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AUTHOR	Chimerine, Carrie B.; And Others
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ABSTRACT

The Nine-Site Program Improvement Initiative evaluated in this report was a 3-year venture in which federal contractors provided technical assistance to schools. The contractors, Chapter 1 Technical Assistance Centers (TACs) and Rural Technical Assistance Centers (RTACs) received about $60,000 per year for their work with each site, which included several schools. Participating schools had programs funded by Chapter 1 that had been identified as needing improvement on the basis of inadequate gains in student performance. Five sites were large urban districts (Baltimore, Chicago, Detroit, Los Angeles, and Dade County, Florida). Three sites included relatively small isolated rural schools (Pike County, Kentucky; a cluster of schools in Southeastern Iowa; and 9 schools in 6 districts in the Mississippi Delta). Seven schools administered by the Bureau of Indian Affairs comprised the ninth site. Although there were positive outcomes of the initiatives, including increased understanding of the requirements of Chapter 1, a central finding is that technical assistance had limited impact in these schools. Reasons for these limited effects are discussed. They center on the facts that the assistance conformed to conventional models of external assistance and school change and that clear, long-range visions were not available. An appendix presents 18 tables of study findings. (Contains 8 references.) (SLD)

POLICY STUDIES ASSOCIATES, INC.
1718 CONNECTICUT AVENUE, N. W. • SUITE 400 • WASHINGTON, D. C. 20009 • (202) 939-9780

THIRD-YEAR EVALUATION OF THE NINE-SITE PROGRAM IMPROVEMENT INITIATIVE

Carrie B. Chimerine
M. Bruce Haslam
Katrina G. Laguarda

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EXECUTIVE SUMMARY

Many federal education programs support technical assistance to state departments of education, school districts, and schools. This report discusses the accomplishments and limitations of a recent initiative in federally supported assistance to schools. The lessons of this initiative can be applied in two laws that are soon to be reauthorized, the Elementary and Secondary Education Act (ESEA) and the authorizing legislation for the Office of Educational Research and Improvement of the U.S. Department of Education (ED); both laws address the organization and operations of technical assistance.

The Nine-Site Program Improvement Initiative evaluated in this report was a three-year venture in which federal contractors provided technical assistance to schools. The contractors--Chapter 1 Technical Assistance Centers (TACs) and Rural Technical Assistance Centers (RTACs)--received about $60,000 per year for their work with each site, which included several schools. The participating schools had programs funded by Chapter 1 of ESEA that had been identified as needing improvement on the basis of inadequate gains in student performance. Five sites were large urban districts: Baltimore, Chicago, Detroit, Los Angeles, and Dade County, Florida. Three sites included relatively small, isolated rural schools: Pike County, Kentucky; a cluster of schools in southeastern Iowa; and nine schools in six districts in the Mississippi Delta. Seven schools administered by the Bureau of Indian Affairs (BIA) in the U.S. Department of Interior comprised the ninth site.

The Nine-Site Initiative offers lessons about ways of organizing and conducting technical assistance that goes directly to individual schools and that is sustained over a reasonably long period of time. On the positive side, this evaluation identified several accomplishments of the initiative:

- At the end of the third year of the initiative in all of the sites, there was evidence of increased understanding of Chapter 1 regulations and requirements, improvements in the quality and understanding of achievement test data, and increased understanding and experimentation with new instructional techniques.
- In several sites, participation in technical assistance activities appeared to contribute to increased collegiality and professional confidence among teachers.
- In two sites, technical assistance contributed to changes in district administration of Chapter 1.

- Overall, teachers, principals, and district and state administrators who were familiar with the assistance activities gave them high marks and felt that the TAC/RTACs responded to local problems and concerns. They also appreciated the materials the TAC/RTACs provided, particularly information about programs and practices operating in other places around the country.

Nevertheless, despite these positive outcomes and the perceptions of participants, *a central finding of this evaluation is that the technical assistance had limited impact in these schools*. Reasons for the lack of significant impact include the following:

- Technical assistance was linked to an unpopular and incompletely understood federal mandate, with the result that it was difficult to initiate any activities and there was little interest in and commitment to them once they began.

- Technical assistance content and strategies were, for the most part, determined by the TAC/RTACs and local administrators with little or no input from teachers. The activities were primarily intended to convey information, but not necessarily to contribute to professional development or an informed critique of current programs and practices in individual schools.

- Technical assistance was not strongly linked to other reform initiatives, nor was it guided by local visions of how schools that serve disadvantaged students might be better.

- There was little support and encouragement for teachers to participate in the assistance activities or to work on related improvement tasks at other times.

The Nine-Site Initiative began under conditions that federal officials expected to be conducive to success. Several of the sites were already engaged in ambitious reforms (e.g., the changes in Chicago school governance, site-based management in Dade County, and the Kentucky Educational Reform Act). The mandate for Chapter 1 program improvement had been imposed on all the participating schools, bringing with it a requirement for school-level improvement plans. The TAC/RTACs were veteran providers of assistance on assessment and program improvement.

