This paper examines a project involving teams of teachers, school administrators, and district-level people from Coalition of Essential Schools (CES) member schools. The CES is a high school reform movement devoted to strengthening the learning of students by reforming each school's priorities and simplifying its structure. The common principles of CES are discussed as well as the methodological issues raised by this CES project: (1) the conditions in schools that suggest this approach; (2) the derivation of the method; (3) the contrasts and tensions between the structure of the first workshops and the structure of ongoing work of the teams in their schools; (4) the issues of ethics and validity by this type of research; (5) the evolving sense of criteria; and (6) the framework for collaborative action research in restructuring schools.

Conclusions indicate that action research and collaboration are important strands of effective reform. Criteria for collaborative action research in schools are: effective team-based approach, productive use of reactivity, development of reflexive processes, involvement of participants in the process, and interaction of action and research in mobilization of information for the change process. Five restructuring diagrams and a copy of a CES brochure are appended. (SI)
Facing the Essential Tensions: Restructuring from Where You Are

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Our goals for this paper are twofold: 1) To report on a project we are involved in with teams of teachers, school administrators, and district level people from Coalition of Essential Schools member schools, and 2) To discuss the methodological issues raised by this work. As we report on the project, we will discuss our work to date, some of the results of that work, problems we have encountered, and the ways in which we are redesigning the next phase of the project to address these issues. In discussing the methodology we will look at the conditions in schools that suggest this approach; the derivation of the methods we chose; the contrasts and tensions between the structure of the first workshops and the structure of ongoing work of the teams in their schools; the issues of ethics and validity raised by this type of research; our evolving sense of criteria, and a framework, for collaborative action research in restructuring schools. Our conclusions about appropriate methodology for school change come from many sources besides our work; we will explore some of these sources. Thus the conclusions we draw both inform and derive from our work with school teams. In this sense, we see our work as but part of a continuum of exploration by school people and Coalition staff of new ways of approaching understanding change. (See Appendix A, "Graphic Overview.")

Our work with restructuring schools grows out of the Mythos Project of the Coalition of Essential Schools. Our arguments that spring from this work are that the complexity of pedagogically driven restructuring requires collaboration; and school-based, bottom-up reform requires feedback that is specific, action oriented, and timely. We further believe that traditional research methods cannot meet these criteria, even if researchers are committed to aiding change. Thus our work has focused on new methods for new purposes.
THE PROJECT

The Coalition of Essential Schools provides the context within which our work fits. The Coalition of Essential Schools (CES) is a high school reform movement "... devoted to strengthening the learning of students by reforming each school's priorities and simplifying its structure" (Prospectus, 1988, p. 2). Schools joining the Coalition agree to begin careful examination and change of their priorities and structures according to their interpretation of the nine Common Principles that guide the Coalition's work. The Coalition fully expects each member school to look quite different, as each school will reflect its own community and student body.

The Common Principles are as follows:

1. The school should focus on helping adolescents to learn to use their minds well. Schools should not attempt to be "comprehensive" if such a claim is made at the expense of the school's central intellectual purpose.

2. The school's goals should be simple: that each student master a limited number of essential skills and areas of knowledge. While these skills and areas will, to varying degrees, reflect the traditional academic disciplines, the program's design should be shaped by the intellectual and imaginative powers and competencies that students need, rather than necessarily by "subjects" as conventionally defined. The aphorism "Less Is More" should dominate: curricular decisions should be guided by the aim of thorough student mastery and achievement rather than by an effort merely to "cover content."

3. The school's goals should apply to all students, while the means to these goals will vary as those students themselves vary. School practice should be tailor-made to meet the needs of every group or class of adolescents.
4. Teaching and learning should be personalized to the maximum feasible extent. Efforts should be directed toward a goal that no teacher have direct responsibility for more than eighty students. To capitalize on this personalization, decisions about the details of the course of study, the use of students' and teachers' time and the choice of teaching materials and specific pedagogies must be unreservedly placed in the hands of the principal and staff.

5. The governing practical metaphor of the school should be student-as-worker, rather than the more familiar metaphor of teacher-as-deliverer-of-instructional-services. Accordingly, a prominent pedagogy will be coaching, to provoke students to learn how to 'earn and thus to teach themselves.

6. Students entering secondary school studies are those who can show competence in language and elementary mathematics. Students of traditional high school age but not yet at appropriate levels of competence to enter secondary school studies will be provided intensive remedial work to assist them quickly to meet these standards. The diploma should be awarded upon a successful final demonstration of mastery for graduation -- an "Exhibition." This Exhibition by the student of his or her grasp of the central skills and knowledge of the school's program may be jointly administered by the faculty and by higher authorities. As the diploma is awarded when earned, the school's program proceeds with no strict age grading and with no system of "credits earned" by "time spent" in class. The emphasis is on the student's demonstration that they can do important things.

7. The tone of the school should explicitly and self-consciously stress values of unanxious expectation ("I won't threaten you but I expect much of you"), of trust (until abused) and of decency (the values of fairness, generosity and tolerance).
Incentives appropriate to the school's particular students and teachers should be emphasized, and parents should be treated as essential collaborators.

8. The principal and teachers should perceive themselves as generalists first (teachers and scholars in general education) and specialists second (experts in but one particular discipline). Staff should expect multiple obligations (teacher-counselor-manager) and a sense of commitment to the entire school.

9. Ultimate administrative and budget targets should include, in addition to total student loads per teacher of eighty or fewer pupils, substantial time for collective planning by teachers, competitive salaries for staff and an ultimate per pupil cost not to exceed that at traditional schools by more than ten percent. To accomplish this, administrative plans may have to show the phased reduction or elimination of some services now provided students in many traditional comprehensive secondary schools (Prospectus, 1988, pp. 4-6).

The Common Principles, as well as the Coalition itself, derive from the five year Study of High Schools, conducted from 1981 to 1984 and sponsored by the National Association of Secondary School Principals and the National Association of Independent Schools. This study, chaired by Dr. Theodore R. Sizer (now Chairman of CES), was heavily based on visits to almost one hundred American high schools: Concentrated time was spent in fifteen schools, eleven public and four private, in and around San Diego, Denver, Boston, northern Ohio, and southern Alabama. Briefer periods of time were spent in over eighty schools in fifteen states and in Australia (Sizer, 1984, p. 7).

Horace's Compromise, the first of the books, outlines the rationale behind the Coalition of Essential School's Common Principles.

The nine Common Principles suggest certain norms that guide the work of Coalition schools, as well as the central staff's work with those schools. First, the primary goal of our work is to improve student learning. This focus on students provides a framework which guides our thinking about and encouragement of school restructuring: Restructuring that occurs in Coalition schools is done for the express purpose of better helping students learn to use their minds well, and often springs directly from the pedagogical implications of student-as-worker. This means that restructuring to increase teacher empowerment through increasing site-based management or changing governance structures is positive only to the extent that that empowerment is used to improve education for the students in the school. Similarly, many of our schools changed their schedules after discovering that using the pedagogy of student-as-worker was facilitated by having longer blocks of time.

Second, the Coalition believes in local control and influence; no two good schools are alike, and each will reflect its own faculty, student body and community. It is therefore up to each school to interpret and implement the nine Common Principles in ways that best serve its student body, teachers, and community; no one else, at some "safe" distance, can do it for them. This means that there is no model Coalition school; as schools restructure and change, we cannot predict what each will look like, or the exact process that each will follow.

Third, following from this belief in local control, is the firm belief that change must come from the "bottom up" in order to be long-lasting and effective. This belief is reflected in our application process: a majority of the faculty and staff in a school must agree to pursue reform in accordance with the Common Principles before that school may become a
member of the Coalition. Once members, the people at the school-site are in charge of designing, redesigning, and implementing their efforts at change.

Finally, the Coalition believes that holistic, rather than piecemeal change is necessary to improve schools. All aspects of schools, including educational goals, structures, daily activities, assumptions about students and learning, and their commitment to the nine Common Principles are interconnected. Changing structures, without changing the daily activity and pedagogy that occurs within those structures, will do nothing to improve student learning. At the same time, a change in pedagogy is often impeded by the traditional structures and norms of the school. The Coalition therefore defines restructuring as the thoughtful redesign of the institution we call school, this restructuring to occur as the result of agreed upon educational goals and necessary changes to improve education for all students. All school-site staff will need to agree on these goals and changes, and work to think through the redesign.

