

# 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>

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**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

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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>

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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

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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-

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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.

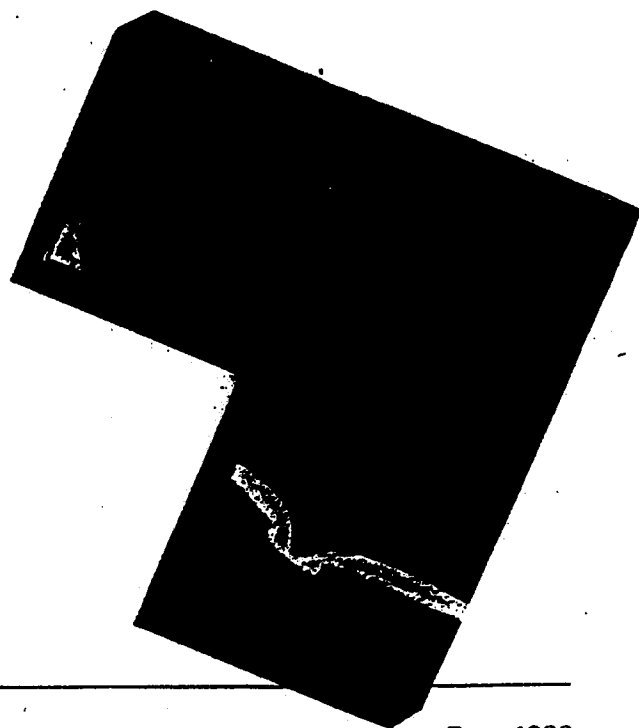
Frankie's experience points up one difficulty with unequal interaction. This has to do with the intellectual quality of group performance. In order to get the best possible group product, it is critical that each member have an equal opportunity to contribute. If some members are hesitant to speak up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

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*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.