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AUTHOR Valencia, Sheila W.; Killion, Joellen P.
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ABSTRACT

Implementing new instructional strategies and programs is a challenging task, and the need for teacher renewal and updating is apparent when the advances in literacy research in recent years and the increasing gap between this knowledge and the training of . st teachers are considered. Among the obstacles to teacher change are short-term inservice attempts, teacher isolation, norm of the status quo, learning needs of teachers, and an expectation of fidelity to the plan for desired change. These obstacles can be overcome by recognizing that change is a process, not an event, and requires time and ongoing support. Three case studies demonstrate staff development efforts to implement research-based reading and writing instruction. The case studies (all in a K-12 school district with over 20,000 students, 1,000 teachers, and 30 schools and only one reading and one language arts coordinator) include a process writing program at the elementary level, a revision of the remedial program in reading and writing at the junior high level, and a staff development inservice program for elementary school reading specialists designed to implement sound research-based reading instruction. All programs were effective in enhancing student performance. (One table of data is included, and 48 references are attached.) (RS)

CENTER FOR THE STUDY OF READING

Technical Report No. 462

IMPLEMENTING RESEARCH-BASED READING AND WRITING PROGRAMS OVERCOMING OBSTACLES TO TEACHER CHANGE: THREE CASE STUDIES

Sheila W. Valencia
University of Washington
and
Joellen P. Killion
School District No. 12 - Northglenn, CO

February 1989

University of Illinois at Urbana-Champaign
51 Gerty Drive
Champaign, Illinois 61820

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Abstract

Implementing new instructional strategies and programs is a challenging task. With the advances in literacy research in recent years and the increasing gap between this knowledge and the training of most of our teachers, the need for teacher renewal and updating is apparent.

This paper begins by reviewing several common obstacles to teacher change--short term inservice attempts, teacher isolation, norm of the status quo, learning needs of teachers and, an expectation of fidelity to the plan for desired change. Then several suggestions are discussed for overcoming these obstacles. Finally, we present three case studies of staff development efforts to implement research-based reading and writing instruction. Although each of the cases exemplifies a set of unique needs, each succeeds by focusing on the potential obstacles to change and strategies for overcoming them.

IMPLEMENTING RESEARCH-BASED READING AND WRITING PROGRAMS OVERCOMING OBSTACLES TO TEACHER CHANGE: THREE CASE STUDIES

The need to improve the education of our youngsters by upgrading the skills of our teachers continues to be both an overriding goal and a pressing problem. Various commissions and task forces on educational excellence recommend surface-level reforms--lengthening the school day and year, offering merit pay to teachers, providing more courses at the high school level, improving teacher preparation, and implementing more testing programs (Carnegie Forum, 1986; Holmes Group, 1986). Yet, as Boyer (1983) has noted, one of the most powerful forces for the improvement of education is the teaching work force. We need to enhance teachers' skills and their feelings of power and professionalism. Boyer (1985) is concerned that we are trying to "fix education from the top," putting emphasis on the regulation of education rather than the renewal of school personnel--the essential educational resource.

Change in teaching practices is brought about by individual teachers, not by institutions. We know from the research program in first grade reading instruction (Bond & Dykstra, 1967), the effective schools research (Edmunds & Frederickson, 1979; Fisher, Berliner, Filby, Marliave, Cahen & Dishaw, 1980; Purkey & Smith, 1983), and from our own experiences, that it is the teacher who makes the difference. Without committed, educated teachers, any reform efforts will be muted and short-lived. Although many worry about teachers' motivation and willingness to learn, teachers have been found to be able to withstand the discomfort involved in new learning and change (Joyce & Showers, 1983).

Curriculum coordinators, administrators and staff developers are particularly concerned with the renewal of teachers' knowledge, skills and attitudes, factors which ultimately impact the education of children. This concern becomes increasingly apparent when we consider that many teachers received their training between 5 and 15 years ago. Many continue to teach in the same way year after year; many are uninspired and bored with their daily routines. Yet, within this same 5 to 15 years, research has provided enormous insight into teaching and, more specifically, into classroom instructional practice.

In this paper, we first review five of the obstacles to teacher change: short-term inservice attempts, teacher isolation, satisfaction with the status quo, learning needs of teachers and strict fidelity to instructional procedures. Then we offer general suggestions for combating these obstacles. Finally, we examine three separate efforts in one school district to implement research-based instructional programs in reading and writing through staff development programs specifically designed to overcome obstacles to teacher change.