It is up to the Coalition central staff to collaborate with schools trying to make these changes, both on and off-site. Staff members visit schools to serve as critical friends (observing carefully both in classrooms and in the larger school, asking thought-provoking questions and providing feedback); to help with planning; and to run professional development sessions for people at the school. Off-site the central staff runs a variety of professional development activities for teachers and administrators from all Coalition schools. In addition, it is up to the staff to observe, listen and write, producing working papers on issues surrounding the use of the nine Common Principles in schools. These working papers are available to all member schools. The staff therefore collaborates directly with schools attempting redesign, while at the same time studying the results of this redesign, and the process that brought it about. In this way, the staff acts as meta-researchers, studying the process in which they are also involved.
The collaboration between the central staff and the member schools is genuine, due to the fact that the Coalition staff believes that it is impossible to have one model, or even a few models, that will "fit" all schools; school people will implement the nine Common Principles in ways suitable to their own settings. The staff, therefore, does not "have all the answers," but is instead a partner in the collective search for possible solutions or approaches for individual schools. School people bring their understandings, knowledge and experience from their own schools to the partnership, while the staff brings the collective experience of all the schools, from which strategies with more and less probability of success can be analyzed.

Summer Workshop

Our 1988 summer workshop and follow-up session, "Facing the Essential Tensions: Restructuring from Where You Are," had three goals: 1. to help participants develop a common understanding of the connection between the philosophy, structure, and budget of their school; 2. to help participants conceptualize change as a holistic process, rather than one of piecemeal decision making; 3. to help participants develop a process for identifying the hard choices that need to be made in their school regarding the use of resources, and processes for realizing those choices. (See Appendix B, "Facing the Essential Tensions Brochure.") There were two additional overarching goals as well: The first was to help participants deepen their understanding of the nine Common Principles and their structural implications; and the second was to train teams of people from schools to act as facilitators of change within their own school settings.

Participating schools, and in one case a district, sent a team of people, each representing different constituencies within the organization. These teams were asked to do a series of exercises -- vision, diagnosis, team building, and strategy -- all based on their own schools. The vision exercise asked each team to diagram their visions of four of the
nine Common Principles: #4- Personalization; #5- Student as Worker; #6- Exhibition of Mastery; and #9- Budget. These four Principles were chosen because we felt they had the most immediate structural implications of the nine. Starting with one of the Principles in the center of each diagram, the team attached concrete examples of activity that would take place in their school if their vision for that Principle had been realized. For example, "students work at their own pace" might be attached to Principle 5, "Student-As-Worker." (See Appendix C, "Sample Diagram.") The teams analyzed each of these visions, and their concrete implications, using the lens of priorities, assumptions and compromises: What are the priorities reflected in this vision? What assumptions underlie this vision? What compromises are inherent in this vision? After developing and analyzing each individual component of the vision, each team combined its diagrams of the four Principles and developed an overarching vision of what their school might look like in the future. Team members then examined the implications of this vision for the use of money, time and human resources, and were asked to consider what their school's budget, schedule and staffing plan might look like, given these implications. Thus they were able to explore the structural implications of their vision.

During the diagnosis exercise, each team attached concrete examples of what was actually taking place in their school to their vision. For example, the reality of "age grading" might be attached to the vision of "students work at their own pace." Teams analyzed their diagnoses through the same lens of priorities, assumptions and compromises; they then examined the implications for the use of money, time and human resources in this reality.

Both of these exercises involved modification of a technique used among researchers attempting to understand the implicit logic of a particular social system. This method is sometimes referred to as "conceptual clustering" or "concept mapping." (Miles & Huberman, 1984; J. Maxwell, lecture, 1987) We use this method to enable team members
Looking at the discrepancies between the two diagrams, one of the vision, the other of the "reality," the teams were able to identify areas for concrete change. Teams developed models of strategies for change by comparing the two sets of diagrams and plotting the course between them. These strategies also required the teams to take into account the kinds of communication, decision-making, and assignment of roles that were appropriate for involving various constituencies. The teams decided on what was "appropriate" based on the understandings they came to in the process of examining their schools, and by looking closely at how they worked together as a team. This reflection added another domain to their thinking; throughout the workshop we stressed that these research conversations were models for conversations that would have to occur in the school; no "solutions" could be formulated at the workshop and imposed on the school. Thus we also asked the teams to keep aware of how they conducted their inquiry as they did the work.

Team members gained the reflective awareness that was the basis of their decisions about appropriate involvement, decision-making, communication, and roles by carefully diagnosing their own experiences in simulated problem-solving, or team-building, exercises. We designed these games to provide data to the teams on their own behavior in situations similar to those they would face in trying to research and change their schools. We forced the issues of reflection-in-action and reflexive methods by creating these simulations and spending considerable time "debriefing" them with a consistent set of questions. The questions focused on concrete description of what actually happened before going on to analysis of decision-making, communication, and roles, and then to making metaphoric leaps to the teams' own schools. The result was that people who were trying to undertake the difficult tasks of better understanding their schools also developed into
coherent, effective and reflective teams very quickly. One unexpected consequence of the team building work was that the larger team (composed of all workshop participants) developed a degree of trust and frankness that enabled them to tackle a fairly sensitive and subtle issue of organizational diagnosis at one of the schools during a follow-up workshop.

A staff facilitator was assigned to each school team throughout the workshop. The facilitators listened carefully, asked hard questions, questioned underlying assumptions, and generally pushed and probed for greater clarity and deeper understanding throughout these conversations.

"Facing the Essential Tensions: Restructuring from Where You Are" in many ways exemplified the genuine collaboration that takes place between the Coalition central staff and the member schools: Each team came with the specific knowledge of their school's constituencies, activities, structures and needs, necessary to form a vision, do a careful diagnosis, and develop a strategy for that particular school. Without this site-specific knowledge, these exercises would have become generic to all schools, and as a result, not entirely applicable or useful to any school. At the same time, the staff came equipped with knowledge derived from observing the change process in a wide variety of schools. We were able to say, "We have seen that similar strategies have often had these results in other settings . . .," and "You might consider what they did in X school . . .," thus contributing a wider range of experience to the conversation. In addition, the staff represented outsiders, far enough removed from the team to be able to see assumptions and effects often hidden in the crush of the daily activity that takes place in a school.

Both the participants and the staff were united by a common acceptance of the Coalition of Essential School's critique. Because of this common understanding at the outset, the nine Common Principles of the Coalition were able to serve as the focus and to
Results and Partial Results

We held a follow-up session to "Facing the Essential Tensions" in early December. This follow-up session was designed to build on the work of the summer and to deepen the understandings gained through this work. It was also intended to provide an external incentive for using the strategy developed at the workshop during first semester, as the group would be meeting again to discuss each team's progress. In many ways, the effectiveness of this workshop can be judged by what happened during this follow-up session. We also did an informal evaluation of effectiveness by doing site-visits to each of the participating schools, and interviewing each team member prior to the follow-up session.

In trying to evaluate the results of our work, we discovered that the title of our workshop, "Facing the Essential Tensions: Restructuring from Where You Are," was even more appropriate than we had originally imagined. Participants did indeed "come" from all different levels of both interest and understanding, and these entry levels influenced what each individual and team gained from the workshop. Some participants were more willing and able to carefully examine the disparity between what existed in their schools today versus what they hoped to see in the future. These people were more successful at grappling with the tensions inherent in working toward their visions -- recognizing the problems, discussing new priorities to be set, and acknowledging the new compromises that would have to be made once the shift to new priorities took place. Other participants came with a considerably lower level of understanding and commitment and tended to remain fixated on individual constraints in the present, rather than taking a longer view of
what they might be able to do in the future and finding concrete steps that could be made toward that goal.

Our workshop and follow-up session were successful in a variety of ways: First, participants left with a deeper, more sophisticated understanding of the Coalition of Essential School's nine Common Principles and their interconnectedness. This was demonstrated at the follow-up session when the group was able to draw out the school-wide implications of using student-as-worker in the classroom.

Second, participants gained an understanding of ways that they and other people function in groups. This understanding forced each participant to consider how s/he might work more effectively with peers, and different ways in which it was possible to work together. This result was largely due to the team building exercises that were used throughout the workshop, and probably also partially due to the intensity of the workshop experience as a whole. The power of the team building exercises was mentioned by a majority of the participants in their retrospective interviews.