On the other hand, some circumstances surrounding the initiative were less auspicious. In an evaluation that tracked the early course of the initiative, we found enormous confusion about the duration of ED's support for the initiative and about the expectations for what was to be accomplished. The earlier evaluation also found that schools in many of the sites were coping with conditions of extreme disadvantage in their communities, which made it difficult to concentrate on change and improvement despite the overwhelming need. Ironically, the presence of other reform initiatives in some sites, instead of creating momentum that could help carry Chapter 1 program

improvement, instead impeded start-up of the nine-site activities because state and local reform initiatives took precedence over Chapter 1 program improvement. All these circumstances combined to dampen the potential local commitment to the technical assistance activities.

This absence of commitment, combined with the fact that, in eight of the nine sites, participation was mandatory, meant that the TAC/RTAC had to spend considerable time selling the initiative and themselves to the schools. Furthermore, two sites, Los Angeles and Mississippi, were served by a TAC or RTAC that lost its contract after the first year. In each case, the new contractor had to repeat the work of building rapport.

The Context and the Services

Through on-site interviews with teachers, principals, district administrators, and technical assistance providers, along with a review of detailed monthly reports from the TAC/RTACs, this evaluation examined the local contexts in the sites and the technical assistance services provided through the Nine-Site Initiative.

The Sites: Not Predisposed to Use Assistance

The nine sites participating in this initiative ran the gamut from immense urban districts to isolated rural settings; most of the schools had high levels of poverty among their students. Despite the mandate to improve their Chapter 1 programs, few schools embarked on this initiative with a drive for reform in Chapter 1--not the least because for many of them the clash of multiple reform initiatives was a continuing worry.

- The requirement for Chapter 1 program improvement did not, by itself, create fertile ground for assistance in any of the schools. Typically, teachers and principals were mildly resentful that their school had been identified for improvement and wanted the designation to go away.

- In the urban sites, large, complex bureaucracies, labor disputes, and impending budget shortfalls made it difficult for the TACs to get the attention of local administrators and school staffs.

- In the rural sites, by contrast, the relative absence of competing programs and pressing problems meant that the technical assistance activities received greater support.

Participation: Varying but Modest Intensity

Although the Nine-Site Initiative was considered a departure from previous federal assistance because it would provide intensive services to individual schools, local participants typically did not experience the services as intensive. Initially, many schools were included, but in the third year, even with fewer schools engaged in the initiative, a typical school received only a few person-days of on-site help. Furthermore, these on-site days represent the assistance provider's time, not the individual recipients' time; under the varying local arrangements only a small proportion of participating teachers actually experienced more than a few hours of assistance or saw the assistance provider as often as monthly. (The appendices to the report contain detailed information about the content and amount of assistance provided.)

- During the first year of the Nine-Site Initiative, the total number of participating schools was 68, with the number of schools receiving services ranging from five to ten per site. The total number of participating schools declined by one-third by the beginning of the third year of the initiative.

- In the third year of the initiative, the mean amount of TAC/RTAC assistance to individual participating schools was 40 hours, with a median of 43 hours. The range was from 81 hours at a school in Baltimore down to 12 hours at a school in Chicago. In four sites, TAC/RTACs achieved some economies of scale by providing assistance to several schools in a central location.

- In three sites, TAC/RTACs provided assistance to each individual school every month of the year. In the other sites, individual schools did not receive on-site assistance every month; some schools received as few as two or three visits from TAC/RTAC staff during the year.

- In Baltimore, Iowa, and Los Angeles, technical assistance was targeted to clearly defined, small groups of school staff, who received relatively high levels of assistance. At other sites, teacher participation was more broadly distributed; as a result, more teachers participated in assistance activities, but individual teachers received very little assistance.

Content: Information Transmission

By and large, the nine-site assistance disseminated new information to participants. To a lesser extent, it trained them in applying new skills. It did little to help them tie the new information or skills into a broader vision of instructional improvement. Although the content of the technical assistance varied across sites and individual schools, the common denominators included a focus on

instruction, Chapter 1 requirements, and assessment. In several sites, the content shifted and evolved over time; a clear, consistent focus was the exception rather than the rule.

- In all sites, the content of technical assistance usually included: (1) training in new instructional practices, especially "hot topics" like cooperative learning, whole language, and math manipulatives; (2) assistance with Chapter 1 program administration and the interpretation and use of student test data; and (3) assistance or training related to local or state initiatives.

- The most ambitious TAC/RTAC efforts to introduce innovations in classroom instruction attempted to ground teachers in the research and rationales underlying whole language, literature-based language arts, or the teaching of problem solving and other advanced skills in mathematics. Frequently, assistance activities had the more limited goal of introducing information about discrete instructional practices that teachers could use immediately.

- In most sites, TAC/RTAC assistance attempted to strengthen school-level efforts to meet the requirements of state and local reforms; in several sites, TAC/RTAC assistance included a modest amount of help in developing and evaluating schoolwide projects.

Varying Strategies for Organizing and Delivering Technical Assistance

In the absence of specific direction about how to organize their services, the TAC/RTACs developed different ways of working with the sites. The approaches and their results varied greatly.