Obstacles to Teacher Change

Short-Term Inservice Attempts

To this point, most of the attempts at teacher renewal and inservice training have taken the form of brief, infrequent workshops often designed and mandated by central or building administrators. Joyce and Showers (1983) point out that

> . . . in a given year the average teacher in the United States participates in only about 3 days of inservice work, rarely more than a day at a time, and usually in brief workshops that feature 'uninspiring' speeches and demonstrations of discrete skills. (p. 1)

Often, these workshops lack opportunities for follow-up, practice and feedback. Such efforts tend to provide superficial, quick fixes to long-term, complex problems.

If we hope to introduce new ideas that lead to enduring changes in classroom practices, we will need to make changes in the current concept of staff development. This may prove to be an exceptionally desirable, yet difficult goal at a time when there are pressures from decreasing budgets and from an emphasis on increasing instructional time--pressures which often translate into fewer professional inservice days for teachers.

Teacher Isolation

Teacher isolation, or lack of collegiality, has been cited as one of the greatest obstacles to professional development of teachers (Joyce & Showers, 1983; Rosenholtz, 1985; Tye & Tye, 1984; Warren, 1975; Willie & Howey, 1980). Most teachers have very little professional contact with other adults and tend to feel that they are alone in their classroom experiences. For many, seeking advice or help from others may indicate they are unable to meet their teaching responsibilities. By maintaining this isolation, teachers have little opportunity to learn from one another or to observe models of excellence. They tend to fall back on techniques used when they were students and, as Lortie (1975) believes, they rely on "trial and error" teaching where they must depend solely on their own ability to determine teaching problems and solutions. Thus, the present social structure of the school offers little opportunity for teachers to learn from one another through professional dialogue and collaboration.

Status Quo

Another obstacle to change is the norm of the status quo. That is, many teachers believe that if what they are doing works fairly well, why tamper with it. Introducing new concepts, techniques and strategies temporarily unsettles the classroom and precipitates problems where they did not exist, causing discomfort for students and teachers. Change fosters a temporary feeling of incompetence in even the most competent teachers. It has the potential for threatening individual teachers and these perceptions of threat are likely to be met with defensive behaviors and resistance to learning.

Additionally, many teachers have a sense of futility about their profession and their efforts to help students learn. Studies pointing to the home and the community as primary influences on achievement (Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld & York, 1966; Jencks, Smith, Ackland, Bare, Cohen, Gintis, Heyns & Michelson, 1972) only fueled the fire of defeatism and hopelessness that teachers could not have an impact on children. If teachers do not think they make a difference, why would they attempt to change? This attitude reinforces compliance with the status quo.

Learning Needs of Teachers

Too often those at the "institutional" level of change, such as central office personnel or building administrators, fail to acknowledge the needs of those who are being encouraged to change or to implement changes in the classroom. It seems odd that, as educators, we respond to the needs of students in our classes, but somehow we forget that, in an environment of change, teachers are learners as well. Research on developmental stages of adult learners (Brundage & MacKeracher, 1980; Hunt, 1966; Willie & Howie, 1980) identifies a series of developmental changes which occur as teachers progress within the profession or as they respond to change. Adult behavior is not fixed, but changes in response to internal and external pressures, both personal and professional.

Similarly, the research conducted by Hall, George and Rutherford (1979) focuses on the concerns of teachers when implementing change. Individuals move through identifiable stages of concern with respect to an innovation. To be successful, those responsible for implementing teacher change must have a fundamental understanding of the needs of adult learners and their stages of development and concern.

Both these avenues of research underscore the importance of addressing the needs of the adult learner in any teacher change efforts (Wilsey & Killion, 1982).

Strict Fidelity to the Plan

One of the most popular and usable curricular change models, the generalized implementation model, assumes that general principles and programs can be applied in a most precise and predictable way. That is, curricula may be designed by "experts" in the field and then delivered by teachers who in essence act as "curriculum conduits" (Connelly & Ben-Peretz, 1980). This assumes that it is most desirable to have teachers transmit the program to students through strict, rigid adherence to the plan. More recently, the focus has shifted to the teacher as agent or decision-maker (Connelly & Elbez, 1980; Olson, 1980; Parker, 1985)--a focus on the potential, rather than the prescription, of a curricular modification. In this model, teachers act as "inquirers-in-practice whose deliberations mediate curriculum inventions and carry them to their potential" (Parker, 1985).

