The two articles in this bulletin concern an experiment in progress to determine if training teachers in a structured program for mathematics instruction results in higher student achievement and if the effects of the program on teachers and students would be enhanced if the building principal participates in and supports the inservice process. In the first article, "Using Staff Development to Improve Schools," researcher Meredith Gall describes how teachers in five schools are receiving training in a research-validated strategy for managing mathematics instruction without principal involvement. Teachers in another five schools are participating in the same program, but in addition their principals are being trained to support the teachers' implementation of the strategy. As a control group, teachers and principals in yet another five schools are not being trained. The most intriguing observation so far is that issues such as expectations for student work, enforcement of academic requirements, ability grouping, and voluntary participation in staff development are matters of policy that require the involvement of administrators. In the second article, "Wednesday Morning Live: Observations on a Staff Development Meeting," Wynn De Bevoise shares her perceptions of one three-hour training session involving both teachers and a principal. (MLF)

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Does Principal Participation in Staff Development for Teachers Pay Off?

A quiet tug-of-war is taking place over the concept of instructional leadership. On the one side researchers such as Ronald Edmonds and William Brookover argue that principals should develop the knowledge and skills to provide direct supervision of teachers about instructional matters. On the other side, Nancy Pitner, Russell Gersten and Douglas Carnine, and Philip Cusick, among others, maintain that principals may not be so disposed and in any event spend little time directly involved in teacher observation and evaluation. Pitner, Gersten, and Carnine have concluded that other personnel and certain functions in school organizations may influence the instructional process more than the principal.

In the midst of this debate, Meredith Gall, a researcher for the Center for Educational Policy and Management (CEPM), in collaboration with Del Schalock and Glen Helding of the Mid-Willamette Valley Education Consortium in Oregon, is testing the effect of the principal's participation in a staff development program for elementary teachers. In his experiment, Gall is not concerned with whether or not principals currently practice instructional leadership. Rather, he is posing two questions with profound implications for school improvement efforts: Does training teachers in a structured program for math instruction result in higher student achievement? And what is the effect of the principal's participation on teachers' subsequent performance and student achievement?

Gall's article, which follows, describes the background for the project and the findings to date. In a second article, Wynn De Bevoise, editor of RED Perspectives, shares her perceptions of one three-hour training session involving both teachers and a principal.

Using Staff Development to Improve Schools

By Meredith D. Gall

I think currently the most exciting idea in staff development involves including principals in teachers' inservice programs. Studies of instructional leadership suggest that the effects of inservice programs on teachers and students would be enhanced if the building principal participates in and supports the inservice process.

This year colleagues Del Schalock and Glen Fielding and I are empirically testing the hypothesis that principal participation adds an important dimension to staff development programs. We are conducting the experiment in 15 schools across three school districts using a training program developed by Thomas L. Good and Douglas A. Grouws, two prominent classroom researchers at the University of Missouri. The program is intended to help fourth- and fifth-grade teachers...
increase their students' learning of mathematics.

Before discussing the project, however, I wish to describe my previous year's research with colleagues Fay Haisley, Rob Baker, and Miguel Perez. This work yielded a model of effective staff development programs that led to the conceptualization of the present experiment.

**Principles of Staff Development**

Part of last year's investigation involved an extensive literature review to identify staff development practices that contribute to increased elementary school effectiveness, particularly in basic skills instruction. Four recent experiments, reviewed by Gage and Giaconia, provided one important source of promising practices in staff development. In each experiment, one group of teachers received training in research-validated teaching methods; the second group received no training. The intent of the teaching methods was to ensure that ample time for basic skills instruction was allocated, that student on-task behavior was maintained, that student progress was monitored, and that instructional content matched district goals and achievement tests.

The four experiments demonstrated consistently that trained teachers used the research-based teaching methods more frequently and that their students made greater gains in achievement. The training procedures used in the experiments provided the foundation for our staff development model. We gleaned other attributes of effective staff development programs from research on effective schools, instructional leadership, curriculum implementation, and teacher attitudes.