Third, there was a recognition among participants that change needs to be an inclusive, rather than exclusive process, involving as many faculty members as possible, rather than only one small group. This was demonstrated to us during a site visit, when we attended a governance committee meeting. There, two of the workshop participants were the most vocal proponents of asking for faculty input before beginning to re-write the school's mission statement. They felt it was important to have the faculty "buy in" to the committee's assumptions about governance and mission, before presenting them with a written statement to vote on.

Fourth, there was an increased understanding of how structures within a school and district might be changed in order to facilitate the use of the Common Principles in schools. Two people from one district attended the workshop. They came to the workshop partially
because their superintendent was pushing all district personnel to have more of a service orientation toward their schools. Consequently, their goals were to better understand the Common Principles, and further, to learn ways of helping schools in this endeavor. One of these people was able to give a presentation during the follow-up session, discussing how master schedules could be used more flexibly to provide for longer blocks of time for student-as-worker instruction. His colleague realized that increased site-based management would give the school principal the spending flexibility needed to be able to reallocate resources in accordance with the school's changing priorities. He was therefore inviting all high school principals and one other person from their schools to a training session on how to use the district's computer system in order to be able to reallocate their own funds. This district level person also realized, however, that this increased site-based management would have further implications for the district personnel. He consequently planned to train his own staff in how to become resource people to these schools as they began using the system, before he began any training for the principals themselves.

Fifth, one Department Chair commented that he was now much more aware of the educational implications of structural changes. This was evident when we watched an English Department meeting. He led the group in a discussion about whether or not a piece of writing that they had all read, was up to an acceptable standard for tenth grade English. After the group concluded that it was not, they proceeded to discuss whether or not the department should have some kind of "gate through which all students must pass." In other words, the department would have a writing exercise that all students would have to complete satisfactorily before continuing on to a higher level of English. The meeting unfortunately had to end at this point as the teachers had classes to teach. When we later discussed the meeting with the Chair, however, he acknowledged that the structural change of adding "a gate" would have other educational implications: Students would have to know and understand the standards that would be used in evaluating this exercise, and
would have to be prepared to write to this standard well in advance of being asked to "pass through the gate."

Sixth, the workshop had one unexpected, but powerful result. During the follow-up session, all participants went on a site-visit to the host school -- one of the three that had sent a team to the summer workshop. After spending some time in the school, and talking to teachers on the host team, the group was able to do a sophisticated analysis of the school. This analysis involved characterizing the culture of the school and anticipating the effects of cultural attitudes on both decision making and leadership development within the school. Because of that formulation, the team was able to give helpful, critical feedback to the host team. The potential for this larger team, made up of all the school teams, to observe, analyze and give feedback on what was occurring at one of their schools was an extremely positive result that we had not foreseen. The school-based workshop exercises had equipped participants with tools of analysis and given them a framework within which to use their prior experience; and the team-building had equipped them with a level of frankness that allowed them to give critical feedback to their colleagues from another school.

We had not anticipated this focus for the team's work at the follow-up session; it evolved quite accidentally, and flagged the fact that we had created a team that to all intents and purposes now was "all dressed up with no place to go." They had become an effective collaborative research and evaluation team and now had no task. This led to our thinking that we could use these combined teams in new ways, hence to our conceiving the new workshop series, The Trek (to be discussed later in the paper).

There were also areas in which less was achieved than we had expected, or where there were unintended outcomes. First, while we asked for teams representing different constituencies within the school and that would have the capacity to forward change, these
were not in fact the teams we got. The first team was composed of a business teacher, the Occupational Education Department Chair, and a guidance counselor -- all representing groups important to include in the change effort, but as a team leaving out some other central constituencies in the school. This team also lacked legitimacy, since none of its members had any authority within the school to even start a process that might bring about change. The second team had no currently practicing classroom teachers, and while the people on the team did have legitimate authority (three district-level people and one high school principal), they excluded a group whose involvement must be central in bottom-up reform. The third team had the Head of the Upper School and the English Department Chair. This team did have legitimacy, but the team members were unsure as to the level of their commitment to the nine Common Principles, as was the first team. The tenuous nature of this commitment was probably largely due to the Coalition's earlier application process which allowed some schools to join as Associate members after they expressed willingness to work on only one of two of the nine Common Principles. Associate status in the Coalition has since been phased out, but some member schools are still debating as to whether or not they are prepared to raise the level of their commitment.

Second, one unintended and undesirable result of the workshop was that the team building exercises in many ways overpowered the vision, diagnosis and strategy school-related exercises. This was probably because of the immediacy of the feedback from these exercises: Simulations such as these can be completed in a relatively short amount of time; and we debriefed them in detail, immediately following their completion. The school-related exercises, on the other hand, required highly detailed, concentrated work over a longer period of time. And though there were some immediate understandings within the group, the real results of this work could only be seen over time.

Third, strategies that the teams developed at the workshop were not entirely successful. Of the three teams, one left the workshop without a completely formed
strategy, and really did nothing as a team during the first semester. (Although there was some activity on the part of individuals.) The other two teams did begin the first steps of the strategy they had outlined. One of these team's efforts stalled with these first steps. The other team viewed their first steps as successful, but did not continue to expand their effort from there. None of the teams seemed to have the sense of strategy as an overarching framework for progress toward a vision, with a series of small, concrete steps within that framework. Nor did they have the sense of re-evaluating, regrouping and trying another tack, if initial steps were unsuccessful.

Fourth, while there was evidence that participants left with some partial understandings of the interconnectedness of the Common Principles, the structure, and the daily activity of their schools, there was no evidence of any in-depth understanding of change as a holistic process. All three schools are still struggling to understand the implications and the magnitude of the changes they are trying to undertake. And, as mentioned above, two of the three are still undecided as to whether they really want to undertake this type of change at all.

Fifth, none of the three schools have really grappled with the hard choices that they will eventually have to make regarding the reallocation of resources. This is somewhat disappointing, but not entirely surprising, as none of the schools is at a stage that forces these decisions as yet, partially because they are only one to three years into a ten year project and have begun with classroom level changes, and partially again because of the tenuous nature of the commitment on the part of two of these schools.

Sixth, the reflection on the process of inquiry that the teams went through did not necessarily result in an awareness of how other teams of colleagues back in their schools might be formed and helped to achieve similar understandings, or be included in the expanding change process.
Finally, there is little evidence that, once having returned to the complexity and time constraints of their schools, the teams were willing or able to continue to engage in research or inquiry, or maintain a mode of thinking that encouraged time and resources to be allocated for inquiry, even if inquiry could be considered as one kind of action strategy for beginning or continuing the process of change.

Making Intelligent Adjustments -- The Trek

Our analysis of the successes and failures of "Facing the Essential Tensions: Restructuring from Where You Are," combined with the central staff's recognition that member schools need more feedback than they are currently getting, lead us to design "The Trek." (See Appendix D, "The Trek Brochure.") "The Trek" will begin with a summer workshop, as did "Facing the Essential Tensions." This workshop, however, will be followed by three additional sessions rather than one, and will be presented as "a year long course of study," rather than a "workshop and follow-up session." Each of these sessions will be hosted by one of the participating schools and attended by two other school teams. Those teams will spend substantial time visiting that host school, talking to the host team, and giving them feedback. Each participating team will visit two other Coalition schools, as well as host a visit. This structure will make use of the larger group's ability to observe, analyze and give feedback when they visit schools, a potential that was developed, but not fully taken advantage of, in "Facing the Essential Tensions."

We concluded that there was a need for such visits, due to comments from many schools that visits from outsiders are invaluable, as they may see things that people in the school are too close to to realize. Outsiders may see a disparity between rhetoric and activity in the classrooms for example, that has heretofore gone unnoticed. Some of our schools have felt this need so strongly that they are trying to form their own visiting agreements with other Coalition member schools.
The idea for the Trek is that a more comprehensive conceptual framework can serve as a structure for understanding and managing change in Coalition schools. We have envisioned this as a "spiral" or "helix" comprising successive iterations of five facets of the school -- the nine Common Principles; Structure; Daily Activity; Assumptions, Beliefs, Habits; and Educational Goals. These successive iterations involve change in each of the facets in two dimensions: deepening understanding, and change in actual physical structures and actions in the school. (See Appendix E, "The Trek Helix.")