Teachers are continually faced with changing factors in the classroom. Effective instruction requires teachers to develop skills that allow them to respond flexibly to their personal and professional needs as well as those of their students. They do not need a new prepackaged curriculum; they need a problem solving orientation to guide their decision-making (Gallagher, Goudvis, & Pearson, 1987). If one narrowly defines effectiveness as teachers' adherence to originally conceived procedures and unaltered implementation in the classroom, then the evaluation is most certain to fall short. In fact, using this criterion, Fullan & Pomfret (1977) found that few programs reached students and even fewer were sustained over time. So, while some change efforts may be judged effective using fidelity as criteria, in practice most will be deemed ineffective.

If these are some of the obstacles we face in striving to implement teacher change, how then, can we strengthen staff development to maximize the potential for change among teachers? The following general concepts and the specific applications described under each offer some sound starting points.

Overcoming Obstacles

The Change Process

We must recognize that change is a process, not an event, and as such, it requires time and ongoing support throughout its different stages. In contrast with our previous description of the "one-shot" workshop, we know that the results of change will prove more lasting if we work with teachers on a number of occasions over an extended period of time, making sure to provide the necessary follow-up (Joyce & Showers, 1983; Rosenholtz, 1985). This is not only important when teachers are enthusiastic about the potential for change, but especially so when they are threatened or uncomfortable about the change (Brundage & MacKeracher 1980), teachers need time and opportunities to deal with reducing stress and anxiety. When change shakes a teacher's self-confidence, time must be allocated for stress reduction before other learning can productively begin.

A recent meta-analysis of almost 200 research studies on staff development (Showers, Joyce & Bennett, 1987) suggests that successful training includes a four part process: (a) an explanation of the theory and rationale of the innovation, (b) workshop demonstration and modeling of the new strategy, (c) initial practice in the workshop setting, and (d) immediate feedback about attempts to implement the strategy. Obviously, these elements cannot adequately be addressed in a single workshop session.

Earlier work by Joyce and Showers (1983) also suggests that teachers need to develop a deeper understanding of the new technique and the ability to use it opportunistically ("executive" control). That is, teachers must understand when it is appropriate to use a strategy and how to adapt it to the changing characteristics of different types of students. Joyce and Showers (1983) also recommend actual classroom implementation and supportive coaching (discussed below) as a facet of the staff

development training. Interestingly, but not surprisingly, this structure of staff development training closely resembles many of the heuristics for sound classroom instruction (Hunter, 1984; Palinscar & Brown, 1984; Pearson, 1985).

Collegial Support

To grow and change, teachers need to become part of a professional group of colleagues. They should engage in dialogue and collaboration rather than remain isolated and competitive. In collaborative settings, teachers tend to interact often about professional concerns as they seek and give support and assistance to one another, a critical component of change and transition. As Little (1982) points out, these teachers are more apt to try new classroom techniques which, in turn, have positive effects on student achievement. The cycle comes full circle when the resulting student success then fosters greater teacher satisfaction, sense of efficacy and further willingness to change. Teachers come to believe that all students with whom they work can succeed due to their efforts and skills as instructors.

Staff development to support teacher change through collegiality should also capitalize on the advantages of coaching (Joyce & Showers, 1982). Coaching is the process where teams of teachers regularly observe one another and provide support, companionship, feedback, and assistance. In a coaching environment, all teachers perceive themselves as one another's coaches. Coaching teams help members feel good about themselves during the difficult periods of initial implementation of new methods and then after early enthusiasm has waned.

Through coaching, which promotes mutual reflection and problem solving, teachers receive and provide non-threatening, specific feedback about the particular skills they are practicing. The team members help each other learn when to use the new strategies, beginning with practice and application in controlled situations and then moving to investigating appropriate use in the classroom. They help each other learn to "read" students' responses so they can adapt the new techniques to the needs of different students.

Coaching and other collegial efforts will help teachers find support and encouragement during the risk taking associated with change.

Changing the Status Quo

To overturn the status quo is to take a risk. Teachers need encouragement, positive support, and a reason to take a risk when trying a new technique. The collegial environment and coaching discussed above are two factors which provide encouragement and support for change. Another vehicle for overcoming the status quo is to provide opportunities for teachers to build their efficacy expectation--"the conviction that one can successfully execute the behavior required to produce the outcome" (Bandura, 1977, p. 193). Teachers need opportunities to develop the belief that they can help students succeed and learn. The stronger the conviction of one's effectiveness, the more likely the person will try to cope with a difficult situation. In a cyclical manner, once students succeed, teachers seek ways to make themselves more effective (Lortie, 1975) which, in turn, fosters greater student success.