Findings from the literature search were organized into a management model suggested by the previous work of Bruce Joyce and his associates. As shown in Table 1, the model has five management tasks and a set of research-based recommendations under each task. The model emphasizes staff development in basic skills, but the tasks and most of the recommendations are generally applicable.

The listing of tasks and recommendations in Table 1 does not imply judgments of priority or sequence. The important point for administrators to note is that all tasks must receive attention if a staff development program is to be successfully installed in a school system.
Current Practices

The model described above provides a set of principles for building a staff development program that has impact—improved teacher performance and subsequent gains in student achievement. We were tempted to build such a program, but realized the importance of fully understanding what is already in place before introducing something new. Therefore, Haisley, Baker, Perez, and I decided to survey current staff development practices and to compare them with the research-based recommendations shown in Table 1.

We interviewed intensively a sample of 47 elementary teachers, building principals, and central office administrators in three Oregon school districts. The results were surprising. For example, we found that teachers spent an average of 73 hours in staff development distributed across 7 different activities over a year's time. Most of the activities, however, were of brief duration, as shown in Table 2. Few activities reflected the sustained, multi-year effort that Fullan and Pomfret have found is required for school improvement. (The activities of long duration in Table 2 generally involved university coursework for advanced certification.) Also, the staff development activities covered many topics rather than focusing on a few preeminent goals.

Contrary to some previous research, this sample of teachers was satisfied with 80 to 90 percent of their activities depending upon the dimension being rated. Teachers' high satisfaction can be explained by the fact that 88 percent of the inservice activities were perceived as relevant to their work; 63 percent of the activities required little new learning; 78 percent of the activities required no out-of-pocket expense; incentives were present for 55 percent of the activities; 49 percent of them were voluntary, and only 6 percent were assessed afterwards.

These data characterize staff development as frequent, but fragmented and without depth. Staff development activities are primarily unintrusive, comfortable experiences that reinforce prevailing patterns of school work. We concluded that the research-based recommendations for staff development are seldom applied in practice.

Principal Involvement

My current research project with Schalock and Fielding has begun to grapple with the possibility of changing prevalent patterns of staff development activities through the direct involvement of district administrators. Recent research on instructional leadership has suggested ways to effect such a change. A review of this research by Leithwood and Montgomery indicates that, at the elementary school level at least, the building principal is critical to
school improvement. Researchers have found that many elementary principals do not actively work toward improvement of their schools. However, almost half of all principals do contribute to school improvement and seek to promote student cognitive growth and happiness. Referring to these principals' efforts to encourage student achievement, Leithwood and Montgomery state, "Effective principals are exceptionally clear about this by Good and Grouws. The program provides training in a research-vali-
dated strategy for managing mathematics instruction. The strategy can be thought of as a systematic daily lesson plan having these key elements:

- **Daily review** (8 minutes)—review previous day's work and homework assignment; have students practice mental computation.
- **Development** (20 minutes)—teach new concepts and skills meaningfully using manipula-
tives, process explanations, and other techniques; check for understanding before assigning seatwork.
- **Seatwork** (15 minutes)—provide monitored, successful practice, and check work at end of allotted time.
- **Assign homework**—assign 15 minutes of work to be completed at home.
- **Special reviews**—weekly review.

each Monday (20 minutes) and monthly review (whole period) every fourth Monday.

In our experiment, teachers in five schools are learning the strategy through a staff development program without principal involvement. Teachers in another five schools are participating in the same program, but in addition their principals are being trained to support the teachers' implementation of the strategy. (The following article describes one of the training sessions.) In this second group of schools, the principals are being asked to function as instructional leaders. Instructional leadership means attending the same training sessions as the teachers, reading the same materials, observing the teachers' classes as they try to implement the instructional management strategy, conferencing with teachers afterwards, generally encouraging teachers in their change efforts, and providing administrative support when appropriate. The principals meet together in

priority with all those with whom they have contact, and they are willing to persist in the face of considerable frustration over long periods to promote this priority" (p. 334).

