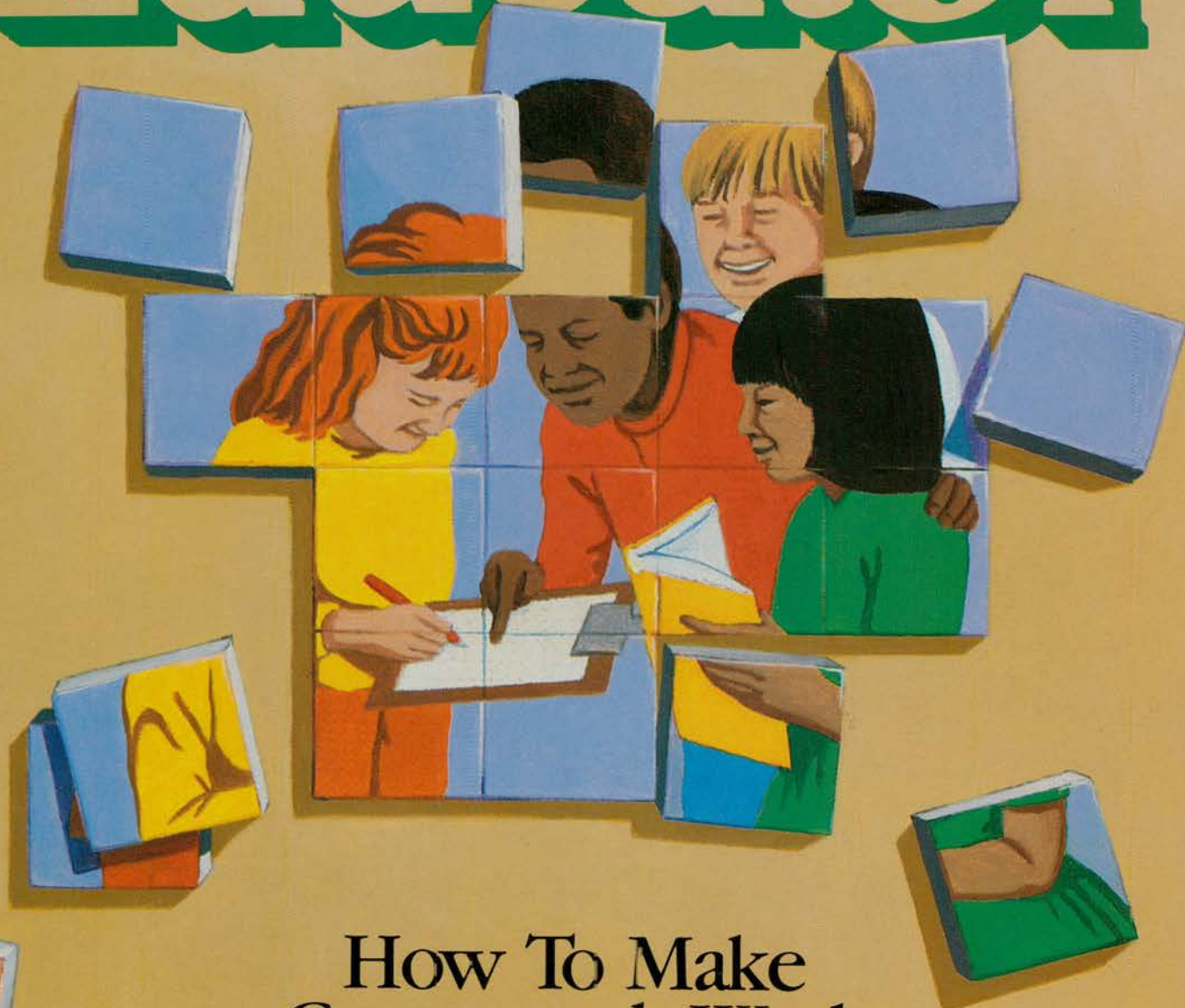


AMERICAN FEDERATION OF TEACHERS  
FALL 1988

# AMERICAN **Educator**



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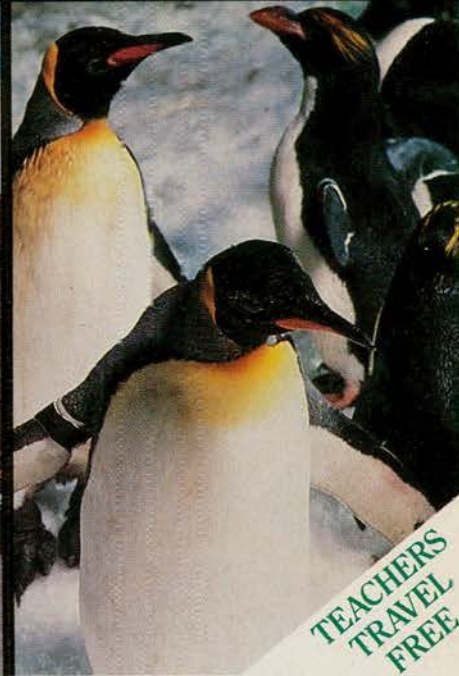
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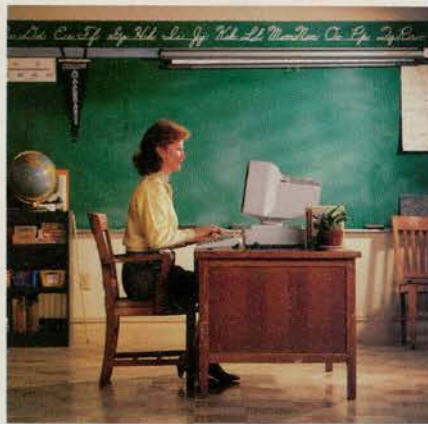
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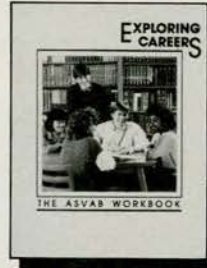
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# NOTEBOOK

## HARVARD EDUCATION LETTER INSIDE

American Educator is pleased to make available in this issue (see page 25) a reprint of a sample copy of the *Harvard Education Letter*. We take this unusual step to acquaint AFT members with this relatively new publication because we feel the *Letter* is making an important contribution to the profession. Those teachers who have been discouraged by the dryness and inaccessibility of much of education research writing will be relieved to find that the *Letter* has not given up on the notion that it is possible to talk about complex ideas in lucid language. Six times a year, it presents crisp reports, concise summaries, and insightful reviews of the more interesting developments in our field. So, if you don't have time to comb through all the literature yourself—or to quiz the people whose writing and thinking are re-shaping our schools (see interview with Ted Sizer)—let the staff and faculty of the Harvard Graduate School of



Education carry some of the load. We've arranged a special discount for AFT members, which amounts to 43 percent off the regular subscription rate. Not bad.

## TEACHERS: TAKE CHARGE OF YOUR INTELLECTUAL GROWTH

In past years, we have informed readers about fellowships and summer institutes on selected topics sponsored by the National Endowment for the Humanities. Now, a new NEH program gives teachers the opportunity to define their own needs and shape their own intellectual growth.

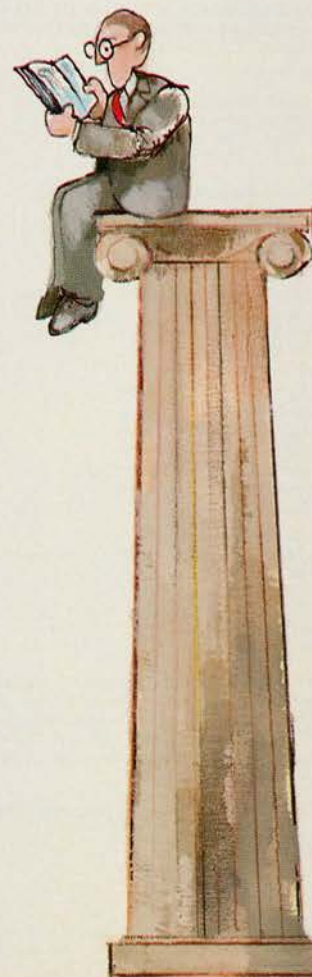
Through the *Masterwork Study Grants* program, a group of teachers can apply for a grant to fund humanities study in an area of their own choosing. Such study may be pursued through workshops, seminars, lectures, and informal discussions. NEH says the following exemplify the broad range of possibilities:

- Fifteen teachers from five elementary schools in the same town want to deepen their knowledge of Greek civilization. Led by a local college professor and a master teacher from the community high school, the teachers meet monthly to study Homer's *Odyssey* and the world it reflects.
- Eight English teachers in a rural high school find that they have been neglecting English Romantic poetry because they believe themselves to be inadequately prepared to teach that literary movement. The

teachers arrange to have a faculty member from the local state university conduct an academic-year seminar on Wordsworth, Coleridge, Shelley, and Keats.

- Four history teachers, four government teachers, and three curriculum supervisors in a suburban district want to know more about the Constitution and the early American Republic. One representative of the group arranges for a historian, a philosopher, and a political scientist from the local university to conduct a series of seminars on significant primary and secondary sources in American history from 1763 to 1824.

Masterwork projects can last for up to a year and may be initiated by teachers, administrators, curriculum specialists, or other instructional personnel. For more information and for advice on developing and writing a grant proposal, call or write to Carl Dolan: Masterwork Study Grants, Elementary and Secondary Education Programs, Division of Education Programs, NEH, Room 302-FT, 1100 Pennsylvania Avenue, NW, Washington DC 20506 (202) 786-0384.





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## NEW GUIDANCE FOR SCHOOLS ON RELIGION

When it comes to the question of how public schools should deal with religion, there have never been easy answers. Decades ago, in many communities, schools were attacked for promoting a *de facto* Protestantism to the detriment of other faiths. As school prayer, religious clubs, and other forms of religious expression were banned from schools, the pendulum swayed. Today, the schools are attacked for failing to deal with religion at all, with some even charging anti-religious bias. This discontent has led to challenges of the curriculum and textbooks in Alabama, Tennessee, and elsewhere.

The debates have often been ugly, with critics labeling each other “unAmerican,” “atheist,” “ignorant,” and “Bible thumper.” Communities have been left polarized and schools more reticent than ever to address issues relating to religion.

Into this mine field have come two refreshing documents. The first is a *Q and A* on “Religion in the Public School Curriculum,” endorsed by a wide array of education, religious, and civil liberties organizations, which asserts both the legality and desirability of teaching *about* religion in schools. The brochure offers guidance on how such study should be approached.

A second, more wide-ranging document is the *Williamsburg Charter*, which “sets forth a new national compact” on how American citizens should “view the place of religion in American life and how we should contend with each other’s deepest differences in the public sphere.” Signed by more than a hundred public figures, including Presidents Ford and Carter, the document cautions that as the church-state pendulum has swung, the role of religion in American public life has often been devalued or dismissed “as though the American people’s historically vital religious traditions were at best a purely private matter and at worst, essentially sectarian and divisive.” Charter signers agree that this betrays the beliefs of the founders who themselves saw religious communities as “generators of faith, and therefore [as] contribute[ing] to the spiritual and moral foundations of democracy.” The charter argues that the religious liberty clauses in the First Amendment were intended to favor neither “an unwarranted intrusion of religion into public life or an unwarranted exclusion of religion from it.” Those who “advocate theocracy or the coercive power of law to establish a “Christian America,” who assert “moral judgments as though they were morally neutral,” or who interpret the wall of sepa-

ration as “exclud[ing] religious expression and argument from public life,” all contradict the First Amendment’s intent.

The Charter’s framers have tried to set forth parameters for what will surely—and properly—be a continuing debate over the right balance of church and state separation. While the Charter does not tell where to draw the line on a given education issue, adherence to its “first principles” should help make such debates more civilized and productive.

To order the 23-page Charter, send \$1 to the Williamsburg Charter Foundation, 1250 24th St. NW, #270, Washington, DC 20037; for the free Q and A, write AFT Order Department, 555 New Jersey Avenue, NW, Washington, DC 20001.



PHOTOGRAPH BY MICHAEL CAMPBELL

### SUPPORT CHILEAN DEMOCRACY

Through the AFT’s *Teachers Under Dictatorship* project, the AFT has been aiding the Chilean Teachers Union—the Colegio de Profesores de Chile—in its efforts to restore democracy to Chile. This fall, for the first time since General Augusto Pinochet and his military *junta* took power in 1973, there will be a plebiscite. Chileans will have the opportunity to vote yes or no to continued rule by the *junta*. If Pinochet wins, he will serve eight more years, during which time democratic rights will continue to be restricted; if he loses, the *junta* will be required, within a year, to hold a free and open election in which opposition candidates will be permitted to run campaigns.

The Colegio—as part of a broad coalition of political parties, trade unions, and civic groups—is working to promote a fear-free environment for the election, to register its members to vote, and to get them out to the polls. Union leaders expect their members to face repression and intimidation; they anticipate vote buying and electoral fraud.

To assist the Colegio, the AFT has launched a fundraising campaign. T-shirts with the message “Por Chile, ¡No Mas!” (For Chile, No More) are available for \$10, with proceeds to go to the Colegio’s ongoing voter registration and democracy-building efforts. Contributions are also welcome. To order T-shirts or for more information about the *Teachers Under Dictatorship* project, write to AFT/Chile Campaign, American Federation of Teachers, 555 New Jersey Avenue, NW, Washington, DC 20001. Indicate shirt size (S, M, L, XL, XXL) and make checks payable to AFT/Chile.

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# MAKING GROUPWORK WORK

*The potential benefits of groupwork are enormous,  
but they can't be reaped without careful planning*

BY ELIZABETH G. COHEN AND JOAN BENTON

**G**ERALDO WATCHES the other children as they complete their task of making a water drop lens. "What do you see?" Geraldo asks another child as he tries to peer into the finished lens. The other child looks up and lets Geraldo look more carefully at it. Geraldo very eagerly goes back to his own lens-making task. He appears to be having trouble taping a piece of clear plastic on a white index card with a hole in the middle; he keeps getting the plastic bunched up on the tape instead of getting the tape to hold the plastic on top of the card. "Oh, shoot!" Geraldo says and gets up to see what another child is doing in constructing her lens. He returns to his task only to be distracted by the child next to him. "Oooh, it gets bigger!" she exclaims. Geraldo gets up and looks at her water drop lens. He raises his eyebrows and very quickly goes back and finishes his lens. Geraldo appears to have understood what the problem was in completing the lens because he rapidly tapes it together without any further trouble. He now reaches over and takes the eye dropper from a glass filled with water. He very carefully fills it with water, centers it over his lens card and squirts one drop over the plastic where the hole is cut. Apparently

satisfied with what he did, he puts the excess water in the eye dropper back in the jar. He gets a piece of cloth to examine under his lens. The water slides around the plastic covering the paper and he cries out, "Oh, no!" He puts his lens down, straightens out the cloth, and then carefully slides the lens on top of the cloth. He very slowly looks into his lens and shouts out, "Oooh—bad—oooh!" "What did you see?" asks one of the girls. "Look how big mine got," says Geraldo. "What are you going to write?" she asks. Geraldo looks into the lens again and says, "It gets bigger." He then takes other flat objects and places his water drop lens on top of each one. As he looks at each object with his lens, he nods his head and says, "Yep!" Talking to himself he says, "They all get bigger." He looks at the girl he has been talking with and finally asks her, "Did yours get bigger, too?"<sup>1</sup>

\*\*\*

**M**R. BOWER'S American government class has been studying the U.S. Constitution. He has designed a rich multiple-ability groupwork task to help his students understand the relationship among the three branches of the federal government. To reach his objectives, he wants to challenge the students to think metaphorically and to produce insights that allow students to use their critical thinking skills.

He starts with a discussion of what a metaphor is and how metaphors can be used to make comparisons. He then assigns students to five-person groups where they will each play a different role. Mr. Bower provides the following instructions:

"Your main task is to draw a metaphor representing the relationship of the three branches of government as described in the U.S. Constitution. You may use single words or phrases, but you may not write entire

---

Elizabeth Cohen is director of the Program for Complex Instruction and chair of social sciences in education in the School of Education at Stanford University. Her research focuses on the treatment of problems of status in the classroom and on the organization of teaching. Joan Benton, an experienced secondary teacher of English, is a doctoral candidate in Stanford's School of Education. Her thesis research evaluates a new strategy for training teachers to recognize and treat status problems. Portions of this article are adapted from *Designing Groupwork* by Elizabeth G. Cohen (Teachers College Press), with permission of the publisher.



sentences—the finished work must be expressed visually.

*"This task will require many different abilities. Some students will have to be good conceptual thinkers; some will need to be good artists; at least one person will have to be able to quickly find the relevant passages in the Constitution; and someone will need to have strong presentation skills. No one can be good at all these abilities, but each one of you will be good on at least one of them. To be able to participate fully, all students, of course, will have to have really studied the Constitution."*

He then passes out instructions about the different roles to be assigned to each group member. One student will be the "facilitator" in charge of keeping the group on task and seeing to it that the group finishes the task in the allocated time. Another will be the "head artist" who will coordinate everyone's drawing contributions; and another will be the "presenter" who will explain the metaphor to the class. The fourth person is the "Constitutional expert" who will make sure that the emerging metaphor is true to the document; and the final person will be the "harmonizer" who will make sure that all members contribute and feel that their contribution is worthwhile.

The students move their chairs to six work tables according to the seating plan on the board. Mr. Bower's students have been well trained in the cooperative behaviors required for this kind of work. They have played roles like these before and know that each person is expected to do his or her part. As a result, they quickly become engaged in lively interaction for the remainder of the period. Mr. B. circulates around the room carefully observing to see if anyone is left out of the interaction or if some of the groups are failing to function. He jots down notes on confusions over the Constitution that he overhears in some groups. He stops several times to ask questions in order to stimulate a few of the groups to think more deeply about what they are doing. Only the facilitators may come up to ask him questions.

He is very pleased with what some of the groups are doing. For example, one group sees the Constitution as an intricate machine with chains and pulleys representing checks and balances and interlocking mechanisms representing separation of powers. The next day, the groups make their presentations while the rest of the class comments on which features of the metaphor are the most apt and why they think this is the case.<sup>2</sup>

\*\*\*

These two examples—the first from a fourth-grade class and the second from a high school government class—demonstrate the advantages of groupwork that may be gained with the proper preparation and structure necessary for success.