We can enhance teachers' sense of efficacy in several ways: providing teachers with encouragement to take small steps when trying new techniques--capitalizing on relatively safe and successful experiences; modeling and demonstrating during staff development training; discussing the theoretical basis of a new idea and benefits for children; and, providing positive feedback and support for any change efforts. These elements of staff development are clearly part of the training structure, collegial support and coaching models described above.

The status quo is also influenced by teacher evaluation. Evaluation of teachers can be conducted on a formative or summative basis. Formative feedback focuses on the improvement of instruction through the ongoing analysis and feedback of classroom observations and events. Summative evaluation, on the

other hand, is more usually a culminating activity aimed at the formal evaluation of teacher performance. Understandably, teachers would not ask for assistance or "admit" difficulties if they were concerned that a negative evaluation might hamper promotion, tenure, or career status. In fact, it has been suggested that training and evaluation should be separated, and perhaps even performed by different people (Joyce & Showers, 1987; Rosenholtz, 1985). Snyder (1981) also sees the potential for conflict in supervision and evaluation and the importance of feedback for breaking with the status quo. In discussing the clinical supervision model. she points out the following:

> Clinical supervision can be used primarily as part of an inspection system, designed to reinforce and maintain traditional practices in which teachers are presumed to be adequately trained. When so used, it becomes less a helping technology and more an evaluation technology. However, clinical supervision offers far more promise when viewed as part of a comprehensive teacher development system that aims at more ambitious goals (especially for learners) and that assumes teachers have need for continuous extension and refinement of their skills. . . . Clinical supervision has the potential for enabling teachers and administrators to break out of isolated and outdated practices and to achieve new performance norms. (p. 7)

Change agents must distinguish between formal evaluation and feedback. Unless this difference is clearly communicated and enforced, teachers will have little incentive to experiment with change or to take risks.

Learner Needs

When working with teachers to explore new teaching strategies, we must keep in mind that they are learners and, as such, have particular learner needs. Just as we need an understanding of child growth and development to work with children, we need knowledge of the adult learner when working with teachers. As Levine (1985) states,

> By understanding the ways in which adults grow and how their needs change . . . , staff developers can increase the likelihood of engaging and motivating teachers and principals, whose energies may then be turned more fully to working with students. (p. 14)

A consideration of adult learning will suggest several methods which will help staff developers design training, inservice programs and follow-up activities for various types of adult learners (Wilsey & Killion, 1982).

Teacher Mediation

The notion of "teachers as active implementers" (Parker, 1985) is one which fosters more direct classroom application of curricular change. This emphasis on conceptual flexibility or adaptability increases the ease with which teachers acquire and implement new instructional strategies (Joyce, Weil, & Wald, 1973; Showers, 1984). By acknowledging and supporting teachers' professional responsibility to adapt, restructure, or even delay a curricular modification, we are more likely to observe evidence of enduring teacher change. Although this path to change is nonlinear, and thus impedes attempts to predict future performance and generalizability (Parker, 1985), this should not be interpreted as a failure to achieve change.

As instructional leaders and educational researchers we must accept and, in fact, encourage variable interpretation and implementation of new programs. Success is then determined by the effects on teacher and student rather than fidelity to the plan. Otherwise, we run the risk of encouraging strategic compliance with the plan--selected, visible compliance--rather than true understanding and commitment to its implementation. When we give others the freedom and opportunity to act as

professionals rather than delineate their every action, change occurs more readily (Pearson & Valencia, 1987).

Programs to Support Change

In one K-12 school district, with one reading and one language arts coordinator for over 20,000 students, 1,000 teachers, and 30 schools, the issue of teacher change assumes some unique challenges. The programs described here were an outgrowth of situational needs observed over a period of time. Each program was designed to meet a specific problem without additional cost to the school district. So although these staff development programs are described within a common framework of teacher change, they were never intended to provide comparable data nor to provide precise prescriptions for common maladies. What seems to be most intriguing and appealing is the notion that a large school district, if aware of the obstacles to teacher change which ultimately impede curricular change, can effectively design and implement programs that enhance student performance and teachers' willingness to experiment with new strategies.

The Composition Framework: A Program to Build Better Writers

Program design. In 1982, a process writing program designed for the elementary level was implemented. The need for this program grew out of the concern that elementary students were not receiving adequate instruction in composition. The program, called the Composition Framework, focused on teaching strategies for the four stages of writing--prewriting, drafting, editing and sharing. The program primarily consisted of teacher training, but also incorporated other critical elements in its four phase implementation.