We envision teams (and eventually the whole school) learning to look at each of these facets through two "lenses," a "logical" lens, similar to the lens used in "Facing the Essential Tensions" (i.e., looking at the priorities, assumptions, and compromises inherent in each facet), and a "causal" lens, developed from our analysis of summative and generalizable research on effective school reform. (Miles, Louis, Rosenblum, Cipollone, & Farrar, 1986) That research identifies certain key conditions (e.g., existing collegiality and effective communication channels among staff), key events (e.g., development of a coherent shared vision), and key processes (e.g., use of teams) that schools need to pay attention to to succeed. (See Appendix F, "The Causal Lens.") (Anderson & Cox, 1988; Lusi, Watkins, Gerstein & Wiggins, 1988)

Each iteration of the spiral occurs as initially the team and, we hope, finally the whole school, uses these lenses to look at each facet of their school in order to: 1) diagnose where the school is, 2) envision where they want the school to be, 3) design first steps as part of an overall strategy for reaching that vision, 4) try these steps, 5) learn from their successes and failures, and then, 6) reflect on what they have done, before beginning again. This iterative process we have begun to see as an appropriate way for schools to approach strategic planning, as well as inquiry. (See Appendix G, "The Trek: An Action Framework for School Change.")
The structure of the new Trek workshop will represent a deeper understanding and emphasis on our part of change as an ongoing process, involving structural issues; rather than designing the workshop with an emphasis on structure first and foremost.

**METHODOLOGY**

What is the context within which action research occurs?

Schools, like many service-oriented, professional organizations embedded in the community, are complex places where cultural traditions and habits of diverse origin and orientation, more than rules and procedures, determine organizational interactions. Schools can be seen as being both designed and grown entities (Hayek, 1945). Their designed aspect evolves in a political and bureaucratic context where decision making is hierarchical, fractionated, piecemeal, and additive. A school's design is a construct that may not resemble anyone's original conception of the best form for enabling educational purposes.

The grown aspect of schools is the result of a school culture that has evolved to provide stability in the face of rapidly changing and often perceived to be hostile environments, with competing claims on the people in the school. Because schools are community and politically dependent organizations, they have very poor boundaries between the school-as-organization and the community and political environment. They are not "closed systems," nor even like most business organizations, where there is careful attention given to providing buffers against the uncertainty of outside environmental factors. Schools are strongly affected by the community and by the political climate. Thus their stability must be provided by internal homeostasis, what has traditionally been referred to as "resistance to change," or strong "cultural filters," or "loose coupling." (Schein, 1985; Weick, 19??) In information and family systems theory language, they create internal feedback mechanisms to maintain equilibrium. These cultural filters or feedback systems insure a reaction to maintain stability against the force of external or
internal pressures for change. Often these take the form of habits of thought (G. Wiggins, personal communication, 11/87) and unexamined beliefs that are protected from internal or external critique. Unexamined beliefs affect our actions and reinforce unconscious adherence to structures that impede effective education; those structures then provide the reinforcement for continuing the habits of thought that support them. This cycle is an unconscious feedback mechanism that resists change and provides stability in the face of pressures for change from outside. It is a very different kind of feedback from conscious feedback that is designed to provide the awareness necessary for change.

Change in schools must address the cultural, grown aspect. When we try to manage change as if the school were merely designed, and designed rationally at that, we act as if change were not complex, and we create change mechanisms that are technological, linear, and mechanical. When schools and communities combine forces in restructuring, the multiple voices that are represented and the dynamics of the interaction, the disparate voices for change, and the reactivity that occurs to maintain stability, all combine to create chaos and turbulence. Thus to pay attention to both the complexly designed and the culturally grown aspects, and the effects of change on both of these, requires managing in turbulence and complexity. Such managing first requires creating an awareness of that complexity.

Schools engaged in the complex tasks of restructuring need designed feedback to counter the built in automatic feedback mechanisms that maintain stability and impede improvement. We need to find ways of systematically gathering information to provide feedback for redesign and cultural change in an ongoing way that is formative and timely, as opposed to summative and after-the-fact. At the same time, we need that information to be rigorously self-critical, such that it does not reinforce negative habits or beliefs. Designed feedback must represent all the voices in the school restructuring effort to be useful.
Thus the main research goal of our work, using the language of evaluation theory, is to find ways of helping school teams create a system of providing designed feedback by rigorously examining the implicit logic of their actual and ideal program theory and their organizational environment. They are examining their logic by looking at their priorities, assumptions, and compromises. Their program theory is represented by their educational goals, vision, learning strategies, etc; while their organizational environment consists of the structure and philosophy of the school, its budget, schedule, and staffing plan. In addition, teams are helped to examine the connections between their implicit logic and organizational environment, as well as to examine their own actual and ideal patterns of behavior (communication, making decisions, and assigning roles), both during the workshop and in their schools. We do this so that the teams will come to a broader understanding of the nine Common Principles, the process of change, and the interconnectedness of various aspects of their schools in relation to the change process. However, that broader understanding must be construed so as to serve the purposes of people engaged in change in actual educational practice, helping them better manage that complex and chaotic process. No self-research process in schools will be useful if it does not contribute to understanding that aids action.

With that in mind, we asked the participants to engage in the four activities described above, namely, diagnosis, envisioning, strategy development, and team building or group problem solving activities. We viewed each of these activities as simulations of research processes that teams would have to engage in more thoroughly and in a more ongoing fashion in their schools, so we explored each in part only and asked the teams to keep conscious of and reflective about the processes so that they could recreate them in their own schools.
Research Supporting the Use of Collaborative Methods

Beyond the specific reasons that Coalition schools had for attending our workshop, why should schools that are engaged in large scale change efforts do research? Aren't the people in them busy enough already not to have to be rigorously studying their schools too? Shouldn't the study of schools that are changing be left to researchers from outside the schools, who are trained to design rigorous and objective studies? What purpose will it serve for school people to do this kind of work? How will they learn the "proper ways" to do good research, and where will they find the time? Why should they work together in groups and with outside researchers? How will doing research aid schools in developing action strategies and frameworks for change, and get on with the work of doing it? Won't this just add another task to the already busy days of school people?

These are all good questions to ask of anybody from outside a school who wants the people in it to engage in research into their own change efforts. There are good answers to all of them. School people should engage in research because they all need a clearer understanding of the whole picture of the effort underway in their school, including what the current structures are and their implications, what different people's daily experience is in the school, what the various groups in the school think the educational goals of the school are and the implications of those beliefs for action, people's assumptions about kids, each other and themselves, and the various views held on what the mission of the school is or ought to be and how to put that mission into practice. They need to be able to build habits of reflection and systematic looking into their busy days, both as an aid to better teaching and administering and as an aid to better managing change.

Researchers from outside have some ability to get at overviews of the issues, but rarely can formulate a subtle understanding of the details and the ways in which the details interact dynamically to make the school the unique and intricate individual organism that it
is. Outside researchers cannot often supply research findings in ways that contribute specific input to change underway when and how that input is needed. They can provide perspective on school issues that is free from insiders' cultural ideology or habits of thought, but must guard against their own ideology framing their involvement. Outsiders can provide moral and technical support when working directly and in an ongoing way with insiders.

Insiders can see details, and formulate sophisticated theory about the intimate functioning of parts of their schools, but they often lack a larger view, and can be blinded by their own formulations. They often have trouble seeing the connection of the smaller pieces to the overall reform effort, or envisioning how to make concrete the ideas of a larger vision, finding entry points for everyone in the school. They are often task driven, caught in the daily press, and have difficulty getting into an inquiry mode (Crandall, Eiseman, & Louis, 1986).

So school people should do this work with outsiders and in groups because of the power of different perspectives and approaches, because of the timeliness of their findings, because as they ask questions of each other and of others in the school, they will contribute in the very process to learning and change, and because there are spinoffs from working as a group: building collegiality and increasing the access of adults within the school to regular, substantive conversations with each other. There is, then, a powerful and positive synergism to be had from collaboration that is lost when the inquiry is left to outsiders. Research by school people on their change effort itself creates change, and it can do so in positive ways that contribute to the success of the overall change effort.

There are other reasons for doing this kind of work. The key conditions for successful school restructuring described above include shared power and decision-making, collegiality, shared visioning, and the development of a sense of the cohesion
among the different parts of the reform effort, among others (Miles, et al, 1986). The research also suggests that effective reform efforts make use of teams (Kell, 1986) to help manage and facilitate the processes involved in strengthening the key conditions. Organizational change theory contributes the idea that large scale change efforts require an initial period of inquiry into different aspects of the organization before any successful designed change can begin (Tichy, 1983). The literature refers to this process as diagnosis. In industry, it is common for focus groups or quality circle teams to meet to explore various understandings of the ways in which the organization does its work. These teams create a set of theories about their organization that represent multiple perspectives, and use those as a basis for redesigning the organization. People who have contributed to the process of diagnosing their organization and designing the changes that are implied are more likely to buy into the process and the outcomes (Whyte, 1984).