We define groupwork as students working together in a group small enough so that everyone can participate on a task that has been clearly assigned. Moreover, students are expected to carry out their task without the direct and immediate supervision of the teacher. Groupwork is not the same as ability grouping in which the teachers divide up the class by academic criteria so that

***Routine, right-answer tasks will only result in students copying the answers of the student who is the best and fastest at the problem or in knowledge of the facts.***



they can instruct a more homogeneous group. It should also be distinguished from small groups that teachers compose for intensive instruction, such as the flexible grouping procedures often used in individualized reading instruction.

In the first example above, we witness Geraldo discovering the principle of magnification. The process has not been an easy one, and he would never have been successful without the assistance of a classmate working on the same task. Just being able to watch others at work gave him some important information. And being able to talk things over seemed to help even further. Notice that Geraldo understands the idea in such a way that he can apply it to a new setting—a clear sign that he has a true grasp of the abstract idea.

In the second example, Mr. Bower is very satisfied with the resulting discussion; participation is broader and the thinking and understanding expressed is far deeper than what he could stimulate with direct instruction. The Constitution has “come alive” for these students.

**T**HE MASTERY of complex ideas requires that a student do more than listen to a teacher's presentation (even assuming that a student is attentive rather than mentally drifting away, as we all know can often be the case). After an instructor has introduced new concepts and has illustrated how they apply, students need active practice in using these new ideas. This is as true for students in a graduate seminar as it was for Geraldo. Traditional methods of accomplishing these goals include written papers, written exercises during class time (seatwork), and large-group instruction.

There are obvious limitations to these techniques. Clearly, when recitation is used, only one student at a time gets the active practice. There is no evidence that listening to other people assimilate new concepts is the same experience as doing it for one's self. Exercises and essays are the time-honored methods of teachers everywhere. Yet low achievers and less-motivated students are often reluctant to do these prescribed exercises and may complete them partially, if at all.

Even among the better-motivated high school students, essay assignments or written reports have their limitations. Understanding and assimilating new concepts and writing about them demand both cognitive processes and writing skills. Problems with writing are compounded with problems of thinking. Take, for example, the high school biology student who writes: “In the case of chlorophyll, photosynthesis will take place.” Does the student understand that photosynthesis cannot take place without chlorophyll? The teacher can only guess about the student's understanding of the process. Furthermore, until the student gets back the corrected essay or exercise, there is no chance to discover confusion and error. As every busy instructor knows, the lag between a student's turning in a paper and receiving it back with adequate comments may be embarrassingly long.

When groupwork is carefully planned and students have the resources they need, it can be more effective than these traditional methods for mastering abstract concepts. However, the task itself must be carefully

selected. Routine, right-answer tasks will only result in students copying the answers of the student who is the best and fastest at the problem or in knowledge of the facts. In contrast, solving a difficult word problem in arithmetic, discovering what is wrong with grammatical construction of some sentences, role-playing historical events, or, as in the second example at the beginning of this article, constructing a metaphor on the U.S. Constitution are all examples of conceptual tasks that can be highly effective in the group setting.

In tasks that are conceptual, students will interact in a way that assists them in understanding and applying ideas. A number of research studies provide important clues as to how this process works. Webb (1982) emphasizes the benefits of explaining to others, especially when the material is complex and requires integration or reorganization.<sup>3</sup> The student who does not initially understand the concept also stands to gain from the peer process. Even kindergarten children have been shown to learn very abstract concepts when placed in a group with peers who already understand the idea (Murray, 1972).<sup>4</sup>

In bilingual and multilingual classrooms carrying out science activities such as those Geraldo was working on in our example, children gain in conceptual understanding because they are using each other as resources in order to understand the task. In these classrooms, the larger the proportion of children talking and working together, the greater the average gain on standardized tests measuring concepts and application (Cohen and Lotan).<sup>5</sup>

Disagreement and intellectual conflict are a desirable part of the interaction in a problem-solving group. Johnson and Johnson (1979), who have worked extensively with cooperative learning groups in classrooms, state that conceptual conflict resulting from controversy in the group forces individuals to consider new information and to gain cognitive understanding in a way that will transfer to new settings.<sup>6</sup>

In addition to its superiority in helping students grapple with abstract ideas, groupwork has two other important academic advantages. It produces more active, engaged, task-oriented behavior on the part of students, and it provides a way of addressing the needs of an increasingly heterogeneous student population without the drawbacks of ability grouping and tracking.

## **MORE ACTIVE LEARNING, MORE TIME ON TASK**

One of the major ways that children lose time on task is through the use of seatwork techniques. The *Beginning Teacher Evaluation Study*, a monumental work of classroom observation and achievement testing, revealed that, on the average, students observed in second and fifth grades spent at least 60 percent of their time doing seatwork (Berliner et al., 1978).<sup>7</sup> For over half the time during reading and mathematics, the students worked on their own, with no instructional guidance. The amount of time children were on task in these self-paced settings was markedly lower than in other classroom settings.

This means that students are often doing something

other than their assigned work when they are left to their own devices—and the students observed in the *Beginning Teacher* study were the students who needed to work hard; they were achieving in the 30th to 60th percentile on standardized tests. Furthermore, regardless of the achievement level of the students in the fall, this study found strong relationships between time on task and achievement test scores in the spring.

Although seatwork can be supervised effectively, this is frequently not the case. Students often find seatwork assignments meaningless and confusing; they may lack the resources to complete the task properly. In a study of Title I schools (Anderson, 1982), young children were interviewed about what they thought they were doing during seatwork.<sup>8</sup> Many did not understand the purpose of the assignment; “getting it done” was what many students, both high and low achievers, seemed to see as the main reason for doing the task. Of these students, about 30 percent (all of whom were low achievers) apparently did not expect their assignments to make any sense.

Groupwork will usually produce more active, engaged, task-oriented behavior than seatwork. The interactive student situation provides more feedback to the struggling student. Interaction provides more opportunities for active rehearsal of new concepts for students of all achievement levels. Students who cannot read or who do not understand the instructions can receive help from their peers (as in the case of Geraldo). If the group is held accountable for its work, there will be strong group forces that will prevent members from drifting off task. Finally, peer interaction, in and of itself, is enormously engaging and interesting to students. All these factors help to account for research findings such as that of Ahmadjian (1980), who studied low-achieving students in fifth- and sixth-grade classrooms.<sup>9</sup> She found dramatically increased rates of time on task for these students doing groupwork as compared to seatwork.

## MANAGING ACADEMIC HETEROGENEITY

Increasingly, teachers are faced with students who possess a wide range of academic and linguistic skills in their classes. This is particularly characteristic of schools serving students from lower socioeconomic backgrounds. Teachers are likely to have nonreaders or students reading well below grade level alongside students performing at grade level. Similarly, a class of students is more likely to contain a wide range of grade levels in math. Very often, the class includes students with limited-English proficiency, students who do not speak English at all, or students who are overage for their grade placement.

Teachers and schools have responded to this heterogeneity by trying to make the set of students with whom they work during any single instructional session more homogeneous. At the elementary level, teachers are using ability grouping, especially for reading, dividing the class into three groups regardless of the range of achievement represented in the class. At the secondary level, schools are managing heterogeneity through tracking and curriculum grouping.

Unfortunately, research evidence gives no support to tracking and ability grouping as a basis for improved performance of the lower tracks and ability groups. What research does show is that those in the lower ability groups and tracks do somewhat worse than they would in more heterogeneous groups or classes. The evidence on high ability students is contradictory: According to some studies, those in the high ability groups and tracks do better in homogeneous settings, but according to other studies, they do about the same, regardless of setting.

Why, then, do teachers and schools continue to use these practices? The answer to this question is a simple one. Teachers do not have alternative technologies that represent an effective way to manage these differences among students. Ever since the demise of individualized instruction, there has been no serious attempt to assist teachers with this problem. The common prescription of teaching to individual needs and differences in a class of thirty is not really practical. It is one thing to state this as an ideal but quite another to provide teachers with the time and techniques necessary to accomplish this goal.

An alternative strategy is the use of heterogeneous groups that are trained to use their members as resources. If the task involves sight, sound, and touch, is intrinsically interesting, and requires a variety of skills and behaviors in addition to conventional academic skills, every student can make a significant contribution that will more than repay the efforts of classmates to help them. Instead of the teacher trying to be everywhere at once making sure that everyone gets the help that he or she needs, students can act as important resources for one another.

This format allows the teacher to challenge the students intellectually rather than teach down to the lowest common denominator. If each group member is required to turn out a product demonstrating understanding but is allowed to use resources in the group to achieve that understanding, the student with weak academic skills will not sit back and go along with the group. If the task is challenging and interesting, he or she will become actively engaged and will demand assistance and explanation. For students more advanced in academic skills, the act of explaining to others represents one of the finest ways of solidifying their own learning.

## THE DILEMMA OF GROUPWORK

Dear Liz,

Thought I'd drop you a line and let you know how things are going at old Jackson High. Do you miss it yet? You won't after this letter. Would you believe that we are going to have a whole series of inservice sessions on groupwork, every Wednesday, for the next eight weeks? You can imagine how “thrilled” I am to be a part of this grand plan.

God, do you remember the late 60s and early 70s when we did groupwork? I can remember feeling so excited when all that ESEA money was pumped into our school. We wanted to use that money as wisely as possible so that we could provide quality education. All those “innovations”—team teaching, television, video cameras, groupwork. Well, they're back!

I am not sure how we could have been so naive. Group-



***Students often find seatwork assignments meaningless and confusing; they may lack the resources to complete the task properly.***

work made such sense in so many ways—at least on paper. I've often wondered why it didn't work. I laugh and cringe at the same time when I remember some of those groupwork days in my class. I wonder whatever happened to Jeremiah Potter. That poor kid. He sure caused a lot of problems—not that he was the only one. Remember how one minute he was clowning around, making his group (and everyone else's) laugh, and the next minute he would be arguing so intensely, I was afraid a fight would start. It's funny how that class would be so electric when they were doing group discussions and then how it would fall apart so easily as soon as the groups had to read or write or prepare a report. I wonder if Jeremiah and Cara Wilkin ever learned to read. I hope so. Cara hated groups. I recall her saying to me that I certainly was a lazy teacher, making all the students take responsibility for their own work. "You certainly ain't no kind of teacher," she said. I finally had to agree with her. I could not make groupwork work, no matter how many nights we stayed up trying. Oh, I just remembered that time my class was doing the time lines, and two of the groups disappeared after claiming their time lines were so long they had to work out in the hall. I could not imagine what happened, but the principal certainly had a fit when he found four of my students on the back of the stage smoking. Well, I fixed that class. They didn't have one more experience in groupwork. And, they shaped right up.

I certainly don't want to be part of the inservice training this next eight weeks. I don't want to deal with all of the discipline and other problems that come with small-group interaction. The kids don't take any initiative. They are just too immature for such responsibility. I have to watch every center like a hawk so that they don't make any mistakes. With all the heterogeneity we have in classes now, I cannot imagine trying to supervise six to eight groups of students who don't understand the directions, don't know how to problem solve, and cannot seem to help each other get their assignments done.

Write soon. Share some of your memories about all that work we did and all those problems we had when we used groupwork. I need a laugh or two.

Cheers,  
Tina

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Frankie, a third grader, had a very difficult time in school. He had no friends in his classroom, no one wanted to play with him during recess, and no one wanted to help him at the learning centers. He read almost two grades below grade level, simply could not write a complete sentence, and seldom could answer any of the questions the teacher occasionally asked him. Mrs. Craven was a very loving teacher. Frankie liked her very much, especially because she never yelled at him or insulted him. "Mrs. Craven likes me. She tells me so often," Frankie informed me.

On the particular day that I observed him, Frankie and the members of his group were working on an activity in which they had to manipulate tangrams to make certain kinds of shapes. Three of the children in the group were girls, two of whom were quite successful academically. The fourth youngster was a boy who, while not at the top academically, was considered to know a lot about science and math; he was playing the role of the Facilitator. And then there was Frankie.

The Facilitator asked Sylvie, a top reader in the class, to read the instructions. Frankie worked alone, while the other four tried to make the various shapes fit together. Sylvie was doing most of the talking and most of the directing of the three children working with her. Sylvie did not understand how to put tangrams together to form new shapes, but the other three continued to follow her lead. In the meantime, all unnoticed, Frankie had completed two of the required shapes and was now working on a third.

The Facilitator called Mrs. Craven over to help the group. Just at that moment, Frankie finished his third shape. Frankie looked up and listened to the discussion. Mrs. Craven didn't look his way; she was busy asking the Facilitator and Sylvie about why the group was having so much trouble with the task. They complained about how hard the task was and how they did not really understand the directions. Mrs. C. asked the children to read the



directions again and to try hard to figure out at least one shape. During the first part of this conversation, Frankie looked expectantly at the rest of the group and his teacher. However, as the discussion continued, little by little, Frankie began to lean over his tangram shapes. By the end of the discussion, he was lying flat over his tangrams so that no one could see, if indeed they had wanted to, that he had completely understood the task and was very successful at producing shapes.

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Although the potential benefits of groupwork are enormous, these examples illustrate several common problems that can and do cause teachers to give up after a few dismal experiments with cooperative learning. The teacher who has no more tools for the planning and implementing of groupwork than an initial attraction to the idea of groupwork as a creative setting for learning is likely to run into trouble trying out the new methods.

The disciplinary problems in the first example were probably a result of failure to select and define suitable tasks for groupwork and the failure to prepare students for the skills they would need. Tina is undoubtedly an expert disciplinarian at traditional whole-class instruction, but groupwork requires a different kind of classroom management.

Teachers often ask about the problem of unequal participation described in the second example: How do I prevent one person from taking over the group while another person sits back and says very little? This is a problem stemming from status differences among the students—differences in how the students rank each other on academic abilities and differences in personal standing and popularity. Group members, like Sylvie, who have a high rank, are seen as more competent and are generally expected to do well on a wide variety of important tasks. These high-status students are very likely to take over their groups; other students defer to these “stars” because they see them as more competent. Group members like Frankie, who have a low rank, are seen as less competent and are expected to do less well. These low-status students withdraw, distract, and sometimes misbehave because they know that they are not expected to contribute anything valuable to the group.

Frankie’s experience points up one difficulty with unequal interaction. This has to do with the intellectual quality of group performance. In order to get the best possible group product, it is critical that each member have an equal opportunity to contribute. If some members are hesitant to speak up even though they have much better ideas, the intellectual quality of the group’s performance suffers.

A second difficulty with the effect of status ordering on cooperative groupwork is that those who do not participate because they are of low status will learn less than they might have if they had interacted more. In addition, those who are of high status will have more access to the interaction and will therefore learn more. It is a case of the “rich getting richer” in the classroom setting.

Thus we have a dilemma: While groupwork is attractive for sound educational reasons, it can lead to chaotic classroom conditions and it can activate status problems within small groups. Let us turn now to ways in which teachers can gain the advantages of groupwork without its drawbacks.

***How do I prevent one person from taking over the group while another person sits back and says very little?***



## PREPARE STUDENTS FOR COOPERATION

The first step in introducing groupwork to a classroom is to prepare students for cooperative work situations. It is a great mistake to assume that children (or adults) know how to work with each other in a constructive, collegial fashion. The chances are that they have not had previous successful experiences in cooperative tasks, working with people who are not personal friends or family members.

Students must be prepared for cooperation so that they know how to behave in the groupwork situation without direct supervision. The goal of the training program is the construction and internalization of new norms for behavior. A *norm* is a rule for how one ought to behave. When an individual comes to feel that he or she ought to behave in this new way, the norm has become *internalized*. Sometimes norms are written rules, and sometimes people just act as if everyone were expected to behave in this way.

When students have internalized norms for working in a group, not only will they behave according to the new norms, but they will enforce rules on other group members. Examples of such norms are: "You have the right to ask anyone at your learning center for help" and "You have the duty to assist anyone who asks for help." Other useful norms for cooperative situations include the importance of sharing, of listening to other people, of making sure that everyone participates, and of not completing the task until everyone in the group is finished.

These new norms must be taught in a series of skill-building exercises. In the book *Designing Groupwork: Strategies for the Heterogeneous Classroom*, Elizabeth Cohen gives detailed instructions for exercises that teachers can use to teach cooperative norms.<sup>10</sup> It is not enough to talk about norms with students because these are new skills and behaviors that require practice and reinforcement. Busy teachers are tempted to skip this phase and get on with the curricular objectives, but inevitably, this shortcut will make the groupwork ineffective.

## GIVE EVERYONE A PART TO PLAY

As adults, most of our daily behavior is controlled by the roles we play, roles such as teacher, parent, employee, or union member. Yet, most classrooms use only two roles, that of student and teacher. Giving students special, specific roles to play in the group will reduce problems of one or more members making no contribution to the group or one member dominating the group. It will also help the teacher have multiple groups and materials in simultaneous operation without losing control of the classroom. Roles can serve to help the group members figure out and complete the task, keep the group together, make sure that everyone gets the help he or she needs, keep track of time, or fulfill any one of a number of managerial functions that teachers usually feel they have to fulfill by themselves.

In *Designing Groupwork*, Cohen advocates the use of student roles to take care of many managerial prob-

lems. For example, a student facilitator can see to it that everyone gets the help that he or she needs to complete the task. Alternatively, a student facilitator can ensure that everyone participates and that the group finishes the task on time. A checker can make sure that worksheets are completed. A safety officer can watch people to see that they observe safe procedures. A reporter can describe what the group has discovered or decided in a wrap-up session. Everyone in the group plays a role and these roles rotate. If students have a clear understanding of what behaviors are expected for each of the roles and if that role is clearly assigned by the teacher, even the meekest and mildest of students will learn to play his or her part.

Assigning managerial roles to students takes much of the burden from the teacher. Instead of the teacher taking major responsibility for satisfactory completion of assigned tasks, the students learn to take responsibility for themselves and for each other. The teacher maintains control by holding students accountable for playing their roles and by insisting on the enforcement of cooperative norms.

## CHANGE EXPECTATIONS FOR COMPETENCE

Establishing cooperative norms such as "everyone participates" and "everyone helps" and giving every student a role to play will do much to equalize the interaction among students. These strategies will encourage low-status students to participate rather than withdraw from the group and will prevent high-status students from doing all the talking. However, these treatments are not sufficient because they do nothing to change low expectations for competence, which is the underlying cause of nonparticipation by low-status students.