In Phase I the administrators and teachers in each building were given several guidelines for their school's participation. Each school was required to establish the improvement of writing as a 2-year goal before being considered for the program. Each building principal discussed his/her program roles and responsibilities with the trainers and agreed to support the program actively. In addition, administrators were requested to observe their teachers conducting writing lessons as a part of the clinical supervision and performance evaluation system. The program directors provided each building principal with a list of suggested teacher behaviors to look for during the observations. Building principals were also requested to support the program by purchasing teacher resources and instructional materials to help teachers implement the new program.

Phase II was a 12-hour staff development training program over 6 months, which was designed to build teachers' and principals' knowledge about the various stages of the writing process. The intent was to provide specific application strategies to translate that knowledge into action in the classroom.

The inservice sessions were delivered by the two program directors, both were Language Arts and staff development central office personnel. All teachers and the principals in each building were expected to attend all training sessions.

Beyond the training program, Phase III included on-site assistance from the program directors. This on-site assistance took several forms: demonstration teaching, individual consultations, grade level meetings, provision of resource instructional material, and observation and instructional conferencing.

Phase IV of the treatment consisted of three parent newsletters which were distributed to the guardians of each child in the program. In each issue, parents were given information about the stages of the writing process and suggestions for promoting their children's writing skills at home.

These four phases of the Composition Framework staff development program were designed specifically to address the obstacles impeding teacher change. Specifically, the long-term inservice program which incorporated application tasks and follow-ups was designed to combat the short-term

inservice obstacle. Behavioral changes in teachers were incremental and built on a principle of success. Meetings among grade level teachers, personal consultations from the coordinators, inquiries and observations by principals, and collegial sharing of teacher designed materials helped combat teacher isolation.

Establishing school-wide goals to emphasize and improve student writing skills over a 2 year period communicated clearly that the status quo was unacceptable. In order to participate in the program, both the administration and teaching staff had to agree that these goals were crucial and necessary to achieve.

The actual inservice programs were designed around the Conceptual Systems Theory (Hunt, 1966), a theory of adult development, in order to meet the unique needs of adult learners. Interventions for each of the seven stages of the Concerns-Based Adoption Model (Hall, George, & Rutherford, 1979) were pre-planned in the development phase to ensure direct assistance to teachers when they expressed concerns. Hence the needs of teachers as learners were addressed.

Lastly, teachers were given a basic process and model to use as a framework. They were encouraged to adapt the program to address individual grade level and learner needs. Program coordinators encouraged teachers to experiment and to share both their successes and failures. As a result, the program in place today in most schools looks drastically different from the original program because teachers have allowed the program to evolve and expand as students' needs and skills have changed. The coordinators did not anticipate that the program would be strictly adhered to, and from the beginning encouraged variation and adaptation.

Results. The program was evaluated by administering pre- and post-test writing samples to all students in grades 1-6. They were scored using an analytic trait mode, a process of evaluating the writing for specific factors (e.g., organization, capitalization, punctuation, sentence structure, format, etc.). The results, drawn from a random sample of student papers in experimental and control schools, indicated a significant increase in student writing skills in the experimental schools. Using an ANCOVA analysis with pre-tests as the covariate, evaluators determined that students at every grade level whose teachers participated in the Composition Framework staff development program performed significantly better on a number of writing criteria (DiStefano & Killion, 1985).

Although the traits were similar across grade levels, the criteria for scoring were based on the developmental levels of the students. That is, at each succeeding grade level, expectations increased. For example, performance required to receive a score of 3 in usage at sixth grade is more advanced than would be required to earn a like score at fourth grade. The chart below depicts the criteria for which there were significant differences between students in experimental and control schools at each grade level.

[Insert Table 1 about here.]

The most impressive finding was that students in the experimental programs significantly outperformed control students on traits such as organization, sentence structure, spelling, and usage. These traits are most closely associated with a process approach to teaching writing. The students in the control group did not perform significantly better than the experimental group on any trait at any grade level. Equally important is the finding that both experimental and control groups improved in the traits associated with the mechanics of writing. This addresses the concern of some that process writing might not provide adequate "skill" instruction.

This program demonstrates that careful design and planning before implementation, such as was evident in the Composition Framework program, produces significant improvement in student achievement. When we consciously address the obstacles to teacher change and design strategies for overcoming them, we can succeed.

Reading and Writing: A Process Approach

Program design. Another curricular modification began in 1984. This project stemmed from a year-long junior high school curriculum mapping project where teachers recorded the amount of time they spent on specific tasks and learnings within their allocated time for instruction (English & Steffy, 1983). The results of the mapping initiated curricular reform in most subject areas. In composition and reading the remedial programs required major revision. The data revealed that (a) those students previously identified as "remedial" reading students were, in most cases, also in need of additional instruction in writing; (b) the one class period allocated for remediation in reading was insufficient to promote gains in reading and writing; and, (c) teaching strategies and course content in the existing remedial courses varied markedly across the six junior high schools with no rationale to support those differences.

