed, demanding different forms of interaction, different roles, and different patterns of behavior. As team members worked through interpersonal issues, understanding and perception of the project changed, they interacted differently, and they approached the research in new ways.

The team experienced a series of five phases in its processes of interaction. Initial analysis suggested that these phases were determined by the research tasks addressed by the team, but further examination of the data revealed that each phase also included interpersonal or group-related issues which often influenced the team's approach to the project. Although boundaries between phases were not always sharply defined, documentation of the phases through participant observation was reinforced by teacher perceptions (revealed in interviews) of having moved through distinct stages characterized by different research tasks and interpersonal concerns.

Although every phase included both research and interpersonal issues, the team experienced a general shift in emphasis from interpersonal to task-related concerns and activities over the course of the two years. Schein (1969) and Tuckman (1965) have noted that many groups exhibit this pattern; interpersonal issues which initially dominate the group process are resolved, allowing the group to concentrate on task concerns. Each phase is briefly described in Table 1.

Phase 1: Year 1, September-December

The team of five teachers and two university researchers spent its first two months identifying researchable problems in the school and agreeing to focus on a school-wide rather than classroom-based problem. They decided to study scheduling issues. In December/January, the team administered a survey to their school staff which solicited opinions on this topic.

During this initial phase, team members used discussions of school context and researchable problems to establish trust and share ideas. Several team members raised concerns about confidentiality within the group. This

TABLE 1
Phases of the Group Process

Phase	Research Project Issues	Use of Team Time	Group Interaction Issues
Phase 1 — Year 1 September-December	Problem identification	Discussing school context	Establishing trust Sharing opinions and ideas: building a common base Setting boundaries Establishing norms
Phase 2 — Year 1 January-March	Data collection (Staff Opinion Survey) Unclear goals: avoidance of research issues	Discussing school context and data collection tools	Feelings of being "on hold" Challenging group leader Unfocused discussions
Phase 3 — Year 1 April-May	Research question and design	Discussing research project	Feelings of time pressure Concern with group consensus Group writing for reasons of "fairness"
Phase 4 — Year 2 September-December	Data collection (<i>MBI</i> , School Survey, interviews) How to analyze data	Discussing research project	Feeling that interpersonal issues resolved in year 1 Questions of individual commitment to group project Resetting boundaries
Phase 5 — Year 2 January-May	Data analysis Presentation of results	Working on data analysis, final report	Feelings of working hard and accomplishing much Emphasis on group rather than individual work Positive group feelings Attempts to remove boundaries with school

time period was spent in stating opinions, challenging those of others, and finding out how teammates would respond. Sharing thoughts and feelings allowed the team to develop an initial sense of solidarity.

During this phase, the group also established boundaries and patterns of interaction which became norms or accepted operating procedures. For example, the team agreed that the principal would not be a participant because the group wanted to maintain control of the project. They also began setting a weekly agenda to plan each meeting. Other operational norms included team members using a question to begin a new task or raise a new idea (e.g., "Do we want to do a school context readout?") and volunteering to begin a task on their own and bring it back to the team for revision (e.g., drafting a survey). In the latter case, team members always accepted their colleague's work, providing a cushion of support before going on to analyze and rework the drafted piece. This phase parallels Tuckman's (1965) description of a group's "forming" time, during which the group comes together and establishes initial ties.

Phase 2: Year 1, January-March

Once the survey data had been gathered, the team experienced uncertainty about the next step: they questioned their control over scheduling issues and their ability to influence administrative decisions in this area. This second phase of the process was characterized by hesitancy and a tendency toward non-research related and free-flowing discussion. Team members usually chose to spend time on agenda items (such as events in the school context or when to meet) which were only indirectly task related.

During this phase, some team members also seemed to challenge the university researcher's role as team convenor. The specific conflict arose over when to meet; several teachers wanted to replace one week's team meeting with an open meeting with the school staff. The university researcher suggested the team meet twice that week to preserve the team meeting time. The conflict was resolved but one or two team members continued to challenge the university researcher's ideas and suggestions in this phase. This pattern of behavior parallels what Tuckman (1965) refers to as "storming," the second stage of group development. Once the group has formed and established some ties, it tends to challenge the group leader in order to define and limit that person's power.

Phase 3: Year 1, April-May

The shift to phase 3 occurred at the beginning of April, when team members asked the university researcher and research assistant to bring some models of possible research designs to a meeting for the team to examine. The team spent most of its meeting time discussing concerns directly related to the research project—research question, design, and methodol-

ogy. By May, they had defined a research question and designed their project, in which they would use the *Maslach Burnout Inventory* to test teachers' level of morale before and after scheduling changes planned for September of year two. Team members indicated that the shift toward more task-oriented interaction may have come from a number of sources: team member frustration with a lack of task or focus; a readiness to take on more abstract research issues; and approaching deadlines — a presentation to another action research team in late May and a research proposal due at NIE in June.