Imagine a well-trained group with different students playing different roles; the low-status students are doing just as much talking, on the average, as the high-status students. Nevertheless, members of the group still think of the low-status students as having fewer and poorer ideas than the high-status students. The low-status students may be active, but they are still less influential than the high-status students. And the low-status students feel that their contributions to the group are less valuable and less competent than the contributions of the high-status students.

*Designing Groupwork* includes a number of status treatments that can be used to change expectations for competence and thus modify the tendency of high-status students to dominate the group. This is in contrast to the other cooperative learning methods currently in use, which make no specific attempt to deal with status problems. All strategies used in these status treatments have been derived from sociological theory and have been extensively tested in the laboratory and in classrooms.

In the multiple-ability strategy, for example, the teacher selects groupwork tasks that are sufficiently rich and varied that different students can make different contributions. These tasks should require many different human intellectual abilities such as spatial and

(Continued on page 45)

# NEW WAYS OF WORKING

*Troubled industries experiment with workers' self-management*

BY DAVID KUSNET

**E**MIL ZULLO is a welder for the New York City Sanitation Department. After decades repairing garbage trucks, now he has the opportunity to help design and build new equipment from scratch. His work used to be routine, but now he finds it so interesting that, even though he's reaching retirement age, he wants to stay on the job.

Tom Zidek was laid off from a steel mill in Cleveland where he "never found out about decisions until the day I lost my job." Now, he works at an experimental steel plant where workers plan what they will do before each shift begins and can learn every skill in the plant.

William Baldwin has years of seniority at an auto and truck transmission plant in southwestern Ohio. After years of working in an environment where the foreman's word was law, he's now part of a self-managing work team. "We know our jobs, we know what has to be done, and we do it," he says. "It's a good feeling."

Zullo, Zidek, and Baldwin are part of a new wave of experimentation sweeping dozens, perhaps hundreds, of American workplaces, from basic industries like auto and steel to service sector companies like the telecommunications giant AT&T.

Growing numbers of workers, managers, government officials, and academicians are taking a critical look at the traditional patterns in American workplaces: over-supervised workers performing fragmented jobs with little, if any, voice in decision making; managers preoccupied with maintaining total control over workers and work processes; and the entire enterprise locked into hostile labor-management relations and outmoded ways of working. Just as the movement for education reform has led to experiments in school-based management, where teachers gain greater professional auton-



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*David Kusnet is a free-lance writer specializing in labor and political issues. The author would like to thank the Work in America Institute for its assistance in researching this article.*

*A welder at New York City's Sanitation Department works on a part for "Our Baby"—a refuse wagon that he and other workers designed from scratch and that is now the model that private vendors are required to duplicate.*



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omy, efforts to increase productivity and improve quality in other workplaces—from factories to offices to government agencies—have also spurred experimentation in labor-management cooperation and a stronger worker voice in decision making.

Most of the experimentation has been prompted not by a sudden corporate concern with improving the quality of worklife but rather by the new realities of foreign competition and high technology. As Ray Marshall, Secretary of Labor from 1977 through 1981 and now a professor of economics and public affairs at the University of Texas, has warned: "American business is losing its competitive position in the world economy at least in part because inadequate worker involvement has resulted in misguided and uncoordinated management and economic policies, which have placed our producers at a serious competitive disadvantage."

Now on the run to close this competitive gap and aware that the new technologies require workers to exercise a high degree of discretion on the job, some American corporations are taking lessons from management techniques that seem to have succeeded in Japan and Western Europe: "pushing decision making down" within the organization from top executives to the workers themselves; eliminating unnecessary layers of middle management; and giving workers a sense that they have a voice in policies and a stake in the success of the enterprise.

The American translation of these principles usually falls under one of three headings:

- 1) *Cooperation at the Top:* Few, if any, American corporations have adopted the Western European model of "codetermination," where workers and their unions have a decisive voice in decision making on such fundamental issues as investment strategy. However, particularly in the automobile industry, American unions have begun to win a voice in corporate decision making that would have been unthinkable even a decade ago. Following the much-publicized selection of United

Auto Workers (UAW) President Douglas Fraser to the board of directors of the financially troubled Chrysler Corporation in 1980, the UAW has played an increasing part in decision making by the big three auto companies on such issues as designing new models and the work processes that will produce them.

2) *Employee Involvement:* While what Professor Charles C. Hecksher of Harvard Business School calls "cooperation at the top" offers unions a voice in major corporate decision making, programs that have been variously called "Employee Involvement" (EI) or "Quality of Worklife" (QWL) offer rank-and-file workers a voice in how they do their jobs. In the big three auto companies, major steel companies other than USX (formerly U.S. Steel), at the telecommunications giant AT&T, and in other companies, relatively small groups of workers and supervisors—usually from ten to twenty people—hold regular meetings to thrash out problems ranging from poor working conditions to improvements in quality and efficiency. In unionized workplaces, these programs are intended to supplement—not substitute for—collective bargaining and the grievance procedure, with EI and QWL steering clear of such issues as wages and benefits or violations of the union contracts. An estimated 2 million American workers participate in EI, QWL, and similar programs.

3) *Autonomous Work Groups:* Perhaps the most visionary of these innovations is the "autonomous work group" consisting of employees who naturally work together—for instance, the workers in one department in an auto factory—and who are given the authority to manage themselves through consensual decision making, rather than taking orders from a foreman. The Work in America Institute, a respected, nonprofit research center on job-related issues, uses the somewhat cumbersome phrase "socio-technical systems" to describe experiments in autonomous work groups that combine the social needs of employees with the technical needs of the organization. The institute estimates that some 200 companies throughout the country are experimenting with "socio-technical systems."

Of course, many businesses have not joined in these experiments. As the Work in America Institute's Michael Rosow observes: "Certainly, at least for Americans, change of any kind is a major threat. We are at a stage of the most accelerated change in human history—social and technological—yet we're all pretty much resistant to change."

Rosow notes that sharing decision making with workers, particularly experiments with autonomous work groups, not only goes against the reluctance of most managers to share power but also defies a century of American management thinking. "Virtually all of the American industrial system dates back to the late nineteenth century when management thinking was dominated by Frederick Taylor, who advocated breaking up every job down to its smallest component activities and imposing total management control," Rosow explains. "Even now, there is a trend in many industries, from computerized offices to some sectors of manufacturing, to de-skill jobs and supervise workers in an even more heavy-handed way."

Rosow also notes that there are very real difficulties associated with power sharing in the workplace. These



PHOTOGRAPH BY DIANE HIRSH

*Workers and managers at this new electrogalvanizing steel mill in Cleveland were determined not to copy Japanese methods but to learn from them and devise a system tailored to their own needs.*

experiments, he explains, can "take a long time to prove they're successful," and "there are real financial costs—training workers and managers, paying for additional employees to run the place while some of the regular employees are away at training sessions." Moreover, as another expert on workplace issues, retired Professor Robert Guest of the Dartmouth School of Business Administration, explains, self-management succeeds only when workers have had the opportunity to learn about any new technologies that are being introduced in their workplace.

**D**ESPITE THESE difficulties, experiments in all three forms of power sharing—cooperation at the top, employee involvement, and autonomous work groups—have been attempted during the past decade. And they have produced a number of success stories at a time when good news has been a rarity in American industry.

The most extensive programs have been in the auto



PHOTOGRAPH BY BRUCE CRIPPEN

*In a dramatic break with the past, workers at Ford's Sharonville, Ohio, plant have the right to stop the assembly line at any time if they spot defective parts.*

industry where General Motors began a Quality of Work Life (later called Employee Involvement) program in 1973, followed by Ford in 1979, and Chrysler one year later. Under these efforts, which are administered jointly by the big three auto companies and the UAW, groups of workers and managers meet regularly to solve on-the-job problems.

At Ford, corporate management has estimated that 85 percent of the company's turnaround during the 1980s was due to improvements resulting from Employee Involvement programs. At Chrysler, the joint labor-management teams have racked up a number of cost savings, such as eliminating over \$1 million in wasted scrap metal at one plant. And General Motors has launched a national television advertising campaign boasting of quality improvements achieved jointly with the UAW.

The auto industry has made history with the involvement of UAW members in corporate decision making on product development and even the design of new factories and work processes. Ford's most successful new

model during the 1980s—the Taurus—was designed in a team process involving assembly-line workers as well as engineers. Among the workers' suggestions was the observation that, in building other models, they had trouble installing car doors because the body panels came in too many different pieces—up to eight to a side. Thus, the Taurus door was redesigned with only two pieces. Following this success, Ford's quality chief, John A. Manoogian, reflected on the reason: "In the past, we hired people for their arms and their legs. But we weren't smart enough to make use of their brains."

No experiment in joint labor-management decision making has been more ambitious than General Motor's "Saturn Project": the company's effort to enter, for the first time, the lower end of the auto market, producing a small car intended to compete with Japanese and Korean models. Understanding that quality will make the difference between success or failure, GM worked closely with the UAW in assembling a team of ninety-nine people, including managers, engineers, union officials, and assembly-line workers, to design the new plant from scratch and devise a new way of building cars. After two years of planning, the company and the union agreed on a system where teams of six to fifteen workers will manage themselves and decide among themselves such issues as job assignments, schedules, inspection, maintenance, absenteeism, and health and safety. In a 1985 agreement, GM and the UAW agreed that workers will be salaried, rather than paid by the hour, and four-fifths will have "lifetime" job security.

In addition to these innovations on the factory floor, the UAW has won an unprecedented role in planning the entire Saturn project. The union has a voice in decisions previously reserved for management, from the all-important question of where the parts will be manufactured to such questions as the eventual price of the product and even selecting the advertising agency that will promote Saturn and the dealerships that will sell it. All in all, UAW President Owen Bieber says Saturn reflects "a degree of codetermination never before achieved in U.S. collective bargaining."

Largely because of GM's financial problems, the opening of the Saturn plant in Spring Hill, Tennessee, has been delayed by two years, and the size of the workforce has been reduced by half. When the Saturn plant finally opens early in 1990, its performance will be watched closely.

**T**HE TREND toward decentralized, participatory management is a healthy development, but as a new study by Charles Heckscher of Harvard Business School makes clear, schemes for employee involvement and labor-management cooperation come in many forms, some with other motives in mind. Such programs frequently are part of what he calls "participation without unions." By creating "Employee Involvement" programs where small groups of workers and supervisors meet regularly to solve job-related problems, a growing number of companies partially satisfy the desire for a voice on the job—one of the basic motives that prompts workers to organize unions—but keep control over major decisions firmly in management's hands. Indeed, Heckscher notes, some consultants who specialize in

helping corporations defeat union organizing drives recommend "Employee Involvement" programs as an alternative to unionism—a tactic that has been used successfully by General Foods, IBM, and several General Electric plants.

Such companies, however, may find that they win the battle but lose the war. A number of industrial relations experts argue that companies that want to improve quality through worker involvement—but are fighting to keep unions out—don't understand the basic dynamics of the process. As Michael Rosow of the Work In America Institute explains, "Employee involvement depends on the workers speaking their minds about how they can do their jobs better. And it usually takes a union contract to give a worker the security to know that, if he speaks his mind, he won't suffer for it. I've seen companies where they try these experiments, and the blue-collar workers who have a union make useful contributions, but the white-collar workers who aren't unionized just keep their mouths shut or say what they think they're expected to say."

While Charles Heckscher's cautionary note about bogus Employee Involvement schemes is certainly well taken, it is also clear that there are a growing number of programs that are both substantial in their content and genuine in their motive. This past June and July, I visited three such places—a government agency in New York City, a high-tech steel mill in Cleveland, and a car and truck transmission factory in Sharonville, Ohio. I interviewed workers, management officials, and union representatives, asking how new forms of Employee Involvement have made a difference in their lives and the workplace's productivity. I didn't see miniature utopias, but I did see promising efforts to eliminate pointless management practices, improve working conditions, and let workers offer—and act on—ideas on how they can do their jobs better.

## TURNING AROUND A GOVERNMENT AGENCY

New York City's Sanitation Department has the largest nonmilitary fleet of vehicles in the world: more than six thousand garbage trucks, mechanical sweepers, salt-spreaders, and other equipment that collect and dispose of more than three hundred thousand tons of solid waste each month, as well as removing snow from the roadways in the winter and cleaning the beaches in the summer. The department's Bureau of Motor Equipment (BME) is responsible for keeping these vehicles in working order—a task that, for years, seemed virtually impossible. With an annual budget of more than \$50 million, a staff of 1,250 workers mostly in skilled trades, and sixty worksites throughout the city, including a huge central repair shop in Queens, BME for years seemed as unmanageable as it is large and far flung.

Just ten years ago, on any given day, almost half the department's vehicles didn't work, and, when a truck went out for the day, there was a one-in-three chance it would break down. Troubles fed on each other, and, because of chronic breakdowns in the fleet, the department was forced to spend over \$9 million a year on overtime costs for collecting garbage at night and for



*This robot repaints sanitation trucks—a tedious, repetitive task that workers were happy to automate. In fact, workers at the Sanitation Department's central repair shop designed and built this robot themselves.*

*This transmission dynamometer room—and other quality control measures—helped the Bureau of Motor Equipment reduce its out-of-service rates on equipment from 50 percent to 15 percent.*

working 'round the clock to try to repair the trucks. Within BME, labor relations were tense, and morale was low. "There were deplorable working conditions," recalls John Venios, president of local 246 of the Service Employees International Union (SEIU), which represents mechanics throughout city government, including the Sanitation Department. "Some garages had no toilets, some had no heat in the winter, and there was the pervasive feeling that no one gave a damn about the workers."

In 1978, Ronald Contino was hired as Deputy Sanitation Commissioner with responsibility for BME. Contino understood that the only way to run such a diverse and far-flung operation is through the active involvement of the workers themselves. As he observes, "One has only to envision a thousand trades people at over sixty locations, working on 5,600 vehicles from dozens of manufacturers and drawing from a parts inventory of over one hundred thousand individual line items, to realize that a single or even many management brains





PHOTOGRAPHS © JOAN POWERS 1988



cannot expect to solve the multitude of problems that occur on a daily basis."

To enlist participation, Contino created something new in city government—a "Labor Team" with representatives of each of the major trades in the department. He went to the presidents of each union in BME, including locals of SEIU, the Operating Engineers, and the Teamsters, and asked them to select representatives who would canvass their co-workers on ideas for improving working conditions and work processes. He encouraged them to seek out aggressive shop stewards who weren't afraid to speak out. "I said give me the guy in the union hall who's always yelling how lousy things are," Contino recalls. In order to ensure that the process would involve the unions, not undermine them, Contino specified that Labor Team members must report to their local presidents and attend union meetings.

As almost invariably happens with ventures in Employee Involvement, workers first demanded im-

provements in their own working conditions. As John Giuliano, a mechanic and member of SEIU local 246, remembers: "We wanted better lighting, better working conditions, clean bathrooms—just a minimally decent environment. We had to see evidence the new system could deliver. And it did."

During the first months of the Labor Team, the bureau acted on workers' complaints. For instance, welder Emil Zullo in the central repair shop got a new smoke-eating device to divert the fumes. Soundproofing was installed in work areas that had been unbearably noisy. Major worksites were equipped with heating for the winter and air conditioning for the summer. Eventually, workers began to feel that, as Giuliano puts it, "this was for real, and changes were being made."

As conditions improved and trust was established, the weekly meetings between the Labor Team and top management started producing new ideas for improving the bureau's operations, most of which were implemented successfully:

- Workers were freed of the requirement of filling out time sheets showing how they spent their time each day. Instead, each repair shop was given work goals to meet. As Giuliano recalls: "When we got rid of all that paperwork, everyone felt good. Our job is to repair trucks, not fill out forms, and, once we could just do our jobs, it changed the mindset completely."

- The local repair shops were stocked with the necessary parts so they wouldn't have to order them from central repair and wait several days for them to arrive. Air tools and other necessary equipment were also made available to the borough shops.

- Mechanics were given the authority to order new tools their jobs required. As Joseph Bernardo, a mechanic and shop steward, explains, "We would suggest the equipment we needed, based on our experience and the equipment shows and magazines. We know our jobs, and we know what we need to get our jobs done."

- At the central repair shop, workers designed a robot to perform what had been the repetitive and unpleasant task of repainting trucks. Assured that their jobs would be secure and they would be reassigned to more skilled tasks, workers made clear that a properly designed robot would probably do a better job painting than a human being vulnerable to boredom and fatigue.

While these changes were enlisting the participation of rank-and-file workers, middle managers were frequently less than enthusiastic about the new system. "Middle managers can be afraid of exposing the operation," said Lloyd Hackett, who served for several years as a representative of SEIU local 246 on the Labor Committee and is now a manager himself. "They're afraid they'll look bad." And, in fact, there has been significant turnover among middle managers.

After several years of worker involvement in decision making, BME showed improvements in efficiency and productivity, with out-of-service rates on equipment dropping from 50 percent to 15 percent and cost savings of \$16.5 million in one two-year period alone. As operations became more efficient, there were two important bonuses for the employees: an end to the risk that their jobs would be lost through contracting out and an end to the constant demands for night-shift work

to handle emergencies.

Having restored efficiency to BME's basic functions of repairing and maintaining vehicles, the bureau's managers and workers kept looking for new ways to innovate, even creating a special "research and development" team of employees seeking out ideas for improving equipment and operations.

With years of experience fixing up Sanitation Department vehicles, workers knew there were defects in the standard specifications for much of the department's equipment—the "specs" from which vendors built the trucks and other vehicles. As mechanic Joseph Bernardo remembers: "There used to be no input from mechanics who actually knew what kinds of things would go wrong with the trucks. The vehicles were made to specs written up years ago, and we used to be at the mercy of the manufacturers—whatever was coming off the line, the city bought."

BME began involving mechanics and other blue-collar workers in the vehicle design process, which previously had been the sole province of the department's engineering staff. In addition, BME employees were sent to meet with representatives from the vendors to explain the new specifications for department vehicles.

Even after making this extra effort to demand quality from vendors, BME employees remained dissatisfied. Workers came up with a new idea: building their own refuse wagon as a model for how to build one properly. In just thirty-five days—a time comparable to what it takes private vendors—mechanics and other skilled craft workers at the central repair shop built a refuse wagon of their own, and, when they were finished, they proudly painted it with the words "Our Baby." This vehicle is now the model that private vendors are required to duplicate.