As a result of these findings, the curriculum coordinators, together with the junior high school teachers, designed a three-pronged effort to improve the remedial curriculum in composition and reading. The first effort was a pilot program to offer an additional instructional class period for identified "remedial" reading and/or writing students in four of the six schools. The remaining two schools were only able to offer one class period for remedial students and thus, served as controls. Then the district Language Arts and Reading coordinators met with teachers assigned to teach the pilot classes. As a group they developed a process-oriented reading/writing framework and specific learning objectives for the new class. Lastly, the coordinators developed and conducted a 30-hour inservice program for all junior high school Reading and Language Arts teachers. Thirty-five teachers, including 11 of the 12 remedial class teachers, voluntarily attended the class. This inservice program proved to be a key factor in the successful implementation of the curricular modifications.

When designing the inservice program, the coordinators carefully considered the obstacles to change. To combat teacher isolation, several procedures were integrated into the training. First, for the initial 15-30 minutes of each inservice, teachers would meet in "sharing groups" to discuss the techniques they had tried with students within the last 2 weeks. They shared successes, failures, adaptations, and in general, responded to each others' concerns. These sharing groups were composed of several teachers from the same school and several from other schools. The intent was to provide interaction among teachers with different orientations and concerns (different schools) while at the same time providing the immediate, close collegial support teachers might need on a day-by-day basis (same school). Members of groups were encouraged to share new ideas with the entire larger group after small group sharing. As the training progressed however, teachers requested more and more time for the small group sharing and problem solving that began each class.

Second, at some point during each session, teachers participated in personal reading/writing groups. This activity provided an opportunity for them to explore their own experiences as readers and writers so they could gain a better understanding of their students' experiences. The composition of these groups remained the same throughout the entire 10-session program and ultimately, each group developed unique characteristics and strong collegial ties.

Third, throughout the class, the instructors offered support by providing classroom demonstrations, observations and follow-up conferences, consultations and classroom coverage while teachers observed one another. Although some teachers took advantage of many of the support options, the predominant request was for consultation.

The inservice program consisted of ten 3-hour classes scheduled every other week from September until February. In this way, the coordinators were in close contact with the teachers over an extended period of time and worked closely with them as they incrementally implemented new instructional strategies. The longevity of the inservice program provided opportunities for ongoing support.

In considering the learning needs of teachers, the coordinators provided the participants with an overview of each session by outlining specific information to be presented and placing that information within the conceptual model of reading/writing discussed during the first class. This enabled the teachers to build new knowledge from their past understanding and experience. Instructors also modeled sound instruction: Instructional techniques were demonstrated, teachers practiced under the supervision of the instructors and then practiced independently and modified the techniques while working in small groups. Additionally, at the end of each session, participants were asked to reflect on the session and verbalize the information they found interesting or potentially useful. Then, they were given an assignment to try some of the new strategies during the following 2 weeks.

Altering the status quo happened in two ways. First, the teachers were actively involved in the curriculum revision. They collected data from their own classrooms and then served as members of the committee responsible for curriculum revision. In order to implement this new curriculum the teachers determined that they would need instructional strategies different from those they were currently using. Second, in the sharing groups, teachers learned from each other, rather than the instructors. They provided living proof to each other that the new strategies were valuable. Personal experience and those of trusted colleagues "in the same boat" legitimized what they were learning. They were able to capitalize on others' experiences as well as their own.

Lastly, teachers were given freedom to select from an extensive inventory of techniques offered to them by the instructors. No instructional strategies were forced on them; they had specific outcomes to achieve and were able to choose the techniques that best matched their abilities, their students' needs, the environment in which they worked, and their own personal comfort level. The curricular modifications did not specify how teachers were to achieve their outcomes, but rather left instructional decisions solely to the expertise of teachers.

Results. The program was evaluated both qualitatively and quantitatively. Midway through the class, teachers were asked to provide anonymously written reactions to the class and to recommend changes or topics for the second half of the class. These responses were reviewed, presented to the participants, and then as a group, the decisions were made regarding the restructuring and revision of the second half of the training. At the end of the program, teachers provided written responses to open-ended questions about how the class had influenced their teaching. Additionally, students in the new remedial program were pre- and post-tested using a writing sample, standardized reading test, and an attitude measure on reading and writing.