We believe that in the long run this systematic and collaborative taking stock will aid in better formulating the change process, in providing understanding of various groups' views of the process, in creating avenues for the involvement of those groups, in increasing overall understanding and investment in the change effort, and in a more cohesive process for all constituencies. At the same time, teams will be able to develop more appropriate and flexible strategies for change management, approaching the process more as troubleshooters than fixed planners. As well, the building of habits of inquiry and reflection in teams that this kind of research requires will contribute to the quality of the school as a true learning institution, where all members are inquiry and learners. The final outcome we hope for is that engaging in these activities will enable teams to connect pedagogy, curriculum, and structural changes in coherent and meaningful ways that are appropriate for their schools.
Our Choice of Processes/Conceptual Frameworks

The process we chose for "Facing the Essential Tensions" derived from our sense of what would be an appropriate response to the context described above and also consistent with Coalition philosophy and beliefs about how to work with Coalition schools. We felt that developing a vision, diagnosing the school, planning a strategy, and engaging in team building were activities that would contribute to effective change; using teams was one effective process. The conceptual mapping that teams did represents a research method often used by qualitative (and other) researchers to develop hypotheses or explore participants' theories about their culture, how they make sense out of their environment and actions (Maxwell, 1987). The causal mapping that we propose to add to the Trek workshop will provide another analytic tool for understanding change. Causal mapping is a common analytic technique of researchers trying to understand complex change processes (Huberman & Miles, 1982); however, in our case, the mapping process builds the skills of collective inquiry and directly aids change at the same time.

Any number of other approaches/conceptual frameworks is feasible; criteria for focus once a team is up to speed should be set collaboratively by the team, the school leadership, and the outside researchers (if any). The approaches we chose represented our understanding of major categories of conditions, events, and processes that need to be taken into account for large scale change to work, and we made the choices based on Coalition philosophy, understandings gained from our ongoing involvement with restructuring schools, and from other research studies of restructuring schools. We imposed the conceptual frameworks that we did to provide some structure to workshops that we viewed as training experiences for teams that would then return to their schools with the skills to approach their own research more rigorously.
Where Do the Methods of Collaborative Research Come From?

None of these methods are new; collaborative reflective practice research has been a growing part of the professional development bag of tricks for awhile now, and certainly collaborative action research has been a part of organizational change and third world political change for many years. In schools and professional development centers that support ongoing practice-oriented research, teacher-researchers, either as individuals working with outside researchers or as groups of teachers working together, are a more and more common phenomenon. The focus of much of this research has been on the classroom or on the teacher as a researcher, or reflective practitioner, in the classroom; what is more rare, although occurring, is the use of these approaches in looking beyond the classroom, looking at (and reflecting on critically) teacher or school-wide ideology as an inhibitor of change, and looking at the way the organization itself, in its structures, procedures, and norms, acts as a constraint to or reflection of changing educational priorities. The methodology of teacher research is still in its infancy, often ad-hoc, often contingency-based rather than internally rigorous, as we believe much action-oriented research is. Part of our motive for undertaking this work, then, besides the facilitation of large scale change in schools, is to be able to identify an appropriate methodology for action research in schools.

Some of the varieties of action research currently practiced in schools are worthy of review because looking at them together will enable us to delineate a series of methodological continua. Many teachers have engaged in action research in their classrooms, aimed at improving practice (Wallet, Green, Conlin, & Haramis, 1981). Initially researchers brought these methods to the classroom to better understand student learning (Spindler, 1982). Teachers and researchers questioned whether the improvement of education was an issue solely of the change of educational technology; to test this
question, both felt, interpretive studies were called for (Cochran-Smith & Lytle, unpublished manuscript). More recently teachers individually and in groups have begun to develop their own research agendas and methods (Duckworth, 1987; Evans, Stubbs, Duckworth, & Davis, 1981). Some of these groups have shifted from action research on classroom learning to a form of collaborative action research focusing on reflective practice (Schon, 1987). Others have chosen critical theory based "emancipatory" methods (Berlak, 1988; Miller, 1987a). Emancipatory methods involve teachers using observation, dialogic journal writing, videotape analysis, and group discussions to document and analyze what they contribute both consciously and unconsciously to the successes and failures of their classroom effort. These methods have helped teachers to identify and correct the tacit assumptions that have inhibited better practice, thus the terms "reflective" and "emancipatory" (Miller, 1987a, 1987b). A few groups have expanded their research to include the organizational environment beyond their classrooms (McDonald, 1986, 1988).

In general, teacher based and collaborative reflective practice research have contributed methods for directly effecting local change in substantive ways. How do these methods directly effect change? Robert Penn Warren once said, "The recognition of complicity is the beginning of innocence" (Bredo & Feinberg, 1982, p.7, citing, Warren, A Place to Come To, 1977). Bredo and Feinberg quote Robert Penn Warren to make a point about research. Despite researchers' concerns about remaining "unobtrusive" (Webb, 1966) and not "contaminating the setting," every action of researchers affects the people whom they are researching, and vice-versa. This process is called reactivity (Lincoln & Guba, 1985). Not only do researchers affect their subjects by acting to gather information, but they affect them by the beliefs about knowledge that underlie their choice of the methods of inquiry and analysis. Paul Rabinow makes this quite clear when he says, "Whenever [a researcher] enters a culture, he trains people to objectify their life-world for him" (1977, p.119). For researchers of change the issue is whether to acknowledge...
complicity; the assumption from a critical theory perspective is that to do so would make research "innocent." Rather than attempting to minimize reactivity, the role of research in this light is to make positive and conscious use of reactivity to facilitate productive change.

This represents a fairly narrow definition of action research. Bogdan and Biklen (1982) define action research more broadly, as any research that systematically gathers information designed to "bring about social change" (p.215), where the researcher "is actively involved in the cause for which the research is conducted" (p.215). The closest they come to acknowledging reactivity is to state, "Sometimes the research process itself may improve the situation" (p.210). At the other end of the spectrum are researchers who claim that any act of research involves ideological manipulations of beliefs, whether they are conscious or not (Lather, 1988). To acknowledge that research is "openly ideological" (p.7) is to move toward a stance requiring "reflexive" (p.7) approaches. Here researchers and participants agree to look at each others' values as they influence the research process and the changes engendered by it. Such research seeks to develop a systematic and methodologically sound approach to the productive use of reactivity. Reflexive research might also be called co-reflective research, after Schon (1987).

The various models of teacher research range along this spectrum. Early on researchers brought their methods and agendas to bear on the classroom to understand student learning, sometimes in collaboration with teachers (Spindler, 1982; Wallet et al., 1981). This approach most closely matches Bogdan and Biklen's definition. Other teachers designed their own classroom based research efforts (Armstrong, 1980; Paley, 1986). The action orientation evolved as researchers and teachers began to see how their combined involvement in research contributed to improved practice. Reflective practice research represents a fusion of this approach with research on expert behavior (Schon, 1982, 1987). Research in groups evolved as teachers sought supportive spaces where the distractions and constraints of their daily routines did not impinge (Duckworth, 1986;
Evans et al., 1981). Joe McDonald argues that teachers needed these groups also to enable them to overcome cultural and structural barriers to communication (McDonald, 1986). Emancipatory methods grew from the intersection of critical theory-based participatory research in third world countries (Bredo & Feinberg, 1982; Freire, 1985) and the various group approaches to research (Miller, 1987a, 1987b, in press). These latter approaches are now referred to as a form of openly ideological research. The next step beyond emancipatory research that focuses on individual emancipatory action is for this research to enlarge to include policy deliberations at the organizational level. Our work with teams of teachers and administrators from Coalition schools is designed to make use of the aspects of teacher research that have proven comfortable and effective for teachers and appropriate for school cultures.

The history and variety of teacher research efforts is long and broad. Since the focus of this paper is on collaborative research for restructuring schools, we will not attempt a complete survey. Many already exist (Cochran-Smith & Little, unpublished manuscript; Holzman, unpublished manuscript; Harvard Ed. Letter, July, 1988). But the characteristics and criteria for the research process we are attempting to build in our work derive from these approaches.