For welder Emil Zullo, who learned his trade at an aircraft plant during World War II, experiments like "Our Baby" are the most exciting work he's done in decades—more interesting by far than doing routine repairs. That's why, he tells a visitor, he's staying on the job even though he's reaching retirement age.

Today, ten years after it was a problem agency, BME is a model for the entire city government. In fact, instead of contracting out its own repair work, it is now "contracting in," repairing vehicles for other city departments and even soliciting repair contracts from the state government.

During my visit to BME, I was left with only one nagging question: Since the Labor Team system is strictly advisory, and worker involvement in decision making is not guaranteed by written agreements between unions and management, what will happen when Ronald Contino eventually moves on?

"What would happen if Ron left?" said one key participant in the changes at BME. "I don't know. I really don't know."

## **SUCCESS AT AN EXPERIMENTAL STEEL MILL**

While America's basic industries have taken a beating during the past decade, none has suffered more than basic steel, where employment has dropped from an

average of 560,000 jobs in 1978 to an average of 269,000 in 1987. A growing number of leaders from business and labor agree that, if the steel industry has a future, it will have to be found in high-quality products and high-technology processes. In an experimental steel mill in Cleveland, new technologies have been linked to new ways of organizing work processes.

Four years ago, the LTV conglomerate—which includes the old Republic Steel, Jones and Laughlin Steel, and Youngstown Sheet and Tube companies—entered the race to meet the new demand by the nation's auto companies for corrosion-resistant steel produced by "electrogalvanizing," a process in which steel sheets are electrically plated with zinc, providing a smoother surface for paint than traditional steel products.

Understanding that it would need to make high-quality products quickly and at low cost, LTV chose to enter two unusual partnerships. The new electrogalvanizing plant would be a joint venture with Sumitomo Metal Industries, a Japanese company that first developed the technology. And, in an even more revolutionary development for American steelmakers, the plant would be designed and managed in partnership with its workers. As Donald Vernon, vice president and general manager of the L-S (for LTV-Sumitomo) Electro Galvanizing Company, has explained, the plan was "to establish a company that would have a competitive edge through full utilization of its workers," drawing upon their skills and experience, as well as their physical labor.

When LTV approached the United Steelworkers of America (USWA) with the idea, it found a receptive audience, recalls Sam Camens, who was then assistant to the president of the national union. A veteran unionist, Camens believes the steel industry has suffered from its traditional "autocratic" organization: "No plant can be competitive if it's organized on the old, traditional basis because management alone does not have the knowledge that comes from the workers' experience."

Together, LTV and the USWA reached an innovative agreement. L-S Electrogalvanizing (LSE) would hire its work force from laid-off union members from the Cleveland area. The plant would have its own union contract, separate from the national contracts covering the major steel companies. Workers would be guaranteed job security and wages and benefits comparable to those provided by the national contracts. And the workers would be hired and placed on the payroll before the new plant and its work processes were designed, so they could be involved in the planning process from the beginning. As the USWA's Camens recalls, this was to be "a greenfield plant—new equipment, new technology, and a new way of doing things."

An initial work force of forty-five was hired in 1985. The workers and managers then journeyed to Japan, where they studied Sumitomo's electrogalvanizing line. Top union and management officials at LSE—USWA local 9126 president Tom Zidek and LSE human resources director Ken Pohl—agree that the Americans had mixed reactions to what they saw in Japan. They admired the "team concept" at Sumitomo but were doubtful about the extreme "company mindedness" of the workers, and

*(Continued on page 42)*

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## Learning from Children: Teachers Do Research

**U**niversity professors are expected to do research. School teachers are not. For the most part, teachers have little time to reflect on what they are doing and few opportunities to share what they are learning with each other or a broader audience of educators. Nevertheless, a growing number of teachers across the country are creating ways to engage in their own form of classroom and school-based research.

Standing at the all-important intersection of theory and practice, teachers are in a position to formulate research questions that are critical to educational improvement. What teachers learn from their inquiries can be applied immediately to their own daily practice and, at the same time, also constitutes a source of important knowledge for the field of education.

### Inside:

An Interview with  
Ted Sizer

A New Assignment  
for Student Teachers

### What Is Teacher-Research?

Mary Schulman, an elementary school teacher in the Northern Virginia Writing Project, describes the beginning of a research project (her journal entries appear in *Working Together: A Guide for Teacher-Researchers*):

12/7/81—I do still feel as if I'm groping in the dark. I hope that's not abnormal for a researcher, especially at this stage of the game...I'm thinking I should have more data...

1/17/82—I was driving home from school today and seemingly out of nowhere a question did occur: I wondered what would happen if a group of my second graders had conferences with a group of my first graders about their writing(s)? What kinds of questions will my second graders ask? Will my first graders revise their writings? Will their writing improve?

Schulman, like any researcher, began her inquiry by formulating a question. Thoroughly grounded in the context of the classroom, she struggled to find a question that would help her make specific decisions about how to teach writing to her students. But she also looked for

a question that would contribute to her knowledge (and potentially to the knowledge of others) about how children come to understand the process of revising their work.

At the heart of teacher-research are careful and systematic observation, reflection, and documentation. Teacher-research is not motivated by trying to prove a theory or to generalize from a specific case; rather, teachers seek to describe and to discover what engages particular learners in specific contexts and what contributes to their understanding. They keep journals, conduct interviews with students, and sometimes arrange to exchange classroom visits with a colleague. Whenever possible, they share their "field notes" with others, and—if there is time and support—write these up in more formal reports.

### Research on Writing

"Finding the Writer in a Learning Disabled Student"; "The Computer in Language Arts: Measuring Its Worth"; "The Student Journal: A Survey of Assignment Types and Instructional Value." In 1986 these were among the 25 teacher-research projects funded by the Research Foundation of the National Council for Teachers of English (NCTE). Many of the teachers conducting class-

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room research focus on investigating children's development as writers as well as classroom structures that support writing.

Research on writing enjoys support from a variety of institutions across the country. Each summer, more than 250 teachers attend the institute offered at the Bread Loaf School of English at Middlebury College in Vermont, while dozens of others enroll in the programs sponsored by local affiliates of the National Writing Project (several of which offer seminars during the school year as well). Both Bread Loaf and NCTE help teachers obtain small grants that support research efforts during the school year.

The emphasis in such programs is not on "honing teaching methods," but rather on helping teachers focus on learning—through a systematic examination of their own experiences and those of their students. They return to their classrooms with new formats for observation and analysis, and often with a determination to do things differently.

Amanda Branscombe, a ninth-grade basic-skills English teacher in Auburn, Alabama, describes her transformation from "the typical classroom teacher who felt that my role was to stand in front of the room and pour knowledge into the students" to a "co-learner with my students," whose classroom became "a learning lab in which the students and I equally focused on gathering the data that we needed." With the assistance of the anthropologist Shirley Brice Heath, whom she met at Bread Loaf, Branscombe and her students conducted research on the uses of reading and writing in their own communities and their own school. She found that her students not only could be trained to be good "field researchers" but also dramatically improved their own language skills as they became more self-conscious about the varieties and uses of language.

## Observing Children

One teacher begins the group with a focusing question: "Susan is very timid about her own ideas and very willing to follow along in other people's plans. What can I do to help her trust her own ideas, to try out new things—succeed or fail—and try again?"

As a group of colleagues listen and one person records, the teacher meticulously describes the child, drawing from such data as a portfolio of the child's writings and drawings, homework papers and workbook pages, as well as from the teacher's own observations and records. Avoiding judgment or clinical language, she organizes the data into six basic categories: body and gesture, social relationships, emotional tenor, activities and interests, academic activity, strengths and vulnerabilities. Another teacher may offer additional information, such as the child's history in the school. A chairperson then summarizes what has been said. The group takes turns asking questions, and finally makes recommendations as to how the teacher might work with this student in the future.

**"Researchers ignore teachers; teachers ignore researchers right back."**

A major strand in teacher-research derives from the work of Patricia Carini and her colleagues at the Prospect Archive and Center for Education and Research in North Bennington, Vermont—a combination alternative school, teacher-training institution, and research center. The "Staff Review of a Child,"

described above, is one of a number of documentary processes developed over the last 23 years at the Prospect Center.

Teachers who attend the institutes and workshops offered by Prospect have access to the extensive archive of children's works—a collection of artwork, writings, and classroom records of more than 300 children who have attended the K-9 alternative school. Using these resources, teachers learn to look at children's efforts and their patterns of intellectual development in new ways, and hence to consider new approaches to teaching.

Teachers also gain experience in using documentation and reflection—to explore a drawing or a piece of writing, to review a particular curriculum or their own teaching practice, and even to investigate a school-wide issue such as privacy or playground fighting. Like the Staff Review of a Child, all of the documentary processes developed at Prospect depend upon immersion in the focus of interest—the child, a drawing, a setting—as well as upon continuity and regularity in recording and collecting information.

As a result of their work at Prospect, some teachers begin to develop an "archive" of their own. Alice Seletsky, a New York City teacher for nearly 30 years, describes herself as a "confirmed Prospector," a reference both to how much she values her long association with the Center and to her own constant "digging" into the meanings of children's words and actions. She keeps a journal in which she writes down as much as she can of her observations of the 30 children in her classroom. In the process, says Seletsky, she uncovers "the many meanings which are inherent in the work which the children do, the things they say, the relationships they form." These notes become the basis for classroom approaches and curriculum, as well as for parent conferences and published articles.

In explaining why they take time in their busy schedules to do such detailed observations, teachers argue not only the value but also the practicality of focusing on individuals. For example, Anne Martin, a teacher in Brookline, Massachusetts, notes: "When we plan particular activities for one child in the class, on the basis of careful observation and reflection, we find that other children with similar interests will also be drawn to these projects." Such curriculum, she points out, "is derived from empirical knowledge rather than from an abstract notion of what children that age should learn."

## Becoming Agents of Change

As teachers study how children engage, understand, and develop, they take charge of their own practice in an ongoing effort to construct theories about how to teach and about how children learn. They see themselves not simply as technicians implementing strategies devised by experts, but as experts themselves with special insights into teaching and learning.

Where there is school and district support, teachers work collaboratively to change curriculum and instructional methods. For example, Nancie Atwell, a Bread Loaf teacher-

researcher, directs a multi-year project involving elementary school teachers in three Maine communities. Based on their study of writing theory and research, and observation of their own and their students' writing processes, these teachers have developed innovative ways to "put writing to work" as a tool for concept development in all subjects. Students use writing to conduct in-depth content-area research and keep learning logs in at least one academic subject throughout the year.

In the absence of institutional support, some teachers find or form their own support groups. The discussions in such groups go far

## A New Assignment for Student Teachers

"I wish I'd had this kind of training earlier in my career." This is a common reaction among teachers attending summer institutes where they learn methods of documenting and analyzing the learning that goes on in their classrooms. But, given the "trial by fire" described by most novice teachers, could they learn how to be classroom researchers as well?

Project START, or Student Teachers as Researching Teachers, is a new teacher-preparation program, offered for the first time in 1987-88 to a group of 15 students in the Graduate School of Education of the University of Pennsylvania. "The emphasis is away from the view that the primary task of student teachers is to imitate the management, discipline and procedural techniques of their cooperating teachers," says the project's director, Marilyn Cochran-Smith. "The task of student teachers, like the task of experienced teachers, is to learn how to think for themselves about teaching and learning issues by engaging in a continual process of reflection and inquiry about theory and practice."

In addition to the usual combination of observing and gradually taking on teaching responsibilities, student teachers in Project START work collaboratively with their cooperating teacher on classroom research projects. For example, in the first year some teams moved through a series of inquiries, each directed at understanding a particular child's experience in the classroom. Why is John having trouble making friends? Why is Susan making slow progress in reading? Others defined their projects more broadly, investigating the effects of a particular curriculum or instructional practice over the year.

The student teachers, cooperating teachers, and Project START supervisors keep track of their classroom research through "dialogue journals" and regular meet-

ings. Writing weekly in the journals, student teachers share observations from their classroom research, raise questions, and express concerns. As the journal circulates to the cooperating teacher and the university supervisor, a three-way dialogue develops, often centering around the relationship of educational theory to daily classroom practice. Weekly meetings at each school site create a forum for such dialogue to take place among all of the student teachers and cooperating teachers at that site; the graduate school supervisors attend as well.

Once a month, everyone associated with Project START meets at the university. In some of these seminars participants learn methods of teacher-research—for example, techniques of observing in one's own classroom, or how to use videotaping and journal-keeping as documentary processes. In others, participants draw on their own professional knowledge and expertise. At one meeting, for example, the experienced teachers (both those in the schools and those on the faculty of the Graduate School of Education) took turns sharing stories that they wanted to pass on to the prospective teachers. Each story illustrated something important about the process of teaching and learning, or about the tensions between theory and practice.

The joint meetings and seminars are key elements of the program. They serve as a form of professional development for the cooperating teachers, while the prospective teachers have the opportunity to observe and interact with experienced teachers in the process of reflecting on their practice. "It is invaluable for student teachers to be exposed to the critical perspectives on teaching and learning of a group of people who are successful teachers," says Cochran-Smith. "They are learning how to reform from within."



beyond what one teacher called "teachers' lounge chat." Those attending the Educators Forum in Massachusetts make efforts to design and carry out classroom investigations, using meetings to share and interpret the results. The Philadelphia Teachers' Learning Cooperative, which has been meeting weekly for more than 10 years, structures many of its discussions around individual children, using the basic format of the Staff Review of a Child.

A recent project undertaken by the Philadelphia group illustrates how teachers' confidence in the value of their own knowledge can lead them to address larger policy issues. "This year 20 teachers new to the system joined us," reports Rhoda Kanevsky, a founding member of the Learning Cooperative. "They felt tremendous pressure to have their students perform well within the prescribed curriculum, but also knew they needed time to get to know the students and adjust to teaching." After systematic documentation of "the experience of the first year," group members presented their findings to central administrative staff and initiated a series of discussions regarding how to improve the induction program for the 400 teachers new to the system each year.

## Closing the Research Gap

"Researchers ignore teachers; teachers ignore researchers right back." This statement, which appears in the opening pages of a report issued in 1981 by the Teacher-Initiated Research Project in Boston, describes accurately the gap between teachers and researchers that has characterized education for the last 30 years.

Teacher-researchers can play an important role in bridging that gap. In the introduction to their book *Reclaiming the Classroom: Teacher Research as an Agency for Change*, Dixie Goswami and Peter Stillman of Bread Loaf note that when teachers begin to design and conduct their investigations into learning, they become more critical readers of the existing research literature. Even

more important, they become rich resources in themselves, "who can provide the field of education with information that it simply doesn't have."

Recognizing this fact, a number of universities and educational research centers involve teachers as full partners in their research efforts. For example, recent reports issued by Michigan State University's Institute for Research on Teaching (IRT) and Harvard's Educational Technology Center refer to the important role of teachers in helping to frame research questions and collect and interpret data. Andrew Porter, co-director of the IRT, calls attention to the more subtle contributions of teachers in an article on collaborative research in the October 1987 *Phi Delta Kappan*. Teachers, he notes, question the quick judgments that researchers sometimes make about what constitutes "good" and "bad" practice, and push for research that goes beyond describing the problems of schools or inadequacies of teachers to constructing scenarios of what might be.

Such collaborative work is likely to be much more enthusiastically received by teachers than traditional research. Too often, teachers have found educational research to be removed from their concerns—the product of "experts" who do not understand or appreciate teachers, yet presume to tell them what to do. This can change as teachers see their own voices and concerns reflected in the research.

## What Can School Districts Do?

At this point, few school districts encourage teachers to carry out research projects. Teachers do create and seek out their own sources of support, but this does not substitute for institutional arrangements that would give them the time and resources to visit other classrooms, reflect regularly on what they are documenting, or write up and disseminate the results of their investigations.

In *Working Together: A Guide for Teacher-Researchers*, Marian Mohr and Marion MacLean of the Northern

Virginia Writing Project point out a number of key ways school districts can support and reward teacher research. These include offering release time or paid overtime for teachers to meet and discuss their ongoing research projects; making typewriters, computers, and clerical support available to teachers; and offering grants that provide reduced teaching loads and financial support to enable teacher-researchers to write, read, and conduct research.

A few districts have begun to provide such support—usually drawing from funds set aside for professional development. In Philadelphia, for example, the district hires 10 regular substitutes who rotate among 60 teachers in the Philadelphia Writing Project, so that they can extend their research through observing in other classrooms and schools. But according to Miles Myers, president of the California Teachers Association, "teacher research is not institutionalized in even a dozen school districts."

Although he supports the use of professional development funds, Myers calls for a broader foundation for teacher-research; he specifically proposes that districts set aside up to 20 percent of their testing and evaluation budgets for grants to classroom teachers to conduct research. Test scores, he points out, may give general information on district trends, but the teachers themselves are in the best position to gather systematic data about student learning by examining actual failures and successes at their own schools.

Like Myers, a growing number of educational and political leaders are calling for more autonomy at the local school site: school-based innovation, drawing on the knowledge and wisdom of those at the school. If this movement continues to grow, teacher-research may indeed become part of the very definition of teaching and learning and a guiding force in the continuing discussion of school reform.

## For Further Information Monographs

Much of what teacher-researchers write is unpublished, including some of the pieces

quoted or referred to in this article. The following organizations are a few of those vitally interested in teacher-research and in receiving manuscripts from teachers.

Center for Teaching and Learning. *Teaching and Learning: The Journal of Natural Inquiry*. Box 8158, University Station, University of North Dakota, Grand Forks, ND 58202.

ERIC Clearing House. Dr. Carl Smith. Indiana University School of Education, 3rd and Jordan, Bloomington, IN 47405.

National Council of Teachers of English. Research Report Series. 1111 Kenyon Road, Urbana, IL 61801.

North Dakota Study Group on Evaluation. Center for Teaching and Learning, University of North Dakota, Grand Forks, ND 58202.

Philadelphia Writing Project. *Works in Progress*. Susan Lytle. University of Pennsylvania, Graduate School of Education, 3700 Walnut Street, Philadelphia, PA 19104.

### Programs

Bread Loaf School of English. Paul Cuberta. Middlebury College, Middlebury, VT 05753.

National Council of Teachers of English Research Foundation. Charles Suhar. 1111 Kenyon Road, Urbana, IL 61801.

National Writing Project. Bob Tierney. University of California at Berkeley, Berkeley, CA 94720.