Concentrating on the research project and deciding on future directions seemed to draw the group closer together. Team members used weekly meetings to work on materials provided by the university researcher, research assistant, and one another rather than to discuss vague concerns about their school. They left meetings with the feeling that they had worked hard. The group demonstrated its feelings of joint ownership and shared responsibility in this phase when it decided that all team members should help write the research proposal required by the National Institute of Education. Tuckman (1965) would characterize this phase of interaction as "norming," a time when established patterns of interaction make productive work possible in the group.

Phase 4: Year 2, September-December

The team spent from September to December of year two collecting data and beginning to analyze results. They readministered the *Maslach Burnout Inventory* to all school staff and interviewed a sample of teachers to determine their level of morale, reaction to schedule changes, and perception of the decision-making processes in the school. Questions as to how the data should be analyzed led the team back to discussions of the research question and purpose. Team meetings during this phase were used to discuss and modify research design, data collection procedures, and plans for data analysis.

During this phase, two team members questioned their commitment to the group, in part because of the team's increased emphasis on their research project. Both of these team members challenged the value of the project, noting that the group now aimed to describe teacher morale in the school rather than to make any concrete changes or improvements in school practice or policy. Although both doubting team members stayed with the group, only one became more committed to the project and involved in carrying out research tasks.

At the beginning of phase 4, one team member left the team when he accepted a principalship in another town. The team continued to maintain its boundaries and cohesion, indicating its task orientation by agreeing not to

replace its lost member. Team members explained that they did not want to take the time to rebuild trust and understanding with a new group member, nor did they want to spend time filling someone in on the project when there was so much to be done. Thus, in phase 4, the team moved forward on its research task while redefining and solidifying its boundaries and membership. Team members described phase 4 as a time when the group focused on the demands of the research rather than on interpersonal relations or unrelated school issues.

Phase 5: Year 2, January-May

During phase 4, team members used meetings to talk about the research project; data collection occurred outside of team meetings. In phase 5, team members used group time to work on specific tasks, such as collating data, analyzing computer printouts, and writing their final report. Team meetings during phase 5 had the same feeling of intensity as those in phase 3. Meetings tended to last an hour longer than at any other time during the project, and all team members contributed to data analysis and report writing. Between January and May, teachers designed and used computer programs to analyze their data and wrote their findings for presentation to the National Institute of Education, the American Educational Research Association, and a faculty colloquium at the University of New Hampshire. Team members frequently commented on how much there was to do but also noted how much they had accomplished. Team members initiated and held several all-day meetings to work on the project, meeting twice during school vacation and three times on weekends. No one questioned the extra time; group involvement and commitment reached its highest point during this time. Tuckman (1965) would say that the group was "performing," using its energy to carry out its final work before disbanding.

Team members' intense, shared work on the project and their group presentations at AERA and the University of New Hampshire led to strong feelings of group cohesion during this phase. In team meetings, the group resisted any suggestions to divide up the work of data analysis or report writing. In phase 3, the rationale for group writing had been fairness. During phase 5, team members wanted to write together because they felt the group provided necessary intellectual and emotional support during the difficult processes of data analysis and writing.

Group data analysis and writing led to a unique pattern of interaction for the team during this phase. Team members composed aloud, building and rebuilding sentences as everyone added to and amended the words and statements of others. This kind of interaction arose from the nature of the task and promoted feelings of group solidarity; team members encouraged one another, and applauded good or appropriate words and phrases.

DISCUSSION

Two key patterns emerged from analysis of the team's process. The first is that although the team moved through the typical steps of identifying a problem, defining a research question, choosing methodology, designing the project, collecting and analyzing data, and presenting results, they did not always do so in a sequential process. They frequently cycled back into earlier steps or worked simultaneously within several. The second characteristic of the research process was the team's tendency during year one to work on more concrete aspects of the research, such as designing data collection tools, before they had clearly determined more abstract parameters of research question and design. This ordering of research steps may have arisen from several factors related to inexperience as researchers. First, teachers' initial definition of a research problem, scheduling, was vague. They saw data collection as one way of informing themselves about specific areas to investigate within the broader area of scheduling. Second, as practitioners, team members questioned the purpose of doing a research project and what, if any, impact it would have on the school. They may have focused on concrete data collection procedures rather than long-term and at that time unanswerable questions of research design and outcome.

A shift occurred in this pattern at the end of year one and beginning of year two. Team members were able to use the research question and design defined in year 1 to guide decisions about the kind of data they needed to collect and appropriate data collection tools. The change in the team's approach to its research project may also be related to the change in team members' goals in the second year of the project. By year two, most team members no longer believed that changing the school was their primary goal. They focused instead on personal growth and their contribution to research on schooling. They were therefore freed from the constraints of designing a project aimed at creating changes over which they had no control. Once the team reached this point, the research question and design could guide data collection.