What is important to note in this inquiry into methods is that there are approaches to action research that are compatible with school people's needs and school cultures, given that certain issues are addressed. One issue is the pull of school people to immediate, concrete action -- a task orientation that makes research seem vague and unconnected to their normal problem solving approach. In the early stages of one project, a teacher-researcher wrote that the participants, "...were more inclined to focus on teaching strategies than on ways to identify and collect relevant information" (Evans, 1981, p.28).
A second issue is addressed by Joe McDonald:

But of course, the design [of schools] itself is of great organizational consequence, including the empowerment of those who coordinate [the cellular teaching stations], the subordination of those who inhabit them, and... the discouragement of cooperation, inquiry, collegiality, and participation in the fashioning of a school-wide culture.... ...the problem is not just that [teachers] are alone, but that they adapt to being alone. Used to the absence of colleagues, they grow silent. In fact... teachers may fail even to develop a language in which to talk with each other. (McDonald, 1986; after Lortie, 1985; and Sarason, 1971)

Thus, we have attempted to include structured conversations that focus on concrete aspects of schools organizational structures and practices in our workshops so that the isolation can be overcome and a language can be built with which to engage in collective inquiry in the school.

There are other issues:

In all of these approaches there is an underlying emphasis on creating supportive spaces, on making the role of the researcher problematic, on a research method that is based on humility and compassion, on collaborative approaches, and on a sense of the need for collective assumption of responsibility for any enterprise. Certainly the point is open to question, but if these characteristics of teacher-based research are true, that would have significant implications for how one would choose to use action research as one facet of school change. Our use of teams and emphasis on team building games attempts to address these concerns.
In the literature on critical theory research there is a distinctly normative approach to change (Argyris, Putnam, & Smith, 1985; Bredo & Feinberg, 1982; Lather, 1988). Critical theory based researchers must attempt to show participants that the current social setting does not work for them, that a more functional situation is possible, and that they, the researchers, are aware of what that new setting might look like. They justify making statements about improved settings, or taking normative positions, by "...adhering to the principle of internal criticism" (Argyris et al., 1985, p.73), or by subjecting the collaborative research process to reflexive methods of analysis (Lather, 1988; Miller, 1987a, 1987b). These are in most cases integral parts of the research methods described above. Not to have the internal critique itself be guided by poorly working social processes (e.g., power politics, personality disputes, fear, suspicion) is what is difficult. Habermas (Bredo & Feinberg, 1982), Argyris (Argyris et al., 1985), and others (Tichy, 1983, citing Lewin, 1938) believe that it is possible to create enclaves of functional space in otherwise poorly working environments within which such critiques can occur. Some techniques for doing this include textmaking (and the subsequent analysis of the text and assumptions built into it), dialogic journal writing (including the researchers), and team building. Teachers who have worked with Miller, Lather, and McDonald find this process empowering. Our teams' work on debriefing their team building games and identifying ideal communication, decision-making, and role assignment procedures to practice in them is one way of approaching internal critique and redesign.

Eleanor Duckworth suggests that it is possible to follow the threads of a person's understanding until conflicts become apparent to that person. The resulting confusion can be explored as a positive aid to learning; however, this process cannot work well, at least for teachers, unless the setting "feels safe." Although Duckworth has examined this process in the individual learning of children and teachers, there is still much work to do on understanding how it happens in group learning, and even more work to understand how it
occurs in organizational learning, where power and politics play important roles. In all the research methods discussed above, some process of creating safe, or functional, spaces occurred. Miller raises the concern that such spaces can easily become uncritical ones (Miller, 1987b). Duckworth points out that such spaces may not be possible to create and sustain within schools (E. Duckworth, personal communication, February, 1988). Yet Lieberman believes that no substantial or permanent change can happen unless this work is integrated into normal organizational life in schools (Lieberman, 1988a).

There is a fine line in these approaches between vulnerability and rigor, if vulnerability is necessary for the rigorous self-examination of beliefs and practices, yet creating a safe space is necessary for vulnerability, and neither has much in the way of institutional precedents. We have had some difficulty so far in finding ways of moving the teams back into the complex and politically charged environment of their schools and maintaining the team's commitment to careful looking. The Trek approach, of using combined outsider/insider teams, may help.

All of these methods fall prey to traditional concerns for validity: researcher bias (if the teachers are the researchers), construct validity, self-report bias (if the researchers are the teachers); however, the possibilities for triangulation when collaborative teams are formed could handle these validity threats. There is also concern for generalizability, if what leaves the school site is more than the report that certain methods seem appropriate. Some of the approaches discussed above do raise these concerns; on the other hand, some others question whether traditional research design concerns are valid for teacher-based change-oriented research (Cochran-Smith & Lytle, unpublished manuscript; Miller, 1987a). Certainly the discipline of collaborative action research in schools has no orthodox methodology yet attached to it; still, researchers exploring reflexive or openly ideological methods have already been able to confront some of the more sticky issues facing all research (e.g., reactivity, researcher ideology). Since few experiments have been
conducted by school people to determine if these approaches can directly aid effective school reform, and the approaches are fairly new, it may be that the issue of rigor needs to wait until some results are in. Finally, the question may come down to purpose, process, and audience. Research design is determined not just by research questions, but by intended use as well. If the intended use is as a method of change, the study of that outcome has not yet begun. These methodological concerns frame some essential questions for our own inquiry into appropriate methods for our research/change work.

**Action Research -- Moving into the Organizational Domain**

These methods may provide significant personal and professional growth, yet their usefulness as components of overall reform may be limited unless they are carefully situated within a larger managed strategy, where the focus can enlarge to include making policy that takes into account and acts to change the overall school. Once safe, or "functional," spaces are created through team building and internal critique, then one of the problems for managers of the larger reform of which they are a part becomes how to expand their work to include others in the school. School people and researchers also express concern about the time and commitment needed to use reflective practice research, or reflexive methods, in an organizational setting. Where will the training come from, and how much will cost? How can the work of inventing, mucking around (McDonald, 1988), and reflexive exploration (Lather, 1988; Miller, 1987b) be situated in the larger context of reform such that it gets the sustained support, both internal and external, it deserves? How will action research methods deal with the arena that is most anxiety producing for teachers, the part of schools that they live in but do not see, have traditionally had no power to affect, and have retreated from? Our goals for "Facing the Essential Tensions" attempted to address these issues. By starting "where they were," in the classroom, and with action research tools with which they might be somewhat familiar, and then giving the teams tools that derive from traditional research on change in schools so that they could rigorously
examine the connection of their classroom concerns to the complex web of structural and procedural factors that interrelate to affect the classroom, we hoped to expand their awareness and their sense of power to effect change at the same time.

Conclusions about methods

Our goal for this exploration of methods has been to tie together the methodological implications of the various strands of research on change in schools, research on school cultures, and teacher-based research; Coalition of Essential Schools philosophy, norms, and cumulative experience; and our specific experience with the teams we have worked with. Doing that, we should be able to draw some conclusions about ways of approaching change that have the potential to enhance the learning capacity of people in schools that are changing, hence increasing the ability of schools in the process of changing to become learning organizations. We have characterized this approach to becoming a learning organization as "action research." We have shown that collaboration is an important strand of effective reform. At the same time we have tried to find specific and concrete approaches to learning about the complexities of schools and school change that acknowledge that complexity, but do so with an understanding that it is the specifics of the particular school that need to be understood, and that it is the people in a particular school who need that understanding. Finally, we have realized from this work that what people engaged in change need and want is learning that grows out of and is oriented towards action. What, then, are the implications of this triangulation of approaches and focuses for the characteristics and criteria of collaborative action research in school change? We have identified the following as salient:
What Are the Characteristics and Criteria of Collaborative Action Research in Schools?

- It is team-based, and the team is representative of diverse constituencies in the school. The team may or may not include outsiders; however, outsiders help solve validity problems (through triangulation) and speed the process. Teams are an effective way to facilitate change. They can help build collegiality. The more successful teacher-researcher efforts have been team-based. Change in schools is in part change in school cultures; teams offer a place to practice new ways of thinking and working together to build new cultural norms. Teams can enable shared visioning and sharing power, as well as inclusion of diversity. Building a larger team, where the insider/outsider perspective is present, can make possible frank and trusting critical analysis of the schools we are all working to change.