- Where TAC/RTAC activities involved groups of schools, they achieved some economies of scale, providing more contact hours to schools and teachers than visits to individual schools alone would allow. In other sites, TAC/RTACs pursued a strategy of intensive attention to a small number of teachers, working on classroom instruction through demonstration teaching and coaching.

- Technical assistance in Iowa, which involved teams of teachers and administrators from each school participating in a series of activities that were connected to a clear framework, reflected the most thoroughly developed strategy for organizing and providing technical assistance.

- In sites where one-on-one sessions were the dominant TAC/RTAC strategy, sessions tended to be discrete, isolated events with little relation to one another.

- In sites where a clear content focus and a well-defined strategy for delivering services guided the technical assistance process, the assistance was much more likely to be

cumulative over the three years of the initiative. In sites without a clear focus, technical assistance tended to be tentative and reactive.

- We found a few examples of TAC/RTAC cooperation with other external assistance providers, but no extensive collaboration.

Conclusions and New Directions for Technical Assistance

The Nine-Site Initiative had its successes, especially as perceived by participants at the sites. The TACs and RTACs understood local demands for assistance and worked hard to meet them. One indicator of their success is that in five of the nine sites, negotiations are under way or contracts have been signed to extend TAC/RTAC assistance into 1993-94. Our findings about the amount, content, organization, and outcomes of the assistance lead to several favorable conclusions:

- The technical assistance activities and services generally met teachers' and principals' standards for quality.
- The TAC/RTACs provided the schools with a large amount of information and materials about instructional practices, curriculum, and student assessment.
- Many participating teachers reported that they had experimented with the new strategies in their classrooms and found that these strategies "worked"--they held students' attention, they relieved teachers' boredom, and they offered new ideas for lesson plans.
- Follow-up visits, although usually limited in duration and frequency, gave teachers a chance to review progress and seek additional advice on how to use the information. Repeated visits over the three-year period, even though they were not always frequent or regular, helped set TAC/RTAC assistance apart from assistance that teachers and principals reject as not helpful.
- In several sites and schools, TAC/RTAC assistance extended the standard model in two additional ways. First, assistance was targeted to stable groups of teachers whose participation was sustained for a long period of time. Second, the assistance topics were cumulative--each individual activity was part of a framework that connected it to a broader vision.

Despite some real contributions, though, the Nine-Site Initiative had a limited impact on participating schools specifically because the assistance conformed to conventional models of external assistance and school change. The bulk of the technical assistance was organized around presentations, workshops, and other dissemination activities given by experts to impart skills to

teachers. It was designed to support training and the transfer of information and skills, not problem solving. If the intent of the initiative was to generate serious attempts at Chapter 1 (or broader) improvement, then this traditional model of technical assistance was not a good choice.

No one should have expected that TACs and RTACs would select an alternative mode of assistance. One reason is that prior experience with technical assistance leads teachers and principals to expect a certain type of service, most likely one that revolves around a set menu of options for workshops and presentations related to specific instructional techniques and ways to install them into daily lesson plans (Fullan, 1991). In addition, given the structure of the Nine-Site Initiative--particularly its link to Chapter 1 program improvement requirements--its fairly hasty start-up, and the confusion regarding ED's goals in the initiative, the TAC/RTACs had little reason to rethink their traditional approach to technical assistance. Instead, they chose the rational and reasonable course of following the technical assistance model of the day. Their client (ED) implicitly demanded it--by not directing the TAC/RTACs to try different or novel approaches--and their target audience (schools) expected and happily received it.

The organization, content, and ultimately the impact of technical assistance were also limited by the fact that few participants, if any, had clear, long-range visions or plans for changing their schools. Although the Chapter 1 requirement for program improvement plans was intended to stimulate such visions, in fact the school plans did not reflect careful thought about curriculum, instruction, assessment, or staff development, nor did the plans appear to have emerged from extensive participation and deliberation by teachers and other members of the school staffs. Administrators and teachers in all of the schools had little understanding of Chapter 1 program improvement at the time the Nine-Site Initiative began. For most of them, it represented a bureaucratic requirement that did little to inspire serious thinking about opportunities and options for change. As we learned, the goal was to "to get out of program improvement." Some schools did test out during the second or third year of the initiative. A few schools that demonstrated gains did not sustain them and were identified a second time. Other schools remained in program improvement status at the end of the third year. We did not find any clear evidence to suggest that the changes in program improvement status were linked to anything that the schools or the TAC/RTACs did in the way of program improvement.

In the absence of ambitious visions or incentives to develop them, the TAC/RTACs provided information and advice about alternative instructional techniques and some opportunities for feedback after preliminary classroom experiments. Teachers searching for new techniques welcomed and valued assistance that provided such techniques; however, this assistance did not push them towards new directions in practice or new views of their professional roles. Therefore, it is not surprising that

the assistance did not lead to many noticeable changes in schools' capacities to change or to be self-reflective.

If ED wants to use school-level technical assistance to contribute to a more fundamental redesign of education for disadvantaged students, the experience of this initiative suggests several possible new directions for future technical assistance efforts.