The research project. The team's research project was influenced by the interactive patterns described in the results. Their choice of a school rather than classroom-based research project grew out of their team building processes in Phase 1. Shifts in the focus of the project — from scheduling to teacher morale — were influenced in Phases 2 and 3 by teachers' initial hesitation in taking control and moving ahead on the project and their gradual growth in understanding the research process. Once they were willing to assume greater leadership in their own project in phase 3, they became very task oriented and moved ahead on the research project. Their positive feelings about the task in which they were engaged in phases 4 and 5 overrode their concern that their research results would not be used by the school

administrator to improve school practice. Questions about the value of the project were pushed aside in these final phases. To some extent, the cohesion of the team and the maintenance of good relations became more important than questioning or changing the project to make it more effective in the school.

Effects on teachers. Although the team felt that their research findings would have little immediate impact on school practice, all five agreed that the two-year experience had been extremely positive in terms of their personal and professional growth. Teachers noted that engaging in the research process rather than implementing a change as a result of the project was the most meaningful aspect of the experience.

The collaborative action research process contributed to confidence in their own ability to identify, confront, and solve classroom and school-based problems. Through participation, they became more familiar with research language, methodology, and design, a familiarity which they felt made them better consumers of educational research and more skilled researchers. At the end of the project several teachers suggested that they would like to use their new confidence, skills, and understanding to carry out other action research projects, write about their experiences, and present papers about action research at local and national conferences.

Although all research teams may not experience the same processes and patterns exhibited by the New Hampshire Action Research on Change in Schools team, analysis of these patterns suggests several possible generalizations and areas of further study. First, an action research team may need to be flexible in carrying out its research project. Teachers' inexperience as researchers, uncertainty as to outcomes, and the school context within which they work may prevent the team from working sequentially through predefined research steps. The opportunity to experiment, reflect, redesign, and requestion ultimately provides teachers with a project that is meaningful to them.

Second, regardless of predesigned research sequences and recommendations from university researchers, teachers may begin working with ideas and processes with which they are most comfortable, such as data collection.

Third, a group of teachers working together on a research project will have to address interpersonal as well as research task demands. This study suggests that a team will experience a shift in emphasis from interpersonal to task-related concerns over the course of its existence. Interpersonal concerns include issues of trust and agreement, setting boundaries, and establishing norms at the outset. The group's initial sense of identity may be based on agreement in areas of opinion not necessarily related to the project. After the team addresses these concerns, it may need to deal with issues of power and leadership. The team gradually coalesces around a

common goal or set of tasks. Members who disagree with this goal create a conflict for the group midway through its life, and the group may need to re-examine its professed purpose, its membership, and its boundaries. Finally, the group focuses on completion of its task and may develop strong feelings of cohesion and pride based on common effort and a unified product.

Results of this project suggest that this process provides a rewarding experience for teachers. Team meetings and projects create an outlet for teachers' frustrations with their school and a sense of collegiality absent in many school settings. Teachers feel that they become better observers of the school context, more skilled researchers, and more able to address problems which arise in the classroom or school. Teachers also gain a sense of professionalism from having worked together to carry out a research project and produced results which are of interest to those outside of their own school community.

REFERENCES

- Becker, H.S. (1951). Problems of inference and proof in participant observation. *American Sociological Review*, 23, 652-660.
- Clifford, G.J. (1973). A history of the impact of research on teaching. In R.W. Travers (Ed.), *Second handbook of research on teaching*. New York: Rand McNally.
- Corey, S.M. (1953). *Action research to improve school practices*. New York: Teachers College, Columbia University.
- Ferver, J.C. (1980). *University collaboration in school inservice*. Unpublished report. Madison, Wisconsin: Extension Programs in Education.
- Glaser, B.G., & Strauss, A.L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. New York: Aldine Publishing Co.
- Hord, S.M. (1981). *Working together: Cooperation or collaboration*. Austin, Texas: Research and Development Center for Teacher Education.
- Lewin, K. (1948). *Resolving social conflicts*. New York: Harper and Brothers.
- Mishler, E.G. (1979). Meaning in context: Is there any other kind? *Harvard Educational Review*, 49(1), 1-19.
- Mosher, R. (1974). Knowledge from practice: Clinical research and development in education. *The Counseling Psychologist*, 14(4), 73-81.
- Oja, S.N., & Pine, G.G. (1983). *Action research on change in schools: Final report*. Washington, D.C.: National Institute of Education.
- Pine, G.J. (1981). *Collaborative action research: The integration of research and service*. Paper presented at the American Association of College Teachers of Education, Detroit, MI.
- Schatzman, L., & Strauss, A. (1973). *Field research: Strategies for a natural sociology*. Englewood Cliffs, N.J.: Prentice-Hall, Inc.
- Schein, E. (1969). *Process consultation: Its role in organizational development*. Reading, MA: Addison-Wesley Publishing Co.
- Tikunoff, W.J., Ward, B.A., & Griffin, G.A. (1979). *Interactive research and development on teaching study: Final report*. San Francisco: Far West Laboratory for Educational Research and Development.
- Tuckman, B.W. (1965). Developmental sequence in small groups. *Psychological Bulletin*, 63(6), 384-399.