- It makes purposeful and productive use of reactivity, both inside the team and in the interactions of the team with other parts of the school. Acknowledging reactivity is another way of saying "looking is changing." To do that we build on the formative aspect of inquiry, the ability that a team in a school has to engage in learning something new and have that process of gaining new knowledge immediately influence the way people in the school understand what they do. Using reactivity is the opposite of the traditional research approach of minimizing or ignoring reactivity. Teacher-based and "emancipatory" research methods have used reactivity to influence change at the classroom level; we believe it is appropriate to use reactivity at the organizational level too. Reactivity is designed feedback; it has the potential to replace unconscious feedback, where habits of thought or unexamined assumptions keep change from happening. Reactivity can be purposefully and productively structured by the choices we make about where and
how we will look at the school, and how self-conscious we can make that looking. New ways of looking can be embodied in new theories about our work and thus new strategies for accomplishing it.

- It has developed reflexive processes, is able to engage in self-critique, and that critique is internal to and integral with the team's process. Building a team culture that is trusting -- safe but critical -- is essential to doing both valid and useful action research. Reflexivity is the reciprocal examination by both insiders and outsiders of their beliefs, habits of thought, or assumptions about their work. It is the only way to guard against the problem of "critical validity" (Erickson, 1989), to keep the values of outsiders, or outside researchers, or "experts," from being imposed upon insiders without conscious agreement that those values are appropriate. The question of whose agenda drives the process of inquiry is a major one for reflexive critique. In an action setting, where change that comes from increased understanding is the goal, commitment to reflexivity is a must. It is an important way to insure that the focus of change is not just "technological," not just a change in a curriculum or staffing plan, but goes to the heart of the teaching enterprise to examine the innermost structures of our educational beliefs. This collaborative reflection has been modeled in "emancipatory" research, where a "safe" team has been created by teachers and researchers working together. We believe it is possible to create such an environment in schools as well.

- The participants learn from the process of designing the research agenda and gathering and analysis of data, as well as from the results of that analysis (Whyte, 1984).
• The process of data collection and analysis is iterative; successive stages increase the sophistication of grounded theory (Glazer & Strauss, 1967), thus the potential for contributing to change.

• Collaboratively built theory on actions, beliefs, and structures is collaboratively tested in action, by the researchers actually doing things differently in the research setting. We cannot stress enough the interaction of research and action. In this approach, research is action, because by researching, we are doing something that changes us. Reciprocally, action is research, because as we build a learning community, we are experimenting with new ways of doing things, and watching the process self-critically as it unfolds. We are engaging in a series of successive approximations, "little tries" (Pat Todd, personal communication, 7/88), modifying our theories about our work as we go, and trying again. This is the same way a qualitative researcher develops grounded theory in the field, except that here the researchers are the participants, and the grounded theory is tested by thinking about and doing things differently, rather than just thinking about things differently.

• Its main goal is understanding that aids action. Action research is in-and-of itself an action strategy, in that it mobilizes representatives of various constituencies within the school to act together to gather and analyze information about the school and its change process.
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Facing the Essential Tensions: Restructuring From Where You Are

CES

Mythos Project

Logical Lens
Priorities
Assumptions
Compromises

Our Changing View of Change
(designed feedback)

Causal Lens
Key Conditions
Key Events
Key Processes

Restructuring From Where You Are

Results/Problems

The Trek
(redesign)

Research Methods That Are Appropriate For Bottom-Up Reform

School Change

1) context
2) trad. research
3) teacher research

1) team-based
2) diagnosis
   vision
   strategy
   team building
3) concept mapping

1) year-long
2) pairing teams
3) diagnosis
   visioning
   practicing
   growing
   reflecting
4) causal network
   mapping

The Criteria
BACKGROUND:

This workshop is a continuation of the Mythos project, started in 1985 to prove the 9th Common Principle of the Coalition of Essential Schools: "The budget of the Essential School will not exceed that of the original school by more than 10%." Our initial study resulted in eight transformations of an actual high school budget, depicting what an Essential School might look like. These budget models demonstrate the financial feasibility of the Essential School.

We have since expanded the Mythos project to address the larger issues of school-site restructuring and the processes involved. Restructuring a school can appear to be an overwhelming task for a number of reasons including the following:

- Tradition: Many of the apparent "givens" in schools (schedules, for instance) are in fact habits formed of tradition. Taking a step back from the press of day to day life to examine what is taking place in the school as a whole, and why business is being done in a particular way, is a time consuming and rigorous task.

- Impatience: While change is a holistic process, people who desire change in any organization often want to do too much too quickly. A long range strategy for change is needed, taking into account where people at the school site "are" in their thinking at the present time, and developing appropriate strategies for pushing their thinking forward.

WORKSHOP GOALS:

This is an intensive 4 day workshop. Your task will be to:

- develop a common understanding of connection between the philosophy, structure, and budget of your school;
- conceptualize change as a holistic process, rather than one of piecemeal decision making;
- develop a process for identifying the hard choices that need to be made in your school about the use of resources, and processes for realizing those choices.

Participants will design a process for the first semester of the '88-'89 school year, beginning the change process they have outlined during the workshop.

Follow-up: For two days in December, teams will meet to share the progress, modifications, and pitfalls of their first semester plans. Insights gained from this sharing will inform planning for the second semester.

WORKSHOP SESSIONS:

Workshop sessions will focus heavily on group work, beginning with cross-school meetings. Individual school teams will then meet to discuss and plan for change within their own schools. Participants will exhibit their work on Friday afternoon of the workshop, by presenting their plans as they would to their own school faculties in the context of a faculty meeting. The "faculty" will be represented by fellow participants, as well as knowledgeable outsiders. A facilitator will work with each team throughout the workshop.

Teams will design "ideal" programs for their schools. The purpose of this exercise is for each team to experience a microcosm of the conversation that will eventually take place at their own school sites. Understanding how that conversation takes place should help participants facilitate a similar process in their own school setting. Teams will bring the process that they have developed back to their schools, not the program.

WHO WILL ATTEND:

Participation in this workshop will be limited to six teams. Each team will consist of three influential people who are willing and able to facilitate large-scale change at their school site. Teams should consist of at least one teacher and the principal or another influential administrator. The third person may be someone from the district or state office, or another site-based person.

WORKSHOP DATES AND LOCATIONS:

Where: Milton Academy, Milton, Massachusetts
When: Tuesday, July 5, 1988, with registration at 4 PM through lunch on Saturday, July 9th.
Follow-up: A weekend session in early December at Brown University, Providence, Rhode Island.

COST:

$1,200 per team of three. This fee covers the workshop as well as all meals and lodging for the four days at Milton Academy. This fee also covers the two day follow-up session and meals. Lodging costs are not included for the follow-up session.

FOR MORE INFORMATION:

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(401) 863-3067
1988 RESTRUCTURING WORKSHOP APPLICATION
APPLICATION DEADLINE: APRIL 30, 1988

Name of School __________________________________________
Address ________________________________________________
Phone __________________
Name of Contact Person for Team __________________________

Team of Participants:

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Mail Application to:
Susan Follett, Staff Associate
Coalition of Essential Schools
Box 1938
Brown University
Providence, RI 02912

DO NOT SEND PAYMENT AT THIS TIME.
STUDENTS HAVE MORE CONTROL OVER CURRICULUM / DIRECTION

STUDENTS ARE QUESTIONING

STUDENT AS WORKER

CURRICULUM: ORIGINAL ESSENTIAL QUESTIONS

MORE ACTIVE WORK
LESS "BUSY" WORK

TEACHER AS COACH FACILITATOR

REALITY: HEAVILY TRACKED, AGE GRADED, STIGMA
ATTACHED TO BEING "TOO SLOW"
NEGATIVE PEER PRESSURE AGAINST HIGH-ACHIEVERS

STUDENTS NEED SKILLS TO BECOME INDEPENDENT WORKERS / LEARNERS

MOVE AT OWN PACE

STUDENT INITIATED ACTIVITY

NEW "EVALUATION" SYSTEM

-MONEY: HARD TO SAY, DEPENDS ON HOW ADDED FLEXIBILITY IS ACHIEVED, BUDGET, TOO, WILL PROBABLY HAVE TO BE ALLOCATED IN BIGGER CHUNKS

-HUMAN RESOURCES: TEACHERS WILL ALSO NEED NEW TEACHING TECHNIQUES, MORE FLEXIBLE, MORE STUDENT ORIENTED; TEACHING WILL HAVE TO BE "ACROSS TRACKS" MAY NEED MORE PERSONNEL AS TEACHERS, OR, TEACHERS TO TEACH ACROSS DISC.