Because 11 of 12 remedial teachers enrolled in the voluntary inservice program it was not possible to assess statistically the effects of the training program. Therefore, comparisons could be made only across instructional programs. A random sample of experimental and control students indicated that those in the double period program made significantly greater gains in writing than the control group and small but insignificant gains in reading. There were no differences in attitudes toward reading and writing. These data were consistent with teachers' impressions and consistent with our observations that because writing instruction was initially less familiar to teachers, they spent more time teaching writing than teaching reading. Overall, gains made by *all* remedial students were more pronounced after the staff development program than in the previous school year.

More revealing however, are the qualitative data collected from the participating teachers. Their written responses indicated they felt they had learned the most in the area of composition, but had gained some insight into the similarity between the processes of reading and writing. They believed they had been effective at teaching and that their students had made significant gains in writing. They appreciated the opportunities to try new techniques and discuss them with colleagues. Many teachers commented on the value of developing a network of colleagues that provided a support system outside of the inservice setting. Others suggested that the ultimate value of the training would be found in the coming months and years of teaching and in their continued experimentation with new instructional

techniques. As one teacher wrote about trying new strategies with her class, "Our end products were not always outstanding but our awareness of our needs were keenly sharpened."

We were encouraged by the initial data from this program and find this framework for teacher change to be a viable one for reaching a large number of teachers over a short period of time with little additional cost to the school district. Since the staff development program did not begin until October and ended in March, we did not anticipate extensive gains in student achievement. We did, however, hope to instill in teachers an understanding of the reading/writing process and to build a collaborative network to support ongoing growth and change. In these respects, we were most pleased with the results and we are optimistic for the future.

Implementing Reading Research with Reading Consultants

Program design. In 1984, a staff development inservice program was conducted for elementary school reading specialists. The purpose of this program was to provide new instructional strategies and support for teachers to implement sound research-based reading instruction. During the previous 4 years these teachers had been gradually encouraged to alter their role from direct service to children to a resource consultant role where time is divided between working with children and working with classroom teachers. This shift was encouraged to maximize the impact on children and on the school-wide reading program by increasing expert contact with classroom teachers. As a result, the reading specialists began to sense a need to improve their own knowledge and skills and asked for a staff development program to support them. A 10-hour inservice class, designed to share new reading research and ways of implementing research in the classroom, was offered.

Twelve of the 13 remedial reading teachers voluntarily enrolled in the 5-week inservice class conducted by the district reading supervisor. During the class, recent research on reading comprehension was discussed and specific teaching strategies introduced. A major portion of the class was devoted to the discussion of techniques teachers had tried and adaptations they had made to meet their needs and those of their students. The class developed a problem-solving type of format. Not only did teachers share successes but failures as well. When new ideas were presented, they were discussed in light of how they might actually be applied in small group and classroom settings, and the potential problems and adaptations that might be required.

All teachers were observed at least twice during the semester with an emphasis placed on discussion and collaboration. In four schools the role of supervisor was also reversed: the trainer asked the reading teachers to observe her teaching a lesson, provide feedback, and then help formulate the next lesson. After reciprocal observations, the supervisor and reading teacher worked as a team in that school to model and encourage classroom teachers to implement new strategies.

The major purpose of this program was to upgrade the skills of elementary reading specialists by encouraging them to experiment with new ideas and teaching strategies. A secondary long-term goal was that as consultants, these reading specialists would eventually internalize and become comfortable enough with the new ideas to demonstrate and share them with classroom teachers. And of course, a third goal was to establish a positive, collegial climate of support and change within the group of reading teachers and between the district reading supervisor and individual reading teachers.

Results. At the end of the second semester three teachers, identified as "high users" (Hall, et al., 1975) of new ideas and strategies were interviewed by an independent researcher. This type of sampling (sampling for conceptual reasons rather than for generalizability) is based on grounded theory research design (Glaser & Strauss, 1967) and has been employed in several earlier studies (Parker, 1985; Parker & Gehrke, 1986). Within this framework, it was desirable to select teachers who were enthusiastic about the program and interested in sharing their ideas. There were two foci for these interviews: (a) to gain insight into how these teachers made decisions during instruction--what they thought about, how they mediated instruction during a reading lesson, and (b) more specifically related to this paper,

to determine how successful the staff development training had been at promoting teacher change by gaining understanding of the ways in which teachers were applying skills learned in the staff development program.