Project START. Marilyn Cochran-Smith. University of Pennsylvania, Graduate School of Education, 3700 Walnut Street, Philadelphia, PA 19104.

Prospect Archive and Center for Research


and Education. Patricia Carini. North Bennington, VT 05257.

### Books

Armstrong, Michael. *Closely Observed Children: The Diary of a Primary Classroom*. London: Writers and Readers, 1980.

Duckworth, Eleanor. *"The Having of Wonderful Ideas" and Other Essays on Teaching and Learning*. New York: Teachers College Press, 1987.

Goswami, Dixie, and Peter R. Stillman, eds. *Reclaiming the Classroom: Teacher Research as an Agency for Change*. Upper Montclair, NJ: Boynton Cook Publishers, 1987.

Mohr, Marian M., and Marion S. MacLean. *Working Together: A Guide for Teacher-Researchers*. Urbana, IL: NCTE, 1987. 

## Putting Ideas into Practice: An Interview with Ted Sizer

**M**ore than 50 middle, junior, and senior high schools now belong to the Coalition of Essential Schools. These schools share what Theodore Sizer, director of the Coalition, terms "a simple set of ideas about schooling"—principles that Sizer began to articulate as a result of his five-year study of high schools, which he describes in *Horace's Compromise: The Dilemma of the American High School*.

The Coalition schools agree, for example, that students should be the "workers" in school. The fundamental purpose of schools is to help young people learn to use their minds well, rather than to "cover subjects" or log credit hours. To this end, the schools are experimenting with different ways of instituting the principle that "less is more": smaller classes, teaching loads of no more than 70 to 80 students, a simpler schedule with longer blocks of time for fewer courses. Eventually, students at Coalition schools will be expected to demonstrate what they have learned through "exhibitions," which can take various forms: written reports, oral presentations, portfolios of their work.

After nearly five years of slow growth, the Coalition is currently in

the process of "regionalizing" its structure by forming state-level Coalitions of Essential Schools. A number of these coalitions will be jointly sponsored by the Education Commission of the States—the first time that schools joining the Coalition will enjoy major state support for their restructuring efforts.

**HEL:** Can you give us a picture of what restructuring looks like in the Coalition schools?

**TS:** I can identify three ways that the Coalition schools have gone. One—and this is particularly in large public high schools—is to set up a school within a school. Another model is to take a whole school and turn it over in a series of carefully planned steps. This requires an initial group of teachers to persuade the majority, and in several schools there have been a couple of years of talk followed by a sealed-ballot vote. The third model, which is rare, is to start a totally new school.

There's increasing doubt whether the school within a school is the best way to start. The evidence is growing that this sets up divisiveness within a faculty. It also may pull out some of the most articulate people and shroud them in an asbestos shield, so that they don't change the rest of the system. Turning over a

whole school is more difficult in the short range, but can ultimately result in a substantial majority of faculty supporting the ideas.

**HEL:** What brings schools to join the Coalition?

**TS:** Interest in the Coalition tends to arise out of frustration with the status quo. You need a core of teachers and a principal who are sufficiently self-confident and patient to try new things without flinching. It takes a certain kind of able veteran to push people back and say "give us time." It also takes a very self-confident veteran to say, "the risks of not changing the present are greater than the risks of something new."

**HEL:** What have been the most visible signs of success?

**TS:** The group of Coalition schools as a whole is skewed a bit toward schools serving working-class or lower-income kids. There's a kind of urgency in those schools that one does not find elsewhere. Suburban college-preparatory public high schools are by and large under no pressure to change, and indeed, they may be under strict pressure not to change. That's different from a school with a 40 percent dropout rate.

We have seen dramatic differences

in attendance and holding power, particularly in such schools. Because of the simplified program, the student-teacher ratios have come down and kids get better known. Kids will say both happily and unhappily, "I'm known around here"—happily in that "I am someone," and unhappily in that "I can't get away with anything." In a country that is full of the horrors of dropping out, this is sign of success. But showing up is not where we end; it's a good place to begin.

**HEL:** Have there been unexpected difficulties or obstacles?

**TS:** Changing the way people teach has been far more complicated and far more pressing than the rhetoric in my book suggests. I knew it would be hard, but I had no idea it would be this hard. It involves really changing one's self-definition. A lot of us are teachers because we like to tell the truth, not because we want to help kids find the truth on their own.

Teachers also have very little experience with professional autonomy. We have limited experience working in groups or in teams. Most departments in high schools are fictions—merely devices to distribute textbooks. So that one problem is there's no culture of collectively driven schools.

I also underestimated the difficulties of politics—district and state politics. I have yet to find any villains, but the mindless steamroller of regulations and unexamined attitudes which lead to unexamined policies can just flatten you.

**HEL:** Was it political considerations that led to your new initiative with the Education Commission of the States?

**TS:** By the end of last year the Coalition was too big and too small. There were too many schools for us to get to know well and there weren't enough schools to have leverage should the ideas work. I talked to various people, including Frank Newman at the Education Commission of the States. It appeared that the governors in ECS wanted to follow up on their year-long focus on restructuring. My hunch is that they were looking for something quite specific

and practical, that a lot of people were giving them policy papers, but very few people were saying, "OK, what do you do on Monday?" Our project is about Monday.

What has evolved is an organization called Relearning—jointly the project of the Coalition and ECS. Beginning this fall, we expect to be working with four or five states. In each of these states up to ten middle or high schools that are interested in the ideas of the Coalition will join as a group. The state will provide funds for some substantial piece of their costs for on-site planning and staff development. The state will also provide a full-time coordinator, who will probably be based at the state university and will become, in effect, the state's representative to the Coalition.

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**A lot of us are teachers because we like to tell the truth, not because we want to help kids find the truth on their own.**

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The Chief State School Officer will assign a member of his or her staff to be liaison to ECS. This staff person, along with staff at ECS, will be involved in organizing a cadre of people—from individual schools right to the governor's office—who will explore ways of restructuring the administrative and regulatory apparatus between the schoolhouse and the statehouse.

**HEL:** What about states that don't join Relearning—can schools in those states continue to join the Coalition?

**TS:** In states where it's unlikely for a Relearning ECS-related program to start, we will set up regional organizations with private financing. For example, a New England Coalition Network will be the first with its own staff. There is discussion in the Ohio Valley—Kentucky, Tennessee, Indiana, and Ohio—and in New York and California. Our connection

would be largely through the staff members hired by those regions.

The nice thing about the Relearning project is that it not only provides state funding, but it also addresses the problem of the support of the hierarchy for school-level reform. The privately financed organizations can't do that. But we will pursue both, and some of the schools that are not in Relearning states can be accommodated in this other way.

**HEL:** What have you learned about the kinds of support that are really essential for school-based change?

**TS:** The toughest part is getting teachers' time to think through what's right for their institutions. That's why in the Relearning project we absolutely insisted that planning money had to be up front for the schools. If the commitment is unequivocal than I think properly skeptical school people will say, "maybe this is different, just maybe." The money will be mostly for release time and a bit of travel.

Schools need the active care of outsiders. This means a superintendent who drops by, who knows all of the teachers' names and what they're doing. The teachers in that school who are taking risks get a signal that the superintendent gives a damn.

In one state there was a confrontation and a public meeting and the governor's aide just happened to show up. The conversation changed. She just sat in the back, didn't say a word. The very fact that she was there signaled something. The governor was concerned about this school miles away from the state capital.

**HEL:** How will the new schools learn from the experiences of the first group of Coalition schools?

**TS:** Our job in the first year will be to provide intensive opportunity for the state coordinators to meet and really work on how one can most effectively support schools engaged in grass-roots reform. We'll continue to organize symposia. We've run nine of them in different parts of the country this year. These are highly organized and focused "show and tell" sessions. We combine that with a lot of videotape drawn from



schools where you take an idea such as student-as-worker and show very different kinds of schools and very different kinds of kids engaged in this kind of learning and this kind of pedagogy.

But the best part is when people get to know each other well enough so that the whole thing becomes self-propelled. One of the reasons why we're working in regions is to encourage these support groups. Eventually, the coordinators will do a lot of matchmaking. Let's say School A has some concern about doing something one way and the coordinator knows that's also true in School F, so he'll get Schools A and F

together. And he will know from us there's a hotshot school in the state of Washington that really seems to have its head around that problem, so he'll call up the principal and say, "Hey, can three of your folks come talk with us."

**HEL:** As the Coalition expands and develops, what kinds of impact do you hope to have?

**TS:** To oversimplify, there are two kinds of effects. One is that schools will be profoundly different, and I think the chance of that happening fast is low. Schools change within this tremendous momentum of tradition. The other effect is to change the nature of the discourse about

schools. Do people use different words? In policy discussions, are there different emphases? I think that's more likely. There are some signs that the rhetoric about educational reform has changed even within five years, not just because of the Coalition of Schools, but for a whole collection of reasons. It's a different climate now.

### For Further Information

The Coalition of Essential Schools. Education Department, Brown University, Box 1938, Providence, RI 02912.



## Off the Presses

In most classrooms it is very important to get the right answer—so important, in fact, that the process of arriving at an answer, of coming up with an idea, may be ignored. In *"The Having of Wonderful Ideas" and Other Essays on Teaching and Learning*, Eleanor Duckworth examines how children develop their ideas, and how teachers can help them to do so, drawing on what she learned in her long association with Jean Piaget and on her own experiences in 26 years as an educator.

Hank was an energetic and not very scholarly fifth grader. His class had been learning about electric circuits with flashlight batteries, bulbs, and various wires. After the children had developed considerable familiarity with these materials, the teacher made a number of mystery boxes. Two wires protruded from each box, but inside, unseen, each box had a different way of making contact between the wires. In one box the wires were attached to a battery; in another they were attached to a bulb; in a third, to a certain length of resistance wire; in a fourth box they were not attached at all; and

so forth. By trying to complete the circuit on the outside of a box, the children were able to figure out what made the connection inside the box. Like many other children, Hank attached a battery and a bulb to the wire outside the box. Because the bulb lit, he knew at least that the wires inside the box were connected in some way. But, because it was somewhat dimmer than usual, he also knew that the wires inside were not connected directly to each other and that they were not connected by a piece of ordinary copper wire. Along with many of the children, he knew that the degree of dimness of the bulb meant that the wires inside were connected either by another bulb of the same kind or by a certain length of resistance wire.

The teacher expected them to go only this far. However, in order to push the children to think a little further, she asked them if they could tell whether it was a bulb or a piece of wire inside the box. She herself thought there was no way to tell. After some thought, Hank had an idea. He undid the battery and bulb that he had already

attached on the outside of the box. In their place, using additional copper wire, he attached six batteries in a series. He had already experimented enough to know that six batteries would burn out a bulb, if it was a bulb inside the box. He also knew that once a bulb is burned out, it no longer completes the circuit. He then attached the original battery and bulb again. This time he found that the bulb on the outside of the box did not light. So he reasoned, rightly, that there had been a bulb inside the box and that now it was burned out. If there had been a wire inside, it would not have burned through and the bulb on the outside would still light.

Note that to carry out that idea, Hank had to take the risk of destroying a light bulb. In fact, he did destroy one. In accepting this idea, the teacher had to accept not only the fact that Hank had a good idea that even she did not have, but also that it was worthwhile to destroy a small piece of property for the sake of following through an idea. These features almost turn the incident into a parable. Without these kinds of accep-

tance, Hank would not have been able to pursue his idea. Think of how many times this acceptance is not forthcoming in the life of any one child.

But the main point to be made here is that in order to have his idea, Hank had to know a lot about batteries, bulbs, and wires. His previous work and familiarity with those materials were a necessary aspect of this occasion for him to have a wonderful idea. David Hawkins has said of curriculum development, "You don't

want to cover a subject; you want to uncover it." That, it seems to me, is what schools should be about. They can help to uncover parts of the world that children would not otherwise know how to tackle. Wonderful ideas are built on other wonderful ideas. In Piaget's terms, you must reach out to the world with your own intellectual tools and grasp it, assimilate it, yourself. All kinds of things are hidden from us—even though they surround us—unless we know how to reach out for them.

Schools and teachers can provide materials and questions in ways that suggest things to be done with them; and children, in the doing, cannot help being inventive.

From *Piaget in the Classroom*, edited by Milton Schwebel and Jane B. Raph. Copyright © 1973 by Basic Books, Inc., Publishers. Reprinted by permission of the publisher. Also in Eleanor Duckworth, "The Having of Wonderful Ideas" and Other Essays on Teaching and Learning (New York: Teachers College Press, 1987).



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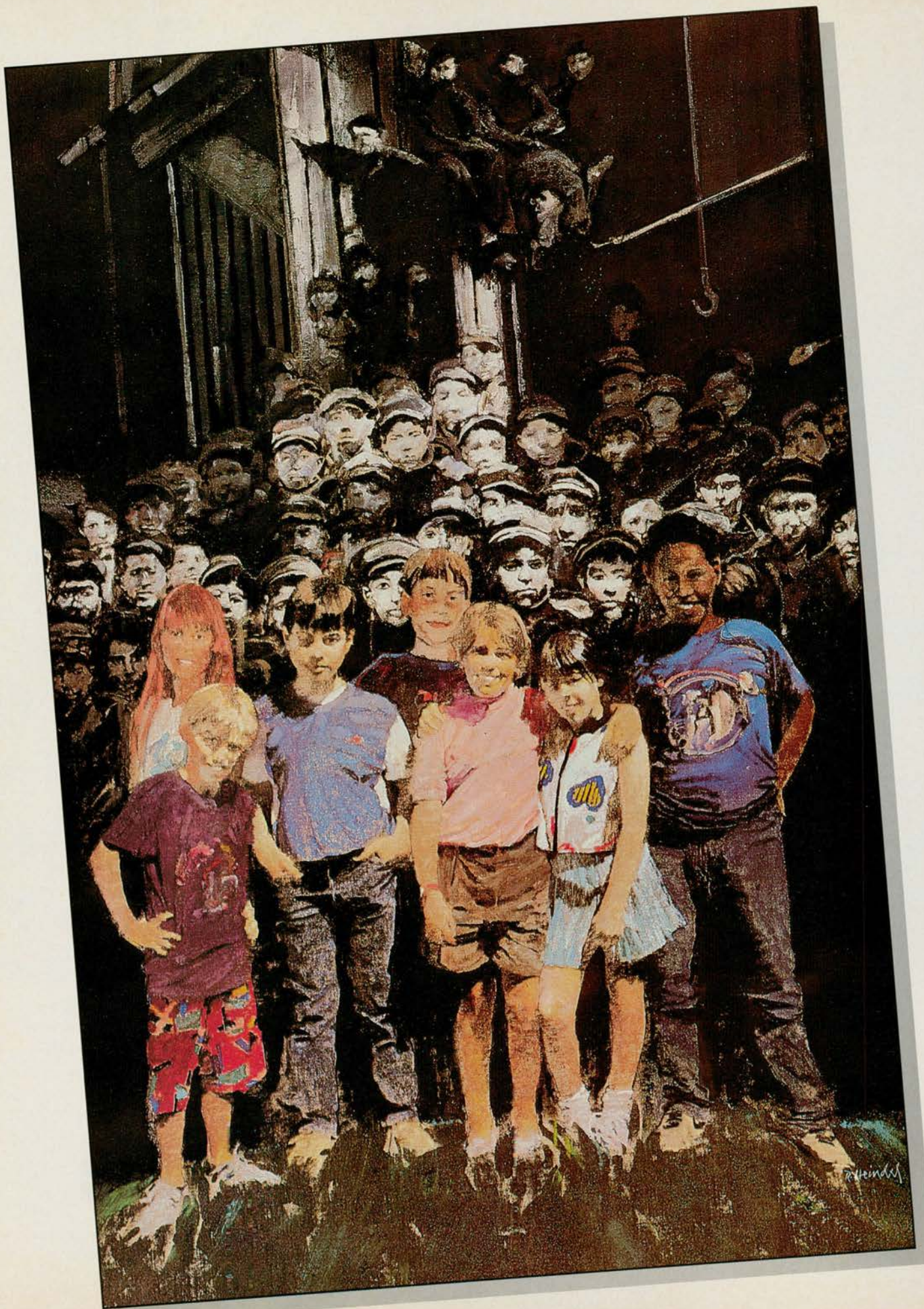
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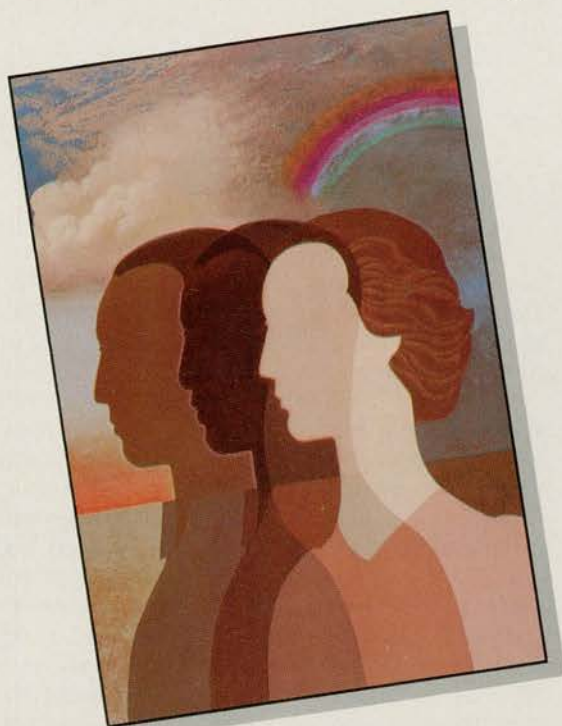
**E**VER SINCE it was said on a picket line that workers needed not only bread but roses, too, trade unions have dabbled in the arts, underwriting or producing their own theatrical productions, artwork, and music.

To celebrate its fiftieth anniversary, the Communication Workers of America—which represents 700,000 workers, mainly in the telecommunications industry—

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*The Fight for Our Future*  
**By Robert Heindel**

They were school age, but they reported each morning to the black coal mines, dusty textile mills, and grim sweatshop lofts. They numbered in the millions. And it was not so long ago: child labor was abolished in America only in the late 1930s. In this poster, today's care-free children are pictured against a backdrop of turn-of-the-century "breaker boys" in the mines and children in the early sweatshops. The children of the twentieth century are better off by far than their counterparts of yesteryear, thanks in large part to labor's hard-fought battle for protective laws and public education.