-TIME: MUST BE MORE FLEXIBLE, SOME WILL NEED MORE, SOME LESS, BIGGER BLOCKS, MORE FLEXIBLE "PROMOTION" SYSTEM, MORE PERSONALIZED TIME

-TIME: MUST ALLOW FOR STUDENT PREPARATION FOR THIS NEW METHOD EVALUATION WILL BE "MESSIER" LONGER BLOCKS OF TIME & LARGER AMOUNTS OF TIME

-MONEY: MAY NEED TO REALLOCATE FUNDS IN ORDER TO FREE MORE PEOPLE TO COACH STUDENTS IN EXHIBITIONS, OR ENCOURAGE COMMUNITY VOLUNTEERS, WILL NEED MONEY FOR PLANNING TIME TO DEVELOP NEW EVALUATION METHODS & EXHIBITIONS

-HUMAN RESOURCES: MORE ADULT TIME SPENT WITH STUDENTS, SOME PEOPLE "FREED-UP". FOR PLANNING, TIME FOR DISCUSSION OF SHOULD THERE BE A NEW SYSTEM OF EVALUATION, WHY?, WHAT IT SHOULD LOOK LIKE, WHAT IT NEEDS TO TAKE INTO ACCOUNT, ETC.
Trek (trek) n. 1. The slow, difficult, but rewarding process of change through which schools attempting Coalition reforms must journey. 2. A year long course of study designed to help school teams gain the tools and skills they need for understanding, designing and managing this change.

Background: The Trek has been conceived and designed starting from the recognition of a few basic points:
1. The process of change in Coalition schools is long and complicated. Schools need to plan and be prepared for this process.
2. Coalition schools involved in this process desire and need feedback from informed critical friends. Ideally, these critical friends are involved in similar efforts in their own schools.
3. Teams serve two important functions in the Trek: a) The school team is the workhorse for planning and managing this process of change. Using a team incorporates different perspectives and understandings into the planning effort. b) Combining school teams creates a powerful vehicle for providing candid, helpful analysis and feedback on site visits to each participating school.

Goals of the Trek: There are two sets of goals for the Trek: goals for the individual and goals for the group as a whole. During the summer workshop portion of the Trek your school team will develop an understanding of your school as a systemic institution. This involves understanding the interconnectedness of and between the educational goals, daily activity and structures (i.e., budget, schedule and staffing plan) of your school, and the nine Common Principles. In addition, your school team will become a cohesive group, and will develop a preliminary framework and strategy for understanding, designing and managing change in your school. Your team will leave the summer workshop with small concrete steps to begin or continue this process.

As the Trek continues throughout the school year, understandings you reached during the summer will broaden and deepen. In addition your team will: develop a shared vision within your school; reflect on your own experiences of the summer and follow-up sessions in order to help others in the school begin to make similar changes; gain a broader understanding of the different constituencies present in your school and their interests; and develop a strategy for including others and moving your school forward.

The goals for the larger group (made up of all school teams) are to: become a cohesive team; learn to apply the understandings and skills developed by examining their own schools to the examination of other schools and vice versa; and learn how to give helpful critical feedback, or serve as critical friends to the other schools they visit, as well as make good use of the criticisms they receive.

Who Should Attend: We ask that each participating school send a team of between three and five people. These people should represent different levels or functions within the school, and within the district where appropriate. For example, a team might be made up of a teacher, a school administrator, and a district administrator. We do ask that there be at least one teacher on each team. When considering the composition of your school’s team, please bear in mind that this team will return from the workshop and follow-up sessions having developed concrete tasks to be carried out in your school. Consequently, each person on the team should be willing and able to engage in this work. The team should demonstrate leadership, energy, creativity, and commitment to change. They should begin the Trek with the understanding that there will be substantial work involved throughout the year. Your school should be willing to support this work.

The Expedition Schedule: The Trek consists of:
1. A six day summer workshop
   DATE: July 5-10, 1989
   PLACE: Brown University
   Providence, Rhode Island

2. Three 2 day follow-up sessions, scheduled throughout the '89-'90 academic year. Each school will host one of these follow-up sessions as well as participate in two additional sessions at other schools. Host schools will be responsible for making meeting arrangements with the assistance of the Coalition staff.

Workshop and Follow-up Sessions: The six day summer workshop will focus on diagnosis, vision and strategy. A careful diagnosis of what exists in your school today will be the first step. Diagnosis will focus on these areas: the nine Common Principles; the educational goals of your school; the daily activity that takes place; the assumptions about kids and learning that lie behind that activity; the constituencies present in your school community and their interests; and the structure -- budget, schedule and staffing plan -- of your school.

Diagnosis is of course an ongoing process, both in this workshop and in your school. Following this initial diagnosis, however,
your team will begin forming a shared vision of what your school might grow to look like in the future. You will develop this vision by again focusing on the areas listed above.

Using your diagnosis and vision, your team will develop an initial cut at an overarching strategy for moving your school toward the shared vision. Your team will then concentrate its efforts on designing some concrete first steps within this strategy, that you will use upon returning to your schools.

Each school participating in the Trek will host one follow-up session. During these sessions, the teams will spend a substantial amount of time visiting the host school, analyzing their experience, and sharing observations and insights with the host team. Teams will also use the follow-up sessions to continue the work and planning started during the summer. Teams will discuss the progress that each has made and will again leave with small concrete steps to work on before the next session.

Cost and Registration: The cost of the Trek is $1,550 per person. Cost includes:
1. Workshop fees for the summer and three follow-up meetings.
2. Meals and lodging for the summer workshop.
3. Meals for the follow-up sessions.

Lodging costs are not included for the follow-up sessions.

This workshop is open to a maximum of eight school teams. The registration deadline is April 20, 1989. To register, please fill out the enclosed registration form. All registrations must be accompanied by a payment of $350 per person, taken as a non-refundable deposit.

Please make checks payable to "Brown University."

Mail registrations and deposits to:
Susan Follett Lusi
Assistant Director of Research
Coalition of Essential Schools
Box 1938
Brown University
Providence, RI 02912

If you have questions or concerns, please call Sue at: (401) 863-3067.

Coalition
of Essential Schools

A Year Long Course of Study on School Change
including:
1. Workshop July 5-10, 1989 at Brown University
2. 2 Site Visits at other Coalition schools
3. A Site Visit by 2 other teams to your school

The Trek
Appendix E

The TREK Helix

**New**

**Old**

**Deepening Understanding**

**Structure**

**Daily Experience**

**Nine Common Principles**

**Educational Goals**

**Assumptions Beliefs Habits**

Change in Structures and Actions

**Lenses**

- Logical
  - assumptions
  - priorities
  - compromises

- Causal
  - key conditions
  - key events
  - key processes

**Activities**

- Diagnosis
- Vision Articulation
- Designing
- Practicing
- Growing
- Reflecting
# The CAUSAL LENS

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<thead>
<tr>
<th>KEY CONDITIONS</th>
<th>KEY EVENTS</th>
<th>KEY PROCESSES</th>
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<tbody>
<tr>
<td>Active, positive Principal leadership</td>
<td>• Develop a shared vision</td>
<td>• Use teams (build teams)</td>
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<tr>
<td>Shared power</td>
<td>• Build collegiality</td>
<td>• Rapidly expand involvement</td>
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<tr>
<td>Collegiality/staff cohesiveness</td>
<td>• Design a coherent reform program</td>
<td>• Define clear tasks</td>
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<tr>
<td>School autonomy</td>
<td>• Develop school autonomy/external supports</td>
<td>• Define clear new decision-making, communication and role assignment procedures</td>
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<tr>
<td>Shared vision</td>
<td>• Diagnosis/discovery</td>
<td>• Emphasize collaboration, vision, action, reflection</td>
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<tr>
<td>Reform program cohesion (@ educational goals)</td>
<td>• Develop strategy</td>
<td></td>
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<td></td>
<td>• Implement early and expand quickly</td>
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The TREN: An Action Framework for School Change

Structure

Nine Common Principles

Daily Experience

Educational Goals

Assumptions Beliefs Habits

Logical Lens

Assumptions Priorities Compromises

Causal Lens

Key Conditions Key Events Key Processes

Activities

Diagnosing Visioning Designing Practicing Growing Reflecting

Structure | Nine Common Principles | Educational Goals | Assumptions Beliefs Habits | Daily Experience
---|---|---|---|---
buoys, student-as-worker schedules, personalization, etc. | | what we expect all of us to be doing and to learn to do | about teaching about students about teachers "the school" etc. | concrete little details that make up real, day-to-day life