1. Through competitive procurements and reporting requirements, give assistance providers incentives to go beyond conveying information about successful practice and to foster professional development of teachers.

Federal support for all the providers of technical assistance should reflect clear expectations about the purposes of the assistance. By the same token, because assistance that nurtures self-reflection and critical thinking is largely uncharted territory--few providers and probably fewer federal officials know how to do it--the government should avoid excessive prescription about the content and methods of assistance. ED could encourage or require potential contractors to propose alternative models of technical assistance and to explain why the models are appropriate for intended target audiences. Potential contractors also could be encouraged or required to provide evidence that potential target audiences are disposed to use the alternative forms of assistance. Indeed, an important task in providing new kinds of technical assistance will be to help recipients develop the capacity to use it. A revised reporting system also would require contractors to provide the quantitative information necessary to support observations and assertions about implementation and effectiveness.

2. Create a technical assistance network that connects to and leverages state and local support for professional development.

Technical assistance in support of school problem solving must go hand in hand with more ambitious and unconventional forms of professional development. In fact, even conventional technical assistance demonstrates the need for connection with local professional development. Even when assistance is available to participants at no cost for the services, there are costs such as paying substitutes to cover classes, paying stipends for participation during non-school time, or simply allocating normal staff development time to the assistance activities. The size of these commitments grows rapidly as they include opportunities for teachers to continue working together between visits by external assisters. Requiring local contributions to support participation in technical assistance and

related improvement activities will increase the likelihood that these efforts will be sustained over time.

3. Create an assistance network organized primarily around themes or topics, rather than categorical programs, and including both process and content specialists.

The experience of the Nine-Site Initiative demonstrated the problems that external assisters face when their assistance is linked to a program that is not central to local improvement efforts. A more compelling foundation for an assistance network would be the aim of fostering ambitious reform in the name of a broader goal--such as bringing all students to high levels of academic performance.

By offering assistance from specialists in both process and content, policymakers would recognize that both are needed. Process specialists could help schools build norms of collegiality and cooperation and define goals, problems, and improvement tasks. Content specialists would then be available, at the request of schools and districts, to help solve the problems and carry out the tasks.

4. Integrate new technologies into the technical assistance network.

Technology can help in technical assistance through conveying large amounts of information and facilitating communication among schools and technical assistance providers. Despite the increasing sophistication of the new technologies and relatively easy access to them, however, this alternative should be pursued with caution. Most schools in the Nine-Site Initiative do not have the hardware and software necessary to take advantage of anything more than a routine electronic dissemination system. Further, even when they are available, school staff do not use them.

5. Support capacity building for the providers of technical assistance.

A central theme in the alternatives is that future technical assistance programs will provide services that are vastly different from those that are provided now. As we saw in the Nine-Site Initiative, a shift in focus to school-level assistance combined with the need to establish and maintain long-term relationships with schools and districts were learning experiences for the TAC/RTACs. The alternative assistance strategies discussed here represent even greater changes in perspective and practice. Therefore, we expect that there will be a need for training and staff development opportunities to prepare technical assistance providers to carry out their new responsibilities. The on-

line information systems being developed and used by the TAC/RTACs are but one example of internal capacity building. Networking activities among the Eisenhower National Regional Consortia for Mathematics and Science Education are a second example. More focused in-house staff development activities, including training and staff seminars, are a third possibility.

In conclusion, although the Nine-Site Initiative affected a significant number of teachers, principals, district administrators, and technical assistance providers by involving them in an experiment in improving education for disadvantaged students, our evidence indicates that for most participants the impact was not very deep and will probably not last very long. The primary reason for the lack of significant, sustained impact is that the Nine-Site Initiative and the assistance it supported were guided by a limited view of how schools change. Thus, the challenge for future technical assistance programs is not to figure out ways to make the traditional approaches more effective. Instead, the challenge is to create and support technical assistance programs that recognize and address the complexity of school change and the professional needs and capabilities of educators.

I. INTRODUCTION

Many federal programs and contractors provide technical assistance to state departments of education, school districts, and schools. For the reauthorization of the Elementary and Secondary Education Act (ESEA) and ED's Office of Educational Research and Improvement (OERI), considerable attention has focused on policy options for reorganizing ED's technical assistance programs to increase their efficiency and effectiveness. One question that has arisen concerns the value of school-level technical assistance. The recently concluded Nine-Site Program Improvement Initiative in Chapter 1 has demonstrated some contributions and pitfalls of such assistance; this report analyzes its lessons.

The Nine-Site Program Improvement Initiative was intended to explore the potential contribution of technical assistance in schools identified for Chapter 1 program improvement under the provisions of the Augustus F. Hawkins-Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988 (P.L. 100-297). The initiative supported assistance that was more intensive and of longer duration than most assistance and staff development programs available to schools that serve disadvantaged students. Therefore, as ED looks ahead to redesigning its technical assistance enterprise, it may be useful to look back at the lessons that can be learned from the Nine-Site Initiative. Although the initiative represents a very small portion of ED's investment in technical assistance--less than one-half of 1 percent in fiscal year 1992--it is one of the few long-term, school-level assistance activities sponsored by ED and the only one in support of a categorical program.