*The Tapestry of America*  
**By Mark English**

Through the clouds shines labor's continuing hope that all workers, regardless of gender or race, will one day be treated equally.

*We're People—Not Machines!*  
**By Fred Otnes**

Just as the first Ford factory workers felt plugged into the assembly line, many workers today feel plugged into the computer. It is a great irony that technological progress, with its capacity to make work easier, can also steal what is interesting and satisfying from jobs. And so a central role of the American labor movement remains that of keeping the workplace a place for people, not just for machines.

# TURNING POINT FOR SOCIAL STUDIES REFORM?

BY PAUL GAGNON

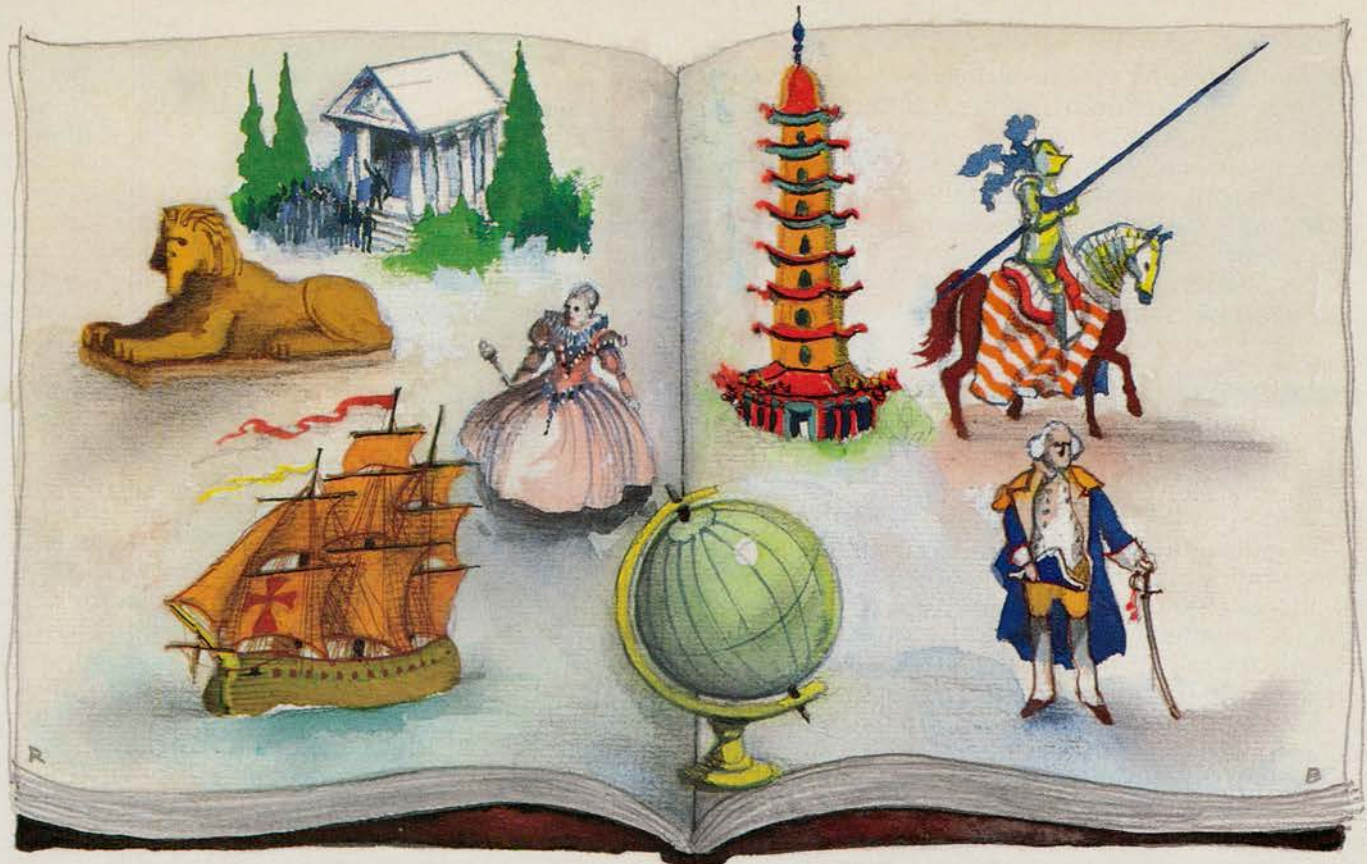
IT SEEMS too good to be true. The new California History-Social Science Framework is written in genuine English, clear and graceful. It restores history and geography to the center of the social studies program, where they belong. It more than doubles the time now spent on them in most American schools, so that vital ideas and events may be taught engagingly and in depth. Together with history and geography, government and economics, it argues for the charms and uses of biography, literature, and the arts for the education of citizens. It says that in a democracy all of these subjects should be taught equally to all students. Its recommended content and major themes take full account of California's multiracial and multicultural population. At the same time, it declares that a common understanding of democratic ideas and practices, and a common allegiance to them, are the best guarantee that a pluralist society may live in liberty, peace, and justice. It argues that skills follow upon, and are best developed out of, subject matter—not the other way around. Finally, it recognizes what good teachers have always known (but

*Paul Gagnon teaches history at the University of Massachusetts/Boston and is the staff director of the Bradley Commission on History in Schools and an advisor to "Education for Democracy," a joint project of the AFT, the Educational Excellence Network, and Freedom House. Gagnon is the author of Democracy's Untold Story: What World History Textbooks Neglect and of an upcoming book-length review of U.S. history textbooks; both are publications of the "Education for Democracy" project. Copies of the California History-Social Science Framework are available for \$6 each (plus sales tax if a California resident) from the Bureau of Publications Sales, California State Department of Education, P.O. Box 271, Sacramento, CA 95802-0271.*

bad educators have never learned), namely, that academic content taught without appropriate pedagogy is as useless as the most innovative pedagogy not tied to rich academic content.

In proposing all of this, the Framework responds to several recent books and studies calling for more history, better taught, as the birthright of all citizens in a democracy. Four main arguments have emerged from these reports. First, that the social studies programs in American schools are too often bloated and boring, without clear purpose or coherent substance. Their emptiness at the elementary level is illustrated in *Tot Sociology* (see sidebar). At the secondary level, electives range from a variety of unsequenced, unrelated "Topics" courses to area studies grounded on little history to such applied social science courses as "The Psychology of Advertising" and "The Sociology of Rock Music." Second, that far too little history is taught to reveal to students the three inescapable realities they must understand as citizens: the reality of the American past, to know who we are and who we are becoming; of the Western past, to know the origins and development of our democratic ideas and institutions and of our civic morality; and of the world's past, to know the cultures and memories of the many peoples with whom we shall share the planet's destiny. Under today's dominant social studies curriculum, U.S. history is often required only in the eleventh grade, is surveyed less often in fifth and eighth grades (having been replaced more and more by a less historical American studies course), and more than half of our students take no world or Western history at all.

Third, the reports say that most history courses, as presently squeezed into the curriculum, are hurried over superficially — from the Mayans to moon landings in a single year of United States history; from prehistory



ILLUSTRATED BY ROBERT BARKIN

to *perestroika* in one year of world history. Neither content nor skills can be taught in such a rush. Teachers cannot pause for breath, much less allow themselves and their students to explore in depth, with time to discuss significant issues, questions, puzzles, or compelling personalities. Fourth, since more and better history is essential to the education of citizens, it follows that it should be at the center of social studies programs that are common and required for all children and adolescents, regardless of their background, their curricular track, or their presumed social prospects.

This last point in particular has an honorable ancestry. In the 1890s, two committees of distinguished university historians and teachers (Woodrow Wilson among them) said the same thing. Democratic schooling required a common and substantial education in historical reality for all students, whether or not they were college bound. In 1892, the Committee of Ten prescribed eight years of history, starting with mythology and biography in the fifth and sixth grades.

In 1899, the Committee of Seven prescribed a four-year pattern for high schools: ancient history in the first year, Medieval and modern Europe in the second, English history in the third, and American history and government in the senior year.

These demanding, egalitarian versions of citizens' education did not survive the 1920s. A differentiated curriculum called "progressive" soon became segregated by class, race, and ethnic background. On the one hand was academic substance, including history (though less and less) for the few college bound. On the other, a program of socialization (later to be called "Life Adjustment") for the many, offering instead of history, either a loose array of social studies options or altogether nonacademic courses.

The good intentions behind the progressive educa-

tion movement—including a justified concern for the "holding power" of schools—should not blind us to these undemocratic consequences. Nor should the progressives be overcredited for inventing innovative teaching methods and "active learning." The Committee of Ten were much concerned with both in 1892. Among their recommended methods were the use of "the magic lanterns" (for the benefit of younger readers, an early version of the slide projector), of field trips, debates, "mock legislatures, parliaments, congresses, and diplomatic congresses," lectures by students themselves, and the reading of biography, which "clings to the memory."

ONLY NOW, a century later, does our concern over education for democracy lead us back to the ideas of the Ten and the Seven, those "elite" few with such faith in the ability of all students to profit from an education both substantial and common, both "elitist" and egalitarian. TheodoreSizer (who wrote the history of the Committee of Ten) now expounds their views in up-to-date form in *Horace's Compromise* and seeks to practice them in the Coalition of Essential Schools. We have the *Paideia Proposal* and a growing number of Paideia schools, built around a common core of academic learning and active learning methods. We have the American Federation of Teachers' project called "Education for Democracy," whose statement of principles last year was signed by 150 prominent Americans, who otherwise agree on very little but were eager to approve its version of civic education, emphasizing both substance and pedagogy.

All of these call for common school curricula, rich in history, geography, and the humanities. But most directly in line of succession to the Committee of Ten and Committee of Seven is the national Bradley Com-

mission on History in Schools, made up of seventeen distinguished historians and classroom teachers, chaired by Professor Kenneth T. Jackson of Columbia. The commission's recommendations call for a history and geography-centered social studies program for the early grades, emphasizing lively, engaging readings from history, mythology, biography, legend, and literature; and for no fewer than two full years of American history and two years of world (or Western and world) history,

four years in all, from grade seven through grade twelve.

**I**N THIS setting, the significance of the California Framework can hardly be overestimated. It is the first attempt to put all of these ideas and study reports into action on a statewide scale, in the most populous state in the union, with a very high proportion of black, Hispanic and Asian-American people, and consequently a rapidly changing school population. Into this enormous

## TOT SOCIOLOGY

BY DIANE RAVITCH

The more closely I examined the social studies curriculum, the more my attention was drawn to the curious nature of the early grades, which is virtually content free. In kindergarten, first grade, second grade, and third grade, the social studies curriculum—in virtually every public school in the country—is organized around the study of the social relationships within the home, the school, the neighborhood, and the local community. Behind this curriculum is a welter of dubious assumptions. Immersion in the sociology and economics of the child's own world is supposed to build the child's self-esteem (because she studies herself and her own family), socialize her as a member of the community, prepare her to participate in political activities, and develop her awareness of economic interdependence (by learning that the farmer grows wheat for bread, which is processed by someone else, baked by someone else, and delivered to the neighborhood grocery store by someone else).

This present pattern of early grade social studies—which is given official sanction in the 1984 draft scope and sequence of the National Council for the Social Studies—has not always been there; it was introduced in the 1930s, as

*Diane Ravitch, adjunct professor of history and education at Teachers College, Columbia University, is the author of The Schools We Deserve and The Troubled Crusade: American Education, 1945-1980. This excerpt is adapted from the Summer 1987 American Scholar.*

part of a new approach to the teaching of social studies. It came to be known as "expanding environments" or "expanding horizons" or "expanding communities of men." The content in the early grades was built around the child, the family, the neighborhood, and the community. The rationale for this approach was that the child should begin his studies of society with what he knows best, building from the known to the unknown, from himself and his family to the larger community, city, state, nation, and ultimately, the world. In the early grades, children learned about the functions of police officers, fire fighters, postal workers, and other community officials; they learned how food gets to the supermarket and what kinds of work people in their community do.

**W**HAT CURRICULUM did expanding environments replace in the early grades? The celebratory histories of progressive education would have us believe that children had been liberated by an innovative curriculum that permitted them to visit the supermarket and the post office. But from what had they been liberated?

Until expanding environments managed to push historical materials out of the social studies curriculum, children in the early grades in most public schools learned about primitive peoples, heroes, myths, biographies, poems, national holidays, fairy tales, and legends. The story of Robinson Crusoe and study of Indian life were particular favorites. Stories about explorers, pioneer life, American heroes (especially Washington and Lincoln), and famous events in

American history were staples of the first three grades. The line between historical literature and general literature was virtually nonexistent. Teacher guides emphasized the importance of telling stories to the children in the teacher's own voice. Most children read (or listened to) the Greek and Roman myths, and in many districts children read myths and folklore from "the Oriental nations," "the Teutonic peoples," and elsewhere. The third grade in the public schools of Philadelphia studied "heroes of legend and history," including "Joseph; Moses; David; Ulysses; Alexander; Horatius; Cincinnatus; Siegfried; Arthur; Roland; Alfred the Great; Richard the Lion Hearted; Robert Bruce; William Tell; Joan of Arc; Peter the Great; Florence Nightingale."

In addition to the stories and historical literature that were found in every school's curriculum, many districts offered civics instruction to children in the early grades. Either as civics or as "home geography," children learned about home, school, and the local community. In the home geography course, children learned about occupations and industries, as well as about nature study, the seasons, and the weather.

Today, children in most American public schools do not read fairy tales, myths, folklore, legends, sagas, historical adventure stories, or biographies of great men and women unless the teacher introduces them during reading period. And we know from recent studies of reading instruction that current reading methods depend almost entirely on basal readers, a species of textbook containing simple stories



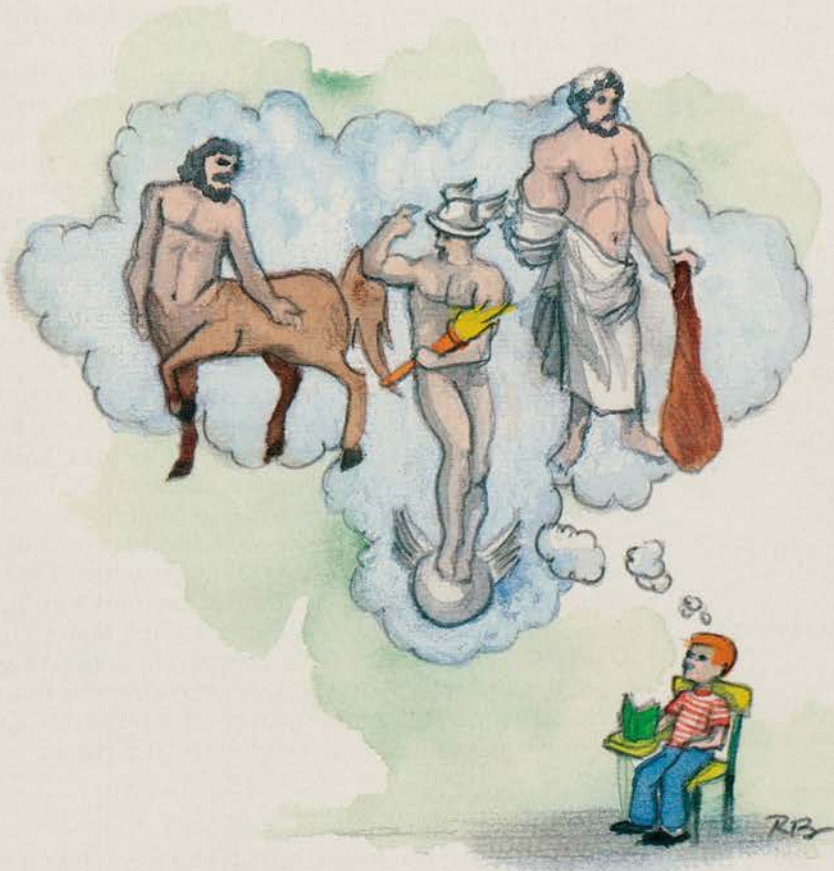
and variegated school system, the intrepid Bill Honig, an elected state superintendent of instruction, has injected a common, prescribed framework for the scope and sequence of the social studies. In every important respect, it seeks to implement the vision of the Ten and the Seven and of the Bradley Commission's Seventeen.

The new Framework recommends that history be taught in eleven out of thirteen grades, in contrast to the five grades in which it was previously taught, and it

prescribes three years of world history compared to the previous one. The chronological study of history thus becomes the continuing core around which other subjects are integrated and correlated.

The "main focus" of the curriculum is the study of continuity and change—its main purpose, the education of citizens:

We want our students to understand the value, the importance, and the fragility of democratic institutions . . . to



tells us that it is not the known and the settled but the unknown and the unsettled that provokes the use of mind, the awakening of consciousness."

Philip Phenix, professor emeritus at Teachers College, a highly regarded philosopher of education, commented that "a largely social science-oriented curriculum emphasizing sociology and economics seems to me ill suited to the needs of young children."

The self/family/community/region progression is presumably based on the notion that learning must proceed within the context of the known and familiar and only gradually move out into the larger domains of the unknown and unfamiliar, as the child expands his or her experience. But such a view seems to me a recipe for boredom and sterility, doing poor justice to the expansive capacities of the human mind. Although teaching must obviously take account of where the student is, the whole purpose of education is to enlarge experience by introducing new experiences far, far beyond where the child starts.

about ordinary children, families, and neighborhoods. With rare exceptions, the basal readers do not contain rich historical and literary content.

SO WIDESPREAD is the "expanding horizons" pattern in American public schools that one might assume that this particular sequence represents the accumulated wisdom of generations of educational research. It does not.

In the face of persisting claims by curriculum developers and supervisors that the expanding environments curriculum is grounded in

research, I circulated an earlier version of this article to a dozen leading scholars in the fields of cognitive psychology, child development, and curriculum theory. None knew of any research justifying the expanding environments approach; none defended it. All deplored the absence of historical and cultural content in the early grades.

Jerome Bruner, the noted cognitive psychologist, wrote that "there is little beyond ideology to commend the [expanding environments] program and its endlessly bland versions. Whatever we know about memory, thought, passion, or any other worthy human process

The responses that I received included repeated references to the "vacuousness" and the "sterility" of the content offered to young children in their social studies classes. Imagine the plight of the typical first grader: She has seen television programs about space flight, wars, terrorism, foreign countries, and national elections, but her social studies textbook is about neighborhood helpers and family roles. No wonder surveys have repeatedly found that children consider social studies their least interesting subject and that the time allotted to social studies in the early grades has steadily diminished. □

develop a keen sense of ethics and citizenship, and to care deeply about the quality of life in their community, their nation, and their world.