Although the identified teachers were similar in terms of being active implementers, they differed in the background and knowledge they brought to the inservice program. They spanned a continuum: (a) an experienced classroom teacher who was relatively new and untrained as a reading teacher (novice), (b) a teacher who had been in the classroom 10 years, had recently received a masters degree in reading and was continuously enrolled in other reading classes or workshops (intermediate) and, (c) a teacher with 21 years teaching experience and a Masters degree in reading received approximately 12 years before (veteran).

These three teachers were asked to tape record a lesson and then engage in a stimulated recall interview. Along with the interviewer, each teacher listened to the tape and stopped it at various points to discuss what he or she was thinking while conducting the lesson. After reviewing the lesson with the interviewer, the teacher was asked to discuss the instructional techniques and implementations as they related to the inservice program. The interviews were recorded and transcribed.

In terms of the impact of the staff development program, analyses of the tapes were focused on three areas: (a) the distinction between ideas and specific strategies addressed in the inservice; (b) the differences between the way the information was presented in class and the way the teacher implemented this information; and (c) the way consultants transmitted this information to classroom teachers.

All the teachers perceived the training program as an opportunity to learn and discuss ideas. It was described as "a sharing of ideas, not only from the instructor, but from other teachers" and as an opportunity to find out what worked for others and how they had to adapt it to make it useful. The program was seen as an opportunity to "revitalize" and to learn new teaching skills. While the novice and veteran teachers saw the program as focused on specific teaching techniques, the intermediate teacher felt the class was about both techniques and broad concepts and ideas.

The implementation of new techniques varied among the three "high users." The teacher who entered the inservice program with the most recent training in reading instruction (intermediate) was unable to separate her current beliefs and practices from the information presented in class. Only after consulting her notes and class handouts was she able to realize the degree to which she had modified the techniques presented in class and integrated them with her own. In fact, she commented about the program, "I just got the relationships and big ideas, and the way I use them . . . is my own." She considered the adaptation and mediation of strategies a critical component of her teaching. In comparison, the teacher with little prior knowledge (novice) and the most experienced teacher (veteran) were able to identify specifically the information learned in class. These teachers implemented the strategies precisely as they had been presented with little or no modification. The only modifications that were made included providing more guidance for students and using various reading materials; the formats and actual instructional techniques were not altered.

In consultations with classroom teachers, the intermediate teacher tended to respond more to teachers' needs by diagnosing the situation and adapting instructional techniques. The others were more prescriptive and less flexible in their responses to requests for assistance. They depended heavily on the information learned in class and tended to share it with the classroom teacher in the same way it was presented during the inservice program.

These results reveal that teachers mediate or adapt new learning differentially depending on their prior knowledge, experiences and attitudes. When teachers personalize new information by actively adapting it, deep, lasting change is more likely to occur. As the veteran teacher noted when asked how the information in the program differed from her classroom implementation, ". . . not much, because my

first exposure to it was through this class and so, at this point, it is basically the same." Clearly, she expected to modify the instructional strategies, but not at this stage of her development. If participants are aware of this need to moderate innovations over time, certainly those charged with the responsibility of evaluating staff development programs must also heed the caution. If we are to measure the success of teacher change programs, we must be cognizant of the teacher's role as a mediator in interpreting and presenting new ideas.

Conclusion

By planning and designing programs to overcome the obstacles to teacher change, we were able to build a framework to support that change. Our experiences suggest several implications for designers of staff development, teacher-change programs.

1. Long-term inservice or teacher training programs which incorporate application activities and include follow-up have longer lasting effects on teachers.

2. Establishing a need, including teachers in the design of the program, and communicating that the status quo is unacceptable, stimulate commitment to change.

3. Addressing the needs of teachers as learners, through the instructional program and interventions, promotes a safe climate for them to take risks.

4. Providing opportunities for increased collegiality and collaboration enables those responsible for implementing change to feel a part of a professional community. By reducing teacher isolation, teachers have more access to the support they need for change.

5. Program designers must view teachers as decision-makers. They must build in room for flexibility, personalization, and adaptation. When given encouragement to make a new program fit their needs, rather than adhering strictly to a "prescriptive" approach, teachers are more effective and more willing to implement change.

With these ideas in focus, we can build strong staff development programs which promote and support enduring and continual change.

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Table 1

Results of Post Writing Comparing Experimental and Control Schools

	Grade Level					
Traits	1	2	3	4	5	6
Organization	XX	XXX	XXX	XX	XXX	XXX
Sentence Structure	X	X	X		X	XX
Usage				X	XX	XX
Punctuation						
Capitalization						
Spelling		XX	XX	X	XX	XXX
Format						

XXX = $p < .001$
XX = $p < .01$
X = $p < .05$