The principals referred to in Leith-
wood and Montgomery's review were naturally effective in their roles. The question that Schalock, Fielding, and I are posing is whether typical principals could be trained to be more effective instructional leaders. We decided to answer the question by trying to jointly train principals and teachers in the development program developed...
groups to be trained in these leadership functions and to discuss problems and solutions. Teachers and principals in yet another five schools are receiving none of the training described. The three groups of schools will enable us to compare the differential effects of participating or not participating in the staff development program. In addition, we can assess the effects of planned principal leadership compared to the absence of such leadership. Emerging Issues The experiment in progress raises a set of issues that extend beyond staff development for teachers. The issues involve fundamental problems of school improvement and how it should be managed.

How can expectations for student work be raised? The assignment and checking of homework is critical to Good and Grouws' instructional management system. The correlation between homework assignment and student achievement in Good and Grouws' research was very high (r = .49). Some teachers in our experiment have reservations about assigning homework, though, because it exceeds their expectations of how much work should be required of students. Also, some parents complain when students take home a school assignment. Expectations for student work and achievement is a policy issue that extends beyond teacher discretion and the content of staff development programs. The issue may surface in the type of staff development program described above, but it cannot be resolved there. The efficacy of staff development seems to depend on how policy for performance expectations gets shaped and communicated within a school district and perhaps beyond. Little is known about how to increase performance expectations once they have been established at a certain level in a district, school, or classroom.

How should academic requirements be enforced? Teachers are sometimes reluctant to assign more work to students because increased student work is attended by burdensome record-keeping and enforcement of deadlines and standards for quality. It requires consistency and patience in near-mythical proportions to constantly monitor the completion of homework and seatwork and to impose the penalties for incomplete or unacceptable work. Some teachers who instruct low-achieving students feel powerless to enforce a homework policy even while acknowledging its effectiveness in providing distributed practice of math skills. Teachers seem to be looking to a higher level of authority to establish and enforce instructional requirements. The exercise of this authority by administrators may be an important element of effective instructional leadership. How should students be grouped for instruction? As teachers discuss instructional management in inservice sessions, we are impressed by their preoccupation with slow learners. One of the principals in our experiment commented, "Teachers appear to spend 40 percent of their time dealing with the bottom 10 percent of the class." Many teachers use individualized instruction and grouping to accommodate slow learners, but these methods are weak because students not working directly with the teacher tend to get off task easily. Also, in individualized instruction, the teacher can only spend a minute or two with each student developing the concepts or skills being taught in the individual learning packets.

Research suggests that whole-group instruction is more effective for low-achieving students, and this feature is built into Good and Grouws' instructional management system. Instructional management of the classroom, however, is just one solution to the problem and not necessarily the most effective. Other solutions involve ability grouping, tracking, and alternative schools, but they raise difficult policy issues, especially for elementary school education. The assignment of elementary students to classrooms or schools by ability conflicts with egalitarian values and with such educational goals as mainstreaming. Again, we see instructional issues surfacing in staff development programs, but they cannot be resolved there without administrative leadership.

Expectations for student work and achievement is a policy issue that extends beyond teacher discretion and the content of staff development programs.

teachers are the central decision-makers about classroom instruction and can resolve these issues by themselves. In fact, such issues as expectations for student work, enforcement of academic requirements, ability grouping, and voluntary participation in staff
development cannot be resolved by teachers and staff developers acting alone. The issues are matters of policy that require the involvement of administrators.

Our work and other recent research points to the principal's role as a key resource for school improvement and staff development. But is the principal the only manager who needs to be involved? What roles do superintendents, curriculum directors, school boards, and parents need to fill in setting policy for the instructional issues described above? Who influences teachers sufficiently to bring about their full participation in a sanctioned staff development program?

Our sense is that teachers are looking for instructional leadership but do not know where to find it. Research can help by clarifying the levels of leadership available to a school district for setting and implementing policy on instructional issues. Unless such leadership is identified and put to use, it is doubtful that staff development programs or teachers acting alone can do much to bring about school improvement.

Our most intriguing observation so far is that critical issues of instructional policy arise in staff development programs.

References


Wednesday Morning Live: Observations on a Staff Development Meeting

By Wynn De Bevoise

The boardroom in this elementary-school-turned-district-office looks out on a large warehouse. Almost lost against the structure's gray weathered shingles, pigeons gather and disperse, their meetings brief and fitful.