The multicultural perspective that is central to the document also demands added time for the "integration at every grade level in the history-social science curriculum" of the experiences of all the many cultural groups of California and the United States, because students must understand:

that the national identity, the national heritage, and the national creed are pluralistic and that our national history is the complex story of many peoples and one nation, of *e pluribus unum*, and of an unfinished struggle to realize the ideals of the Declaration of Independence and the Constitution.

Teachers are enjoined to clarify the importance "of ethical understanding and civic virtue to public affairs," the importance of religion in human history, our own and those of the major world civilizations, "the ethical traditions of each time and place."

In the early grades, the customary "expanding horizons" pattern—*my family, my neighborhood, my community*—which is often vapid and empty, is much enriched with historical, biographical, and literary materials to broaden children's horizons in time and space.

**Kindergarten**—Learning and Working Together, Now and Long Ago

*Reaching out to times past*

**Grade One**—A Child's Place in Time and Space

*Expanding geographic, economic, and cultural worlds, now and long ago*

**Grade Two**—People Who Make a Difference

*Our ancestors and people from other cultures, now and long ago*

**Grade Three**—Continuity and Change

*In local and national history, through biography, stories, legends*

The more formally history-centered courses begin with California history in grade four, and then two three-year sequences of American and world history starting with grade five:

**Grade Four**—California: A Changing State

**Grade Five**—United States History and Geography: Making a New Nation

**Grade Six**—World History and Geography: Ancient Civilizations

**Grade Seven**—World History and Geography: Medieval and Early Modern Times

**Grade Eight**—United States History and Geography: Growth and Conflict

**Grade Nine**—Elective

**Grade Ten**—World History, Culture, and Geography: The Modern World

**Grade Eleven**—United States History and Geography: Continuity and Change in the Twentieth Century

**Grade Twelve**—Principles of American Democracy (One Semester); Economics (One Semester)

**I**NSTEAD OF essentially repeating U.S. history as a full survey in the fifth, eighth and eleventh grades, as many curricula do, the California plan calls for grade five to dwell on early American history, grade eight to focus on 1783-1914, and grade eleven on 1900 to the

present. Likewise, the three years of world history (which are unusually generous in their allotment of time for non-Western nations and cultures) cover successive periods: in grade six, the ancient world, in grade seven, Medieval and early modern world; in grade ten, the modern world; since 1789.

Critics question the long interruptions between courses. They deplore the relegation of early American history, including the Colonial period, the Revolution, constitution making, the early Republic and westward expansion, to the fifth grade. How will younger children comprehend the ideas behind the Constitution? What will they remember of the fifth-grade course by the time they reach the eighth grade? Of the eighth grade when they reach the eleventh?

The authors of the Framework have anticipated these questions. Their approach is to begin each new year's history course with a "selective review" of what has gone before and maintain a strong emphasis on continuing themes and questions to be carried through the three years of American and world history. For example, the Constitution is taken up lightly in the fifth grade, most fully in the eighth grade, reviewed at the start of the eleventh grade, and considered once more in the twelfth-grade government course. Other unifying themes for American history are immigration, the development of the American economy, and technological change and its social impact; and for world history, the interplay of geography and culture, the origins, ideas, and spread of major world religions, and the many forms of human struggle for peace, freedom, and justice.

It remains to be seen how well local schools and teachers will be able to implement this sequence. Other patterns are possible, as the Bradley Commission suggests: for example, the successive United States and world history courses may be grouped in consecutive years. But the great virtue of dividing courses by era—decisively more time, and thereby flexibility, for the teacher—should not be lost, whatever pattern is adopted.

**I**N REGARD to teaching methods and to problems of implementation, the document also anticipates certain questions. First of all, the prefatory message from the California State Board of Education is careful to call it a framework only; not a curriculum but a guide, useful to those responsible for the detailed curriculum planning to be done at the local level for schools and districts. Honig says it "encourages teachers to unleash their pedagogical energies in a variety of ways . . . new technologies, original source documents, debates, simulations, role playing, or whatever means" are helpful. And the Preface leaves planning, course development, and teacher training, together with choice of texts (limited for K-8 by the state adoption list), literature, materials, and primary sources to the local level.

The body of the Framework also repeats this promise of local flexibility and emphasizes interdisciplinary learning, critical thinking, teacher selection of topics and readings, and imaginative use of local community resources. All of the ninth-grade elective courses are to be designed at the local level, as are the twelfth-grade

*(Continued on page 48)*

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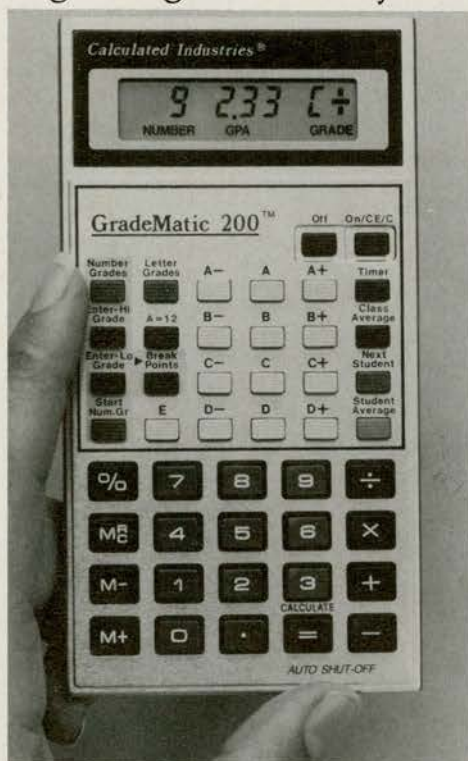
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## NEW WAYS OF WORKING

(Continued from page 24)

even their union. They went home determined not to copy Japanese methods but to learn from them and devise a system tailored to their own needs.

When they came back to Cleveland, LSE's workers and managers held a series of meetings with an outside consultant, Paul Huber. The purpose of the meetings, as LSE's Pohl recalls, was no less than to "actually design the company, envisioning what we wanted it to be once it went into operation." The product of these discussions was something very different from the traditional steel mill, where each worker labors at a highly specialized job while foremen shout orders. Instead, LSE was organized along these innovative lines:

- Instead of the more than forty job classifications in most steel mills, there are three job classifications: entry level, intermediate, and advanced. Workers rotate jobs and are given the opportunity to learn every skill. The highest pay rate is for those who have learned every skill.

- At the beginning of each "turn" (steel industry lingo for "shift"), workers meet to learn what happened on the last turn and plan what they will do on their turn. Instead of foremen, there is a "process coordinator" for each turn, but his role is to help the work group reach consensus, not to bark orders. "In the old system, you never disputed the foreman," says Zidek. "Here, if you think there's a better way to do it, the P.C. [process coordinator] will listen."

- Through joint labor-management committees, workers have an equal voice on such issues as work and vacation schedules, safety, training, and hiring. Workers and management jointly select new hires, with laid-off union members getting the first shot, and applicants taking tests with the Ohio Bureau of Employment Services. "The plant manager meets the new people for the first time after they're hired," says Pohl.

With the planning process under way, LTV and Sumitomo invested \$135 million in gutting and remodeling the old Republic Steel Cleveland Works and building an 885-foot-long electrogalvanizing line. When the mill started up in April 1986, workers initially took jobs resembling those they had held at their old companies, understanding that they would eventually be trained in other skills as well. Within months, a system began where, every other week, workers would work at new jobs requiring new skills, under the guidance of fellow workers—a change that was welcomed by most. "Under the old system, I'd stay on the same job until someone above me died or retired," Zidek said. "Here I do everything—there's variety. I'm not stuck doing the same thing every day. And there are some jobs you wouldn't want to do for the next thirty years of your life."

To hear Pohl and Zidek tell it, the new system at LSE encourages a greater concern for quality since workers learn about the total electrogalvanizing process and help decide how they will do their jobs. The work crews have a great degree of decision-making authority, with the power not only to decide schedules and work assignments but also, as Pohl explains: "They have the responsibility of running their shift. They routinely make decisions as to whether to vary the process to deal

with a quality problem, whether to interrupt the work process to fix a faulty part of the line, and to make decisions on improving and approving the quality of the product that goes out the door."

The work crews, however, are not entirely self-managing. Major alterations in the production schedule would have to be approved by the plant's production coordinator to ensure the customers would get the products they ordered at the anticipated times. Moreover, it is not clear whether a work crew could prevail on an issue if the "process coordinator" (the foreman, in a traditional steel mill) were opposed. Nonetheless, it is apparent that LSE operates along significantly different lines from those of most steel mills. Throughout the steel industry, foremen and other front-line supervisors do have a great deal of authority to make fast, on-the-spot decisions; the difference is that, at LSE, this authority is shared to some extent with the workers, and consultation is encouraged.

LSE's experiment with shared authority is paying off. Producing 30,000 tons of steel a month for domestic automakers, the plant turned a profit in 1987, a year ahead of the business plan. A key statistic, "yield," the ratio of good product to total product, stands at 80 percent for LSE, compared to 55 percent for Japanese companies and an appreciably lower figure for most American companies. And LSE has had a full order book since November 1986.

Both labor and management see LSE as a model. Says LSE general manager Donald R. Vernon, "There is ample evidence at LSE, in its relatively short existence, that, when the assumption is made that people are basically responsible, the results are very acceptable." And the USWA's Sam Camens calls it "probably the most conscious effort of any plant that I've seen of trying to make the process of employee involvement work and really make it into a joint process and consult with the union."

## SAVING AN AUTO PLANT

At the beginning of the 1980s, Ford's Sharonville, Ohio, plant, which manufactures transmissions for cars and trucks, was considered a trouble spot with poor-quality products and chronic labor-management tension.

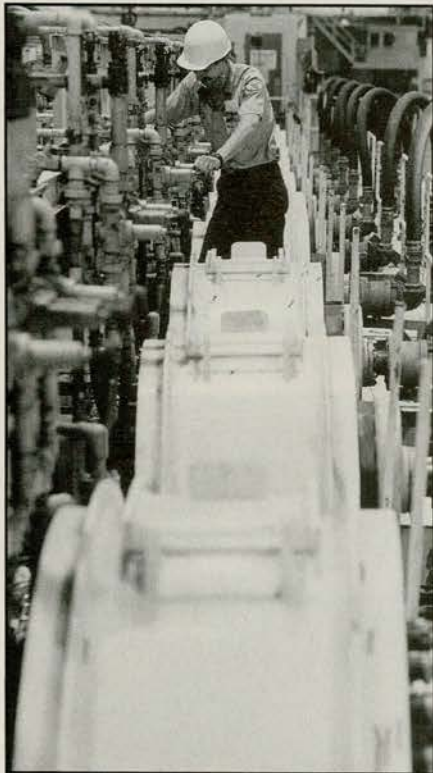
Sprawling over fifty-two acres and employing more than thirty-five hundred people, the plant fit the traditional model of the large, hierarchically organized factory, with foremen barking orders at an alienated work force. The result, union and management officials now admit: low-quality product.

By the middle of the decade, after Ford phased out one of the plant's two products—the outmoded rear-wheel-drive "C5" transmission—the plant laid off some sixteen hundred workers. "Yes, we were in danger of closing," plant manager Thomas McCaffrey says now.

A veteran of more than thirty years at Ford, including earlier stints at Sharonville, McCaffrey became plant manager in the summer of 1983. A deceptively soft-spoken man with a reputation as a no-nonsense manager, McCaffrey soon understood that "something was very wrong here, and we had to make changes." As a mechanism for turning Sharonville around, McCaffrey



PHOTOGRAPHS BY DIANE HIRSH



*The old image of "foremen barking orders" has been replaced by a process of shared authority in which work crews carry the basic responsibility for running their shifts.*

*Instead of the more than forty job classifications typical of most steel mills, LSE has only three: entry level, intermediate, and advanced. Workers rotate jobs, gaining knowledge of the entire electrogalvanizing process.*

turned to what was then a new idea: the Employee Involvement (EI) program Ford and the UAW had negotiated in 1979 but which was only just beginning throughout the company.

"Here, we did things a little differently from what was then the prevailing wisdom about EI," McCaffrey recalls. "Instead of starting in the easiest departments, which was how most places did it, we said, the hell with it, we'll start in the toughest places first. EI is supposed to solve problems, so let's start with where the problems are."

Beginning in fall 1980, EI started with teams of eight to ten workers from the same department meeting every week in an effort to solve problems affecting quality and productivity. At Sharonville, where workers had reason to be skeptical about management promises, the local union took a "wait-and-see" attitude toward EI. This skepticism may well have had a healthy impact because, in an effort to win union support for EI, management agreed to an unusual degree of joint labor-management direction of the program, with UAW members co-chairing committees.

Within several years, the EI process produced dramatic changes:

- The four original assembly lines were eliminated, and two lines were rebuilt in their place. Unlike the past, when engineers and work-standards specialists would have designed the new lines by themselves, these changes were planned after consulting the assembly-line workers themselves.

- In a dramatic break with the past, workers won the right to stop the assembly line at any time if they spotted defective parts. "When I started here, I would have never believed they would let workers stop the line for any reason," says UAW bargaining committee member Ron Hughes.

- In an effort to foster teamwork and reduce symbolic distinctions between workers and management, the executive dining room was closed—and later converted into an exercise room available to all employees. Executives and hourly workers now eat in the same cafeteria, and a visitor to the Sharonville plant now sees managers in jackets and ties and assembly-line workers in workclothes sitting at adjacent tables, if not together. Meanwhile, in a more substantive change, the number of management and supervision levels has been reduced from seven to four.

- There is a new emphasis on training in subjects from computer science to human relations. A favorite course is offered by UAW member Al Loos, who takes apart a transmission and rebuilds it from scratch, so workers can learn the total process of building their product. A visitor to the Sharonville plant is struck by how much of the plant is already devoted to training programs and how many trailers, meeting rooms, and work areas are being converted into classrooms.

- As at the central repair shop in New York City, EI has produced improvements in conditions, such as fans, lighting, and ventilation systems. Also as in New York, workers have had the opportunity to present ideas for improving quality to top management, the engineering staff, and outside vendors.

- And, in a dramatic change from traditional factory life, workers no longer have to punch a timeclock.

Instead, they are trusted to report their own hours, with supervisors and work groups themselves assuming responsibility for ensuring that employees show up for the hours they claim to have worked.

Plant manager McCaffrey credits EI with saving the Sharonville plant, helping it keep the contract for producing a more modern transmission, the C6. However, the guarantee of Sharonville's survival came in April 1986, when Ford decided to invest \$260 million in a new state-of-the-art transmission—the E40D—that will be built only at Sharonville. What has now grown into a \$410 million investment will secure two thousand existing jobs and produce an additional two hundred through the 1990s.

Ford's E40D is an all new, advanced technology, heavy-duty transmission that will be fitted into trucks and vans, including the Bronco, F-Series, and Econoline/Club Wagon. E40D has four speeds, including an over-drive fourth, and a lock-up torque converter and over-drive control.

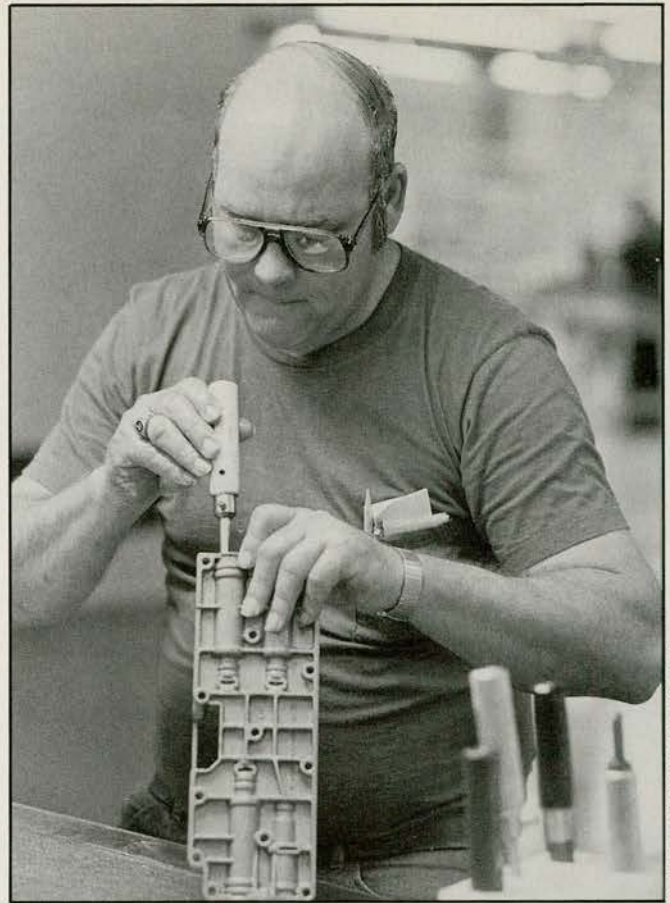
Ford could have contracted out production, bought the transmissions from overseas, or built the E40Ds at any of its domestic transmission plants. Sharonville won the coveted E40D contract through a plan prepared jointly by plant management and UAW local 983 to produce the transmissions in a way that would maximize quality: self-managing work teams. The plan had credibility because of the plant's earlier success with EI. As McCaffrey explains: "The source of our success is on the factory floor. Everyone can buy the same equipment and technologies. The difference is how you manage human resources."

In preparation for building the E40Ds, every employee involved in the new project participated in a three-week training course on both the new technology and the human relations skills involved in teamwork, including setting goals, communication skills, conflict management, and problem solving.

Starting in May, Sharonville began producing E40Ds with forty self-managing "business teams," each consisting of ten workers, with an engineer/cost analyst and a supervisor whose role is summed up by his title, not "foreman" but "adviser." At the time of my visit to Sharonville in July, 151 workers, all of whom had volunteered for the project, were involved with E40D, but their number was expected to increase significantly in the months ahead.