At one time or another and in varying degrees, assistance provided under this three-year initiative served virtually every purpose addressed by federal technical assistance:

- Helping grantees and other recipients of federal funds understand the legal aspects of categorical programs (e.g., informing them about regulations, assisting them in meeting reporting requirements)
- Assisting state departments of education, school districts, and schools with specific technical tasks (e.g., student assessment, program evaluation)
- Building the capacity of these agencies to carry out the technical tasks themselves
- Disseminating information on effective practices
- Facilitating the development of lateral networks (e.g., among Chapter 1 schools)

- Working intensively with schools (or others) to help them define and solve their own educational problems

This report presents the findings from the third-year evaluation of the Nine-Site Initiative and discusses their implications for the operation of federally sponsored technical assistance programs. The remainder of this introduction describes the Nine-Site Initiative, summarizes the key findings from a previous evaluation that we conducted at the mid-point of the initiative, and outlines our approach to the third-year evaluation. The second section describes the technical assistance provided in the nine sites; the third section examines changes in schools over the three years of the Nine-Site Initiative and the impact of the assistance on teachers and principals, school organization, district administration of Chapter 1, and student outcomes. The last section offers some concluding observations about the reasons for the particular organization, content, and strategies of the assistance provided under the Nine-Site Initiative and discusses possible new directions for future technical assistance programs.

The Nine-Site Program Improvement Initiative

In 1990, ED established the Nine-Site Program Improvement Initiative to learn more about how federally sponsored technical assistance in addition to that normally provided by school districts and state departments of education could help the schools identified for Chapter 1 program improvement. The initiative was designed as a multi-year effort in which ED's Chapter 1 Technical Assistance Centers (TACs) and Rural Technical Assistance Centers (RTACs) would provide technical assistance for program improvement to schools in the targeted sites.

ED selected nine sites, each of which offered formidable challenges to external assisters. (See Exhibit 1.) Five sites were large urban districts: Baltimore, Chicago, Detroit, Los Angeles, and Dade County, Florida. Three sites included relatively small, isolated rural schools: Pike County, Kentucky; a cluster of schools in southeastern Iowa; and nine schools in six districts in the Mississippi Delta.[1] Seven schools funded by the Bureau of Indian Affairs (BIA) in the U.S. Department of Interior comprised the ninth site.[2] A total of 68 schools, selected by school districts or state

[1] At the beginning of the Nine-Site Initiative, there were seven districts in the Mississippi Delta site; two of these districts merged during the course of the initiative.

[2] BIA schools may be operated by the BIA by tribes under contracts or grants from the BIA. Six of the schools in this site are operated by the bureau and one is a grant school. The staff of the six bureau-operated schools are all federal employees.

departments of education and, in some sites, in conjunction with the TAC/RTACs, formed the initial group of schools that received services. The number of participating schools in each site ranged from a high of ten in Chicago to five in Kentucky. In Baltimore, Dade County, and Detroit, the TACs provided assistance to a Chapter 1 program serving religious-school students. Almost all of the participating schools were elementary schools, although there were a few middle or junior high schools and two high schools. Once the sites were chosen, ED added about $60,000 per year to existing TAC/RTAC contracts to support the services in each site. This amount was to cover all on-site assistance, preparations for assistance, and TAC/RTAC travel expenses. (As the map in Exhibit 1 illustrates, all of the TAC/RTACs are located several hundred miles from the sites included in the initiative. In addition, schools in the rural sites were quite spread out--up to 80 miles apart in Mississippi--so travel costs and staff time spent traveling were no small matter in planning and scheduling technical assistance services.) The modifications to the regular TAC/RTAC contracts specified that at least half of the TAC/RTAC hours allocated to the Nine-Site Initiative be spent on site.

Technical assistance supported under the Nine-Site Initiative differed from and extended the regular patterns of TAC/RTAC services in two ways. First, services were directed to Chapter 1 programs in individual schools rather than to an entire district Chapter 1 project or a state department of education. Letters of agreement for TAC/RTAC services are usually between state departments of education and the TAC/RTACs. Under the Nine-Site Initiative, the letters of agreement were between the TAC/RTACs and the individual schools and/or school districts, although in some cases state Chapter 1 officials either reviewed or signed the letters. Second, the initiative was planned and announced as a long-term effort, although there was some confusion about the expected duration of support.

Thus, even though the amount of funding for the initiative was relatively low, the organization and concentration of services meant that they were more intense than other TAC/RTAC services. The long-term relationships with individual schools and districts that ED hoped to foster through the initiative represented a new dimension of TAC/RTAC work.[3] The plans for the Nine-Site Initiative reflected a recognition that change takes time, and that while it can be mandated and encouraged from above, teachers, principals, and other members of school communities are the ones who must carry it out.