Inside the boardroom, elementary teachers take their seats slowly and deliberately. It is eight-fifteen in the morning and they are waiting for a training session to begin. As the university professor and the district trainer prepare the audiovisuals, the teachers joke and grumble about being there. They regard the questionnaires they have been asked to fill out with evident distaste. Some push them away. Their faces resemble those of students who feel they've been given an unfair homework assignment. The professor, a consultant for this staff development program, mildly explains the importance of their answers. He does not react to the restrained hostility. As the meeting is ready to begin, most of the teachers jump up to get a cup of coffee from the kitchen down the hall. One laughs and observes that their behavior is "off-task."

By the time everyone returns, the principal has arrived and the atmosphere is more subdued. Some are now filling out the questionnaires that ask for their reactions to the first two weeks of using a new instructional method in their math lessons.

For the next 50 minutes, all participants view a videotape of a teacher using Thomas L. Good and Douglas A. Grouws' Active Teaching of Mathematics system in a fourth-grade classroom. It is Good and Grouws' model that the teachers gathered in this room have been following for the past two weeks. As they watch the videotape, several teachers continue to fill out the questionnaire. They are intent and serious as they write, but they also manage to follow the taped presentation. The principal's attention does not waver from the videotape. He seems to be digesting every activity and interaction in the filmed lesson.

In the exchange of views that follows, the teachers bring up problems they encounter in class that are not addressed in the videotape—discipline, length of time it takes for students to correct each other's papers, difficulties in planning lessons, and grouping problems. They complain that "canned" presentations never quite reflect their own unique classrooms. As each teacher mentions a problem, several others offer suggestions and techniques that work for them.

Initially, the interaction takes place among the teachers without interruption by the trainer, principal, or professor. Increasingly, however, questions are posed directly to the trainer or the
What has become apparent as the teachers discuss problems and share solutions related to using the model is their increasing desire to see the effect of its use on the work habits and skills of their students.
The principal, who has been reinforcing teachers' suggestions, becomes more actively involved in the discussion at this point. He wants to know how often they use a discovery activity similar to the one demonstrated in the videotape. Their responses seem honest, not bound by what they think he would like to hear. Would it help, he wonders, if teachers gave the "greyhounds" creative work in class rather than homework. In unison, the teachers say no. That type of differentiation would reward the bright students and it is the slow ones that need to be rewarded. He then questions them about manipulatives. "What manipulatives do you have," he asks, "and what ones would you like to have?"

One woman answers that she has some geo boards, which she uses for teaching about fractions. "Where did you get them?" asks the principal.

"I made them," she responds and describes the materials needed.

Clearly, the principal is becoming familiar with the small details of classroom management under the Good and Grouws system.

At the conclusion of this meeting, which is the last training session, teachers surprise the trainer by asking about getting together again at the end of the school year to review progress. Their desire to devote further time to discussion indicates that they are finding the training beneficial and belies the reluctant atmosphere with which the session began.

These teachers do not feel they are voluntary participants in the implementation of the Good and Grouws system. The project was approved and mandated by district administrators. It is not surprising, then, that the participants might feel misgivings and some resentment about the training. What has become apparent, however, as the teachers discuss problems and share solutions related to using the model is their increasing desire to see the effects of its use on the work habits and skills of their students. The encouragement and flexibility of the principal, trainer, and professor have helped the teachers move from a position of resistance to one of involvement.

Chattering in relaxed tones, the teachers move into the hallway. The training session has offered them a rare opportunity to talk about problems and common experiences in teaching. They share last-minute information before climbing into their cars, again as isolated as in their separate classrooms.

Meanwhile, in the nearly deserted boardroom, the trainer and the professor review the morning's discussion. They are pleased. The teachers' request to meet again has offered unexpected confirmation that the experiment seems to be working. The assistant superintendent stops by briefly to say that the principal considers the session a clear success.

Despite barred windows, empty chairs, and a series of tables littered with empty coffee cups, the boardroom radiates warmth. This is collegiality, on a level unknown to pigeons.