As at LSE, the "business teams" at Sharonville have a great deal of authority but are not yet completely self-managing. Sharonville's industrial relations director, Gary Blevins, explains: "They make their own decisions on how to meet the schedule, how to arrange the work, and the assignment of the work—which members of the team do what work. They decide how to rotate the jobs among each other. They train each other in the different jobs." In the event the foreman/adviser disagrees with a decision by the work group, he can take up the issue with a higher level of management, a situation Blevins calls "very exceptional—I can't think of one instance like that offhand, but that doesn't mean it hasn't happened." Overall, he says, "we still don't have a finished model—we're all still learning."

At the time of my visit, the "business team" experiment was just two months old, and it seemed the work-



PHOTOGRAPHS BY BRUCE CRIPPEN



*"We know our jobs, we know what has to be done, and we just do it," says Sharonville's William Baldwin. "It's a good feeling."*

*A favorite course is offered by UAW member Al Loos, who takes apart a transmission and rebuilds it from scratch, so workers can learn the total process of building their product.*

ers involved in the project were enthusiastic about the concept but had a number of gripes about its execution. During a free-wheeling discussion in a meeting room in the plant, workers nodded in agreement when Ron Eads, who works on the "final line" in E40D assembly, said: "It used to be they hired us just for our shoulders and below. Now, they finally understand we have something valuable above the neck." But workers also nodded in agreement when Eads warned that "many of the foremen still act like foremen, not advisers. And there are instances when management won't let us manage ourselves and contradicts our decisions."

Confusion about the relationships between self-managing work groups and frontline supervisors isn't unusual, according to retired Dartmouth Business School professor Robert H. Guest, who was a consultant to the Sharonville plant's Employee Involvement program, as well as for similar efforts in other companies. "A lot of these plans are groping in the direction of total autonomy, which would mean the elimination of the frontline supervisor, the foreman," Guest explains. "To move from foreman to adviser is a tremendous leap. It's quite common when you get into self-administration, the old supervisors say, 'Okay, now, we're just advising—but you'd better do it this way.' The old habits persist. Change always takes much longer than anyone predicts."

However, whether by accident or intention, dramatic change has already come to at least one department in the Sharonville plant. At the time of my visit, William Baldwin, a worker in the valve body room, had the opportunity to work in an entirely self-managing work group because his foreman/adviser had been on leave, and there had been no replacement for him. Baldwin says he and his co-workers are enjoying managing themselves because "we know our jobs, we know what has to be done, and we just do it."

Visiting Sharonville and meeting with smart and tough-minded union and management officials—veterans of decades of auto work and industrial conflict—I saw living proof of what UAW bargaining committee member Ron Hughes said: "Employee Involvement, whatever you call it, doesn't mean that the union or management roll over and play dead. They still want to run the company. We still fight like hell for our members. But now, before we fight, we talk." And as Al Blevins, the shrewd and tough-minded UAW shop committee chairman (and no relation to management official Gary Blevins), says: "There are still more than enough legitimate beefs here to keep us all busy. But, ten years ago, if you had told me that workers would have the right to shut down the line for any reason or that the executive dining room would become an exercise room for hourly workers, I would have thought you were crazy, but I wouldn't have put it that nicely."

Sharonville, L-S Electroplating, and the New York City Sanitation Department's Bureau of Motor Equipment are all experiments that are transforming patterns of the organization of the workplace that are as old as the Industrial Revolution. Together with other experiments like the General Motors Saturn Project, their successes—and even their failures—may offer a glimpse of the future, not only for blue-collar work but for every form of work in America. □

## MAKING GROUPWORK WORK

(Continued from page 17)

visual abilities, reasoning abilities, and the ability to be precise, accurate, and careful. Tasks that are conventional pencil and paper or tasks that have only one right answer should be avoided.

Use of the multiple-abilities strategy means thinking in a new way about human intelligence. Instead of thinking about how intelligent or unintelligent a student is, imagine that there are different kinds of intelligence or intellectual abilities that are called forth in different kinds of situations and for different aspects of a given task. Take, for example, the task of teaching. Teaching requires great interpersonal intelligence, organizational ability, conventional academic ability, verbal ability, as well as creative ability.

The multiple-ability strategy requires that the teacher convince the students that many different abilities are required for the tasks and that reading and writing are only two of the necessary skills. The teacher states explicitly in the orientation session: *No one will be good at all of these abilities. Everyone will be good on at least one.*

As a result of this introduction to the task, students expect that they will be good on some of the abilities required by the task and not so good on others. When they go into the groupwork with these kinds of mixed expectations for competence, the tendency of high-status students to dominate and the tendency of low-status students to withdraw is greatly weakened. As a result, low-status students have a chance to interact, to solve problems for themselves, make contributions to the group, and learn.

## THE TEACHER'S ROLE: LETTING GO AND TEAMING UP

Groupwork changes a teacher's role dramatically. No longer are you a direct supervisor of students, responsible for ensuring that they do their work exactly as you direct. No longer is it your responsibility to watch for every mistake and correct it on the spot. Instead, authority is delegated to students and to groups of students. They are in charge of ensuring that the job gets done and that classmates get the help they need. They are empowered to make mistakes, to find out what went wrong, and what might be done about it.

Students are now doing many of the things you ordinarily do—like answering each other's questions, keeping each other engaged in the task, helping each other to get started. After teachers discover that they do not appear to be needed because everything is running without them, they often ask, "What am I supposed to be doing?"

Actually, you are now free for a much higher level and more demanding kind of teacher role. You now have a chance to observe students carefully and to listen to the discussion from a discreet distance. You can ask key questions to stimulate a group that is operating at too low a level; you can provide feedback to individuals and to groups; you can stimulate their thinking; and you can reinforce rules, roles, and norms in those particular

groups where the system is not operating at its best.

There is a fine line between direct supervision and the supportive role. Direct supervision is standing over students and helping them do their task, answering their questions, and instructing them. In contrast, the supportive supervisor stands well back from the group so that she can hear what is going on without signalling the group that she wants to communicate with them. She speaks with them only if a critical opportunity arises.

Becoming a supportive supervisor does not mean giving up control of the classroom. You, as teacher, make the norms and roles work for you to control behavior in productive ways. You hold the groups accountable for their end products and for their management of group functioning.

Developing and evaluating multiple-ability groupwork tasks for heterogeneous classrooms is demanding. It is not a job for a single teacher, but, at minimum, for a pair of teachers who can observe and evaluate each other's work. There are a number of simple techniques teachers can use for gauging the effectiveness of their efforts. Teachers can use these instruments to observe each other; they can also administer short questionnaires to the students to see how well they are responding to the tasks. Armed with this objective information, teachers can provide helpful collegial evaluation for each other. Using the basic principles described here, teachers across the country have been able to design tasks that are highly effective in the most difficult and demanding classrooms. It should be no surprise that when teachers talk and work together, the results can be just as gratifying as when students talk and work together.

## ADDING GROUPWORK TO YOUR TEACHING REPERTOIRE

There are many other aspects of groupwork that will require careful thought, preparation, and decision. What patterns of working together will be employed? (Will students work at learning centers, in small short-term discussion groups, in creative problem-solving groups, or in relatively long-term project groups? Or will groupwork consist mostly of peers giving each other assistance on their individual tasks?) How large should the groups be? How should the groups be composed, and how can a good mix be created? How specific should written instructions be? What other resources are needed? How should the room be arranged to accommodate this new form of working? And—a question teachers invariably ask—how can you

Designing Groupwork by Elizabeth G. Cohen may be ordered for \$13.95 plus \$1.75 postage and handling. Please make check payable to Teachers College Press and remit to: Teachers College Press, P.O. Box 939, Wolfboro, New Hampshire, 03894. You may also order the book using VISA or MasterCard by calling (toll-free) 1-800-356-0409 from 9:00 a.m. to 8:00 p.m. EST; in Maine (207) 324-1809.

evaluate student performance when the task is done by a group? (The general principle on this is to disentangle the issue of learning from the issue of giving grades and marks.) *Designing Groupwork* addresses all these questions in detail.

In closing, we would like to emphasize that cooperative groupwork is not a panacea. Nor, of course, is it the best strategy for all instructional goals. Whole-class instruction clearly has its place in the array of teaching techniques; lively presentations and mini-lectures are invaluable tools of the teacher. However, adding groupwork to your teaching repertoire allows you to achieve results with classes and with individual students that are difficult to attain any other way.

Secondly, we repeat a point that has run throughout this article: Successful groupwork requires quite profound changes in students and teachers. Students take on new roles, and teachers give up some old ones. New, multiple dimensions of intellectual competence are recognized and honored. The curriculum moves away from its almost singular reliance on paper and pencil or verbal tasks to a richer array. Likewise, a wider variety of intellectual methods for solving problems are encouraged.

None of these changes are easy, but we obviously feel they are well worth the effort. Groupwork can help teachers reach all students better, and in particular, those students who in the past have been the hardest to reach. These students will work harder—and happier, will spend more time on task, will be more excited about school, and will learn more. In the final analysis, it is the joy of seeing these students begin to achieve that motivates many of us to continue the difficult process of changing the work of the classroom. □

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# LETTERS

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## KINDERGARTEN DEBATE CONTINUES

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I just finished reading the article "What Should Young Children Be Doing?" (Summer 1988) by Lilian G. Katz and was greatly impressed. I agree wholeheartedly with the views expressed in the article and hope many teachers and other education professionals read it and get about the business of reorganizing their curricula accordingly.

When I taught kindergarten in the late 50s, our system decided to introduce first-grade reading skills into our program. I was against it then and I am against it now. I'm sure many of our youngsters just hated reading or lost interest that could have been stimulated by more exciting activities during their kindergarten years. My co-worker decided she would work with the "more skilled," but I was very happy to stay with those who didn't pass the reading aptitude tests given at the end of first semester. I felt we had more fun and enjoyed our experiences without the constant struggle to maintain status as a "reader."

I am a special education teacher now and still prefer experiences and projects to the standard reading and math series. I really believe this flexibility in my lessons has helped me enjoy all my days as a teacher. I retire in two years, but I haven't regretted my position.

Let's pursue these ideas and get education back on the right track.

—DOROTHY HUGHES  
KINGSTON, NY

I am writing in reference to Lorrie A. Shepard and Mary Lee Smith's article "Flunking Kindergarten: Escalating Curriculum Leaves Many Behind" (Summer 1988). I would like to compliment you both on this excellent piece! I think we do need to take a closer look at WHY so many children are being held back. Let's take

off some of the pressure on our children to perform so much at such an early age.

—KATHY JOHNSON  
BIG LAKE, MN

I was appalled reading your article about transitional first grades. I couldn't believe that an educational magazine specifically written for educators could take such a blind point of view and make statements such as "a child attending a transitional class is losing a year of his life."

Thank goodness educators in Connecticut don't have your point of view. In fact, more and more towns are instituting transitional first grades. I, myself, have taught transitional first for three years in North Branford. I have seen many mini-miracles develop before my eyes. I would like to recommend that you read the picture book *Leo the Late Bloomer*—a children's book that, in essence, is symbolic of what happens during that transitional year.

A second point that was made is that an extra year creates a social stigma. I say that this occurs only in the eyes of those who wish it to be a stigma. I explain to parents that the problem is more theirs than their child's. If they make the child feel guilty or act as though being selected for transitional class is something to be ashamed of, then the child will pick up this attitude. However, if the parents honestly and patiently explain to the child that he/she just needs a little more time to be ready then the child will be most accepting. Everyone knows how easily a child forgives and forgets.

When I graduated from Southern Connecticut State University in 1962, I was well aware of how important it was that a child be ready for first grade—especially boys. Both of my sons were November babies. Since there were no transitional classes in the 60s and 70s, I decided

to keep both my boys home an extra year. I really didn't care if they graduated at seventeen, eighteen or nineteen. I felt that being more mature was an asset. Some of my fellow graduates did the same with their sons, and none of us regret it. We never worried about any stigma.

I believe that a good many of the students in a transitional class develop self-confidence because they are successful in what they do. They later succeed in grade one and feel really good about themselves.

I firmly believe that *American Educator* is making a big mistake by printing the article by Shepard and Smith discouraging transitional first classrooms.

—BRENDA KARSMARSKI  
NORTH BRANFORD, CT

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## CHAPTER 1 SUCCESSFUL?

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Your presentation of my article on the Department of Education's recent Assessment of Chapter 1 was well done except in one respect. The title given my article, "How To Improve a Successful Program" (Spring 1988), suggests that I believe Chapter 1 has been successful. In neither my article nor the Assessment itself is the claim made that Chapter 1 has been "successful"; one might conclude or fail to conclude this from the evidence presented. Successful is a relative word—successful compared to what?

My article attempts no judgment about the program's success; it simply presents information from the National Assessment about practices that are found in Chapter 1 programs and promising practices that could improve the program. In fact, I leave judgment about the program's success to the reader.

—BEATRICE F. BIRMAN  
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## THE CALIFORNIA FRAMEWORK (Continued from page 40)

courses on "contemporary issues."

Some critics have faulted the Framework's course descriptions as overdetailed and prescriptive, but it is no more so than were previous state guidelines on the scope and sequence for social studies. Indeed, its 111 pages covering all courses from K through twelve are remarkably brief when compared, say, to the New York state guide for the ninth- and twelfth-grade global studies courses alone, which uses 220 pages for its endless lists of items to be covered, under the headings of goals, objectives, units, outlines, ideas, and activities!

Apart from its brevity and the clarity of its prose, the strength of the California Framework lies in its forthright statement of what is most important for children and adolescents to learn—the central themes and questions in American history, the history of Western civilization, and of the world. This is of much greater help to teachers than the long, bewildering lists of abstract concepts, objectives, skills, and attitudes that overload so many other social studies manuals. Flexible, innovative teaching methods are far easier to apply when one has at hand both a generous supply of time and some powerful, engaging themes around which to order the subject matter.

In the relation between skills and content, the authors also recognize the importance of both. But they put lively narrative ("history as a story well told") and major political, social, and ethical questions at the forefront and allow the skills and more abstract concepts to flow out of them, rather than the other way around. In this, too, the Framework represents a turning point, away from recent fashions in social studies.

WILL THE turning point really turn? Will the California Framework be successfully implemented? Several questions have yet to be answered. Can its subject matter be well taught without improvements in teacher education and state standards for certification? Without

generous aid to local professional development programs? Without added resources for course development and for teachers to purchase new materials? Without substantial changes in textbooks, in teaching conditions, in school schedules and structures? Without the development of wholly new and different standardized tests and other means of assessment?

This last is perhaps the most worrisome to teachers and local school officers. If the approach to history, social studies, and the humanities is to be thoughtful rather than a matter of rote memorization and if actual courses are to be locally designed and materials locally chosen, how then will statewide tests be designed and administered? Does the danger not remain that the wrong kind of testing will compel uniformity, conventionality, and pressure for rote memorization that would block the very improvements in content and methods that the Framework aims to achieve?

There is a long road to travel before the superb body of learning prescribed by the California Framework is translated into effective daily lessons for the huge and highly varied population in the state's classrooms. But nobody should doubt how much is at stake. Its success would constitute a giant step toward the long-overdue democratization of American public schools, because its aim is nothing less than to break the barriers that have maintained an inequitable system of education in so many American school districts. Its authors know very well that a curriculum that is trivial, optional, or differentiated according to track produces a class system of education, no matter how innovative the methods or how many students receive a diploma. And they know equally well that the most wondrous subject matter just as surely produces a class system of education if inflexible teaching methods and school structures impede its being conveyed to the great majority of children.

Whether the California Framework succeeds and is emulated elsewhere will depend on the number of educators in California and elsewhere who can manage to keep these two imperatives in mind at once. □

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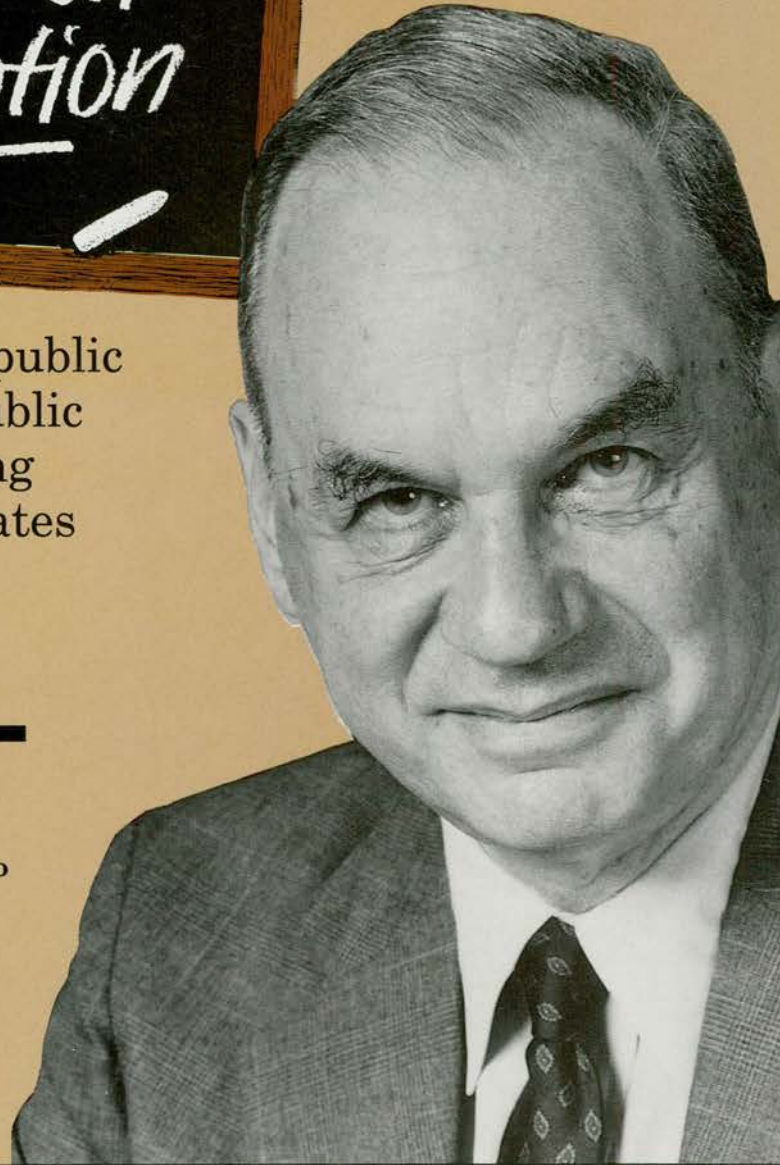
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