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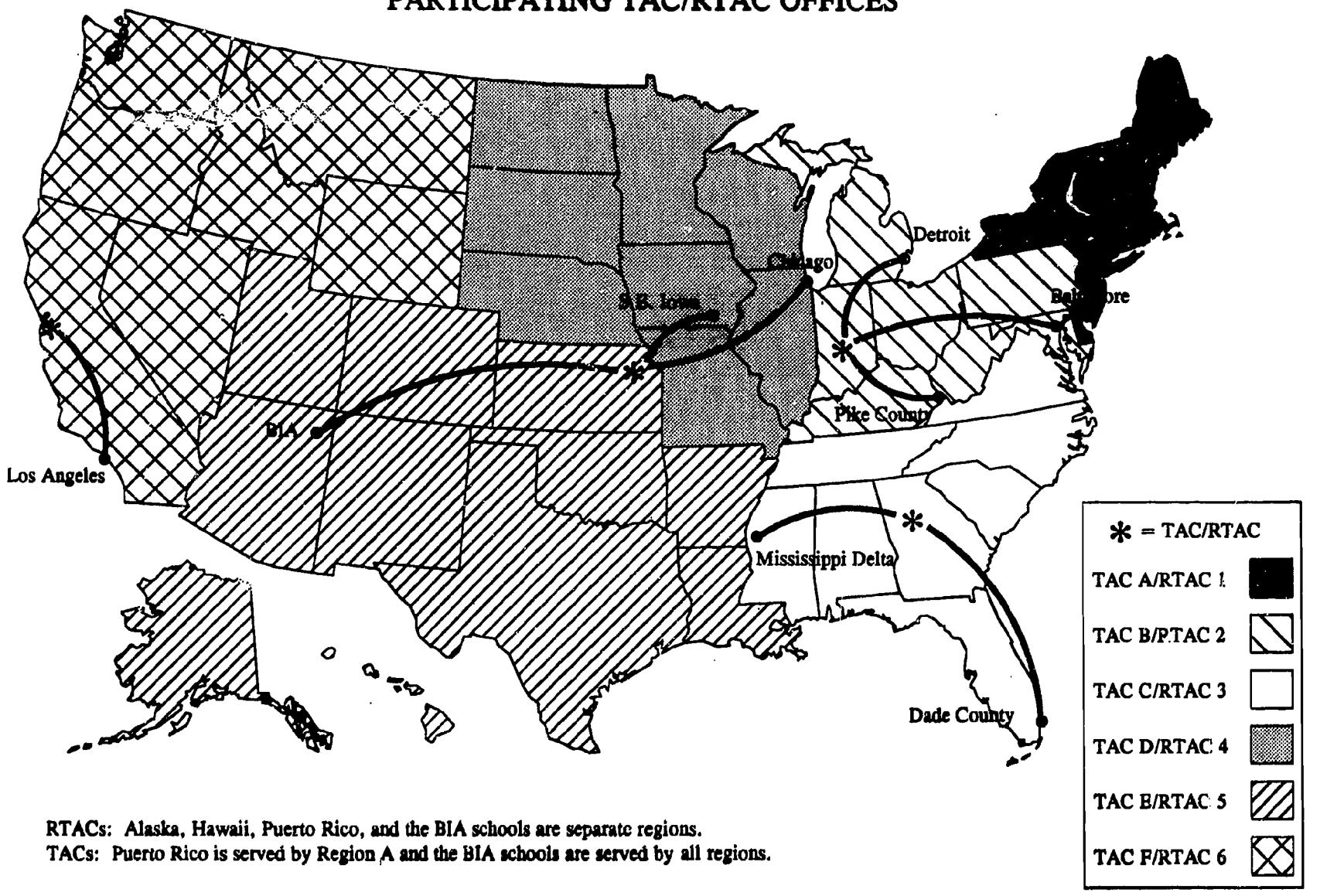
[3] The TAC/RTACs had worked in several of the sites prior to the Nine-Site Initiative; however, there were no long-term working relationships at the time the initiative began.

TAC/RTAC REGIONS, NINE-SITE ASSISTANCE SITES, AND PARTICIPATING TAC/RTAC OFFICES



RTACs: Alaska, Hawaii, Puerto Rico, and the BIA schools are separate regions.
TACs: Puerto Rico is served by Region A and the BIA schools are served by all regions.

Findings and Conclusions from the Formative Evaluation of the Nine-Site Initiative

In 1991, ED contracted with Policy Studies Associates to conduct a formative evaluation of the Nine-Site Initiative. The purpose of that evaluation was to describe the technical assistance services under way at the midpoint of the initiative and to examine their initial impact on Chapter 1 program improvement efforts in the participating schools. Key findings and conclusions from the formative evaluation include the following:

ED Management of the Nine-Site Initiative

We found that at the outset of the initiative there was some confusion about the duration of ED support and about expectations for what was to be accomplished. This confusion resulted in a lack of commitment in many of the participating schools. Together with the fact that, in most sites, participation by the schools was mandatory, this meant that the TAC/RTACs had to spend considerable time "selling" the initiative and themselves to the schools.

Confusion over the duration of support was exacerbated by the fact that TAC/RTAC contracts expired at the end of the first year of the initiative and TAC/RTACs had to compete for new awards. In two sites, Los Angeles and Mississippi, new contractors replaced the incumbents, which meant that many of the relationship-building tasks of the first year had to be repeated in the second year. The transition proceeded fairly smoothly in Mississippi but was more difficult in Los Angeles, where the new TAC had to contend with complicated local conditions and the legacy of uncomfortable relations between the previous TAC and the district over the Nine-Site Initiative.

Local Context for Technical Assistance

We identified three factors that defined the local context for technical assistance. First, many sites were coping with conditions of extreme disadvantage in their communities. Second, there were other, often ambitious state and local reform initiatives under way that took precedence over Chapter 1 program improvement. While TAC/RTACs made an effort to coordinate their assistance with state and local reform initiatives in some sites, most notably Kentucky, state and local imperatives often overshadowed concerns about Chapter 1 program improvement in the minds of teachers and administrators. In a few sites, state and local reform initiatives included technical assistance and staff development that made it more difficult for the TAC/RTACs to find a niche for their services. Third,

Chapter 1 program improvement was not well understood by principals and teachers, many of whom felt that the identification process was unfair or misleading. These factors combined to make it difficult for the TAC/RTACs to find productive niches in the sites early in the technical assistance process.

TAC/RTAC Activities

We found that the TAC/RTACs provided a variety of services during the first half of the initiative. We also found that the services followed a similar sequence in most of the sites, although there was variation in the organization of the activities and the relative amount of time devoted to them. In general, TAC/RTACs began by working with principals and others to gain access to the schools and establish their credibility as external assisters. Typically, this included completing some sort of a needs assessment. In several sites, needs assessments were based on ED's attributes of effective compensatory programs or Better Schooling for the Children of Poverty: Alternatives to Conventional Wisdom (Knapp & Turnbull, 1990), with results reported to principals or school improvement teams. Another early task, completed at ED's direction, was to "clean up" and review student test data to determine whether schools had been properly identified for program improvement. At least one site carried out an extensive analysis of student test data with district staff, using individual student profiles provided by the testing company to analyze student strengths and weaknesses on a multitude of test objectives. In sites that carried out analyses like these, however, an examination of test scores generally produced data for schools, not a foundation for the design of technical assistance. An analysis of test scores shed some light on student understanding; this knowledge informed broader decisions about technical assistance.

In several sites, most notably Iowa and Kentucky, initial assistance activities concentrated on building and working with school teams. In Iowa, work with the school teams continued as a cornerstone of RTAC assistance. In Dade County and Chicago, early plans for assistance and program improvement included collaboration between TAC staff and district supervisory staff, with local staff responsible for coordinating assistance activities and follow-up to help the schools implement new practices. For a variety of reasons, these collaborations did not materialize.

The primary content focus of technical assistance during the first 18 months of the initiative was on classroom strategies for teaching disadvantaged students, particularly in reading and language arts. Other topics included helping students develop test-taking skills, increasing parent involvement, and coordinating Chapter 1 with regular school programs. Assistance strategies included workshops for large and small groups of teachers and principals and one-on-one consultations with district

Chapter 1 staff, principals, and sometimes teachers. Teachers and principals who were familiar with the assistance spoke highly of the usefulness and quality of the presentations, giving particularly high marks to demonstration teaching. One state Chapter 1 director also observed that workshops, the traditional fare of staff development programs in many districts, were more valuable as elements of a long-term TAC/RTAC plan and accompanied by follow-up from TAC/RTAC staff directed at individual schools or groups of teachers. This arrangement stands in contrast to the common stand-alone, isolated events.

Initial Impact of Technical Assistance Provided Under the Nine-Site Initiative

In the schools that we visited for the formative evaluation--just over a quarter of those receiving assistance--technical assistance provided under the Nine-Site Initiative had contributed to: (1) increased awareness of Chapter 1 program improvement requirements and the Chapter 1 regulatory structure, (2) improved quality of Chapter 1 student test data, and (3) increased familiarity with current innovations in the education of disadvantaged students. Not surprisingly, given the resources available and the relatively short duration of the assistance, we found little evidence of change in instructional approaches, curriculum, or school or Chapter 1 program organization that could be attributed to technical assistance provided under the Nine-Site Initiative. In a few schools, however, the assistance did appear to have helped teachers and principals set the stage for potentially significant improvements in the future.

Design of the Third-Year Evaluation of the Nine-Site Initiative

The purpose of the third-year evaluation of the Nine-Site Initiative was to expand the descriptions of technical assistance begun during the formative evaluation, looking more extensively at evidence of the effectiveness of the assistance. To that end, the third-year evaluation builds on the earlier case studies and expands them to focus more explicitly on the impact of technical assistance on (1) individual teachers and administrators, (2) the organization of Chapter 1 programs and schools, and (3) student achievement and other student outcomes. We also report on the impact of technical assistance on the organization and administration of district Chapter 1 projects, since assistance to

district Chapter 1 staff was a central element of technical assistance in four sites: Dade County, Kentucky, Mississippi, and the BIA schools.[4]

Sample of Schools Included in the Site Visits

In each site, we visited two public schools that were receiving assistance under the Nine-Site Initiative and a school that had been identified for Chapter 1 program improvement but had not participated in the Nine-Site Initiative. We refer to the nonparticipating schools included in our site visits as "comparison schools." Although these schools were not matched to the participating schools in any systematic way, our visits to them yielded some insights into the value that TAC/RTAC assistance added in the participating schools and increased our understanding of local context. For the third-year evaluation, we did not return to the Chapter 1 programs for religious-school students that received technical assistance.

In four sites--the BIA schools, Chicago, Iowa, and Los Angeles--we returned to the schools we had visited for the formative evaluation. In four other sites, Chapter 1 administrators recommended that one of the original participating schools be replaced; in the ninth site, the RTAC recommended replacing one of the participating schools. The comparison schools remained the same in all sites. Overall, to conduct the third-year evaluation, we visited approximately one-third of the schools that received assistance in the third year of the initiative. All site visits were completed in May and June 1993. Follow-up interviews were completed by the end of July.

The schools that we visited are not necessarily representative of all schools that received technical assistance under the Nine-Site Initiative or of all Chapter 1 schools identified for program improvement in the nine sites. During the site visits and in the interviews with TAC/RTAC staff, we asked district-level administrators and TAC/RTAC staff to comment on the extent to which the experiences of the participating schools we visited were typical of all of the participating schools in the site. Based on these responses and our analysis of the TAC/RTACs' month-by-month reports, which are discussed below, we have two clear impressions about the experiences of the schools we visited compared with other participating schools in eight of the nine sites. First, with a few

[4] Under a 1990 Memorandum of Understanding between the BIA and ED, all BIA schools are treated as individual districts in ED-sponsored programs. This means that each BIA school has full administrative responsibility for the operation of its own Chapter 1 program, including all of the paperwork. We learned that the RTAC spent a considerable amount of time assisting schools with these responsibilities as part of the school-level assistance services provided under the Nine-Site Initiative.

exceptions, the schools that we visited had made somewhat more progress than other participating schools in the sites. Second, and again with a few exceptions, TAC/RTAC technical assistance services had a somewhat more positive impact in these schools. In the ninth site, Los Angeles, the TAC had the greatest impact in a school we did not visit, and the impact in that school was reported to be substantially larger than in other participating schools in that site.

Data Collection

Data collection included visits to state or district Chapter 1 offices and schools in each site, interviews with TAC/RTAC staff, and examination of documents. In each school, we conducted at least one focus group interview with teachers and interviewed the school principal and other staff, as appropriate. The focus group interviews lasted approximately one hour and explored three main topics: (1) changes in the school during the past three years, (2) TAC/RTAC technical assistance, and (3) the contributions of technical assistance provided under the Nine-Site Initiative and from other sources to the changes in the school. Interviews with principals in every school addressed the same themes as those with the teachers. In addition to interviewing school staff, we interviewed district Chapter 1 staff, including Chapter 1 project directors, other Chapter 1 administrative staff, and, in some sites, Chapter 1 supervisors. We also interviewed state Chapter 1 officials who were familiar with technical assistance activities in two of the rural sites. On-site data collection was augmented by telephone interviews with at least one and usually two TAC/RTAC staff members responsible for organizing and providing technical assistance in each of the sites.

The documents we reviewed included Chapter 1 planning documents from the schools and districts, reports of student achievement and other outcomes, letters of agreement, TAC/RTAC monthly reports to ED, month-by-month summaries of technical assistance to the schools and school district staffs in each site and Education Week reports on significant developments in each of the sites (e.g., major reform initiatives, financial problems, union issues, etc.) identified through an on-line search.

The month-by-month summaries of assistance activities were particularly useful in describing the quantitative dimensions and patterns of TAC/RTAC services to all of the school and district Chapter 1 projects during the third year of the initiative. At ED's direction and following a standard

format, the TAC/RTACs provided the following information about individual technical assistance activities:

- Date, time, and location
- Topic
- Assistance strategy/format
- Number and role of participants

A limitation of the data included in these reports is that they do not include the amount of time TAC/RTAC staff spent preparing for assistance, the amount of time spent traveling, or the amount of time spent in telephone conversations with school and district staff. Thus, the descriptions of TAC/RTAC services included in Section II of this report underestimate the overall level of effort devoted to technical assistance under the Nine-Site Initiative.

Data Analysis

Following the site visits, the evaluation team completed case study reports on each of the sites. The reports, which are retained for internal project use only, follow a standard guide organized around the following general evaluation questions:

- What technical assistance services were provided in the site?
- How and to what extent do other state and local education reform initiatives and the availability of other technical assistance and staff development activities affect Chapter 1 program improvement and technical assistance services provided under the Nine-Site Initiative?
- What changes have occurred in the past three years in the schools visited in this site, and how, if at all, has technical assistance provided under the Nine-Site Initiative contributed to these changes?
- Following their experiences in the Nine-Site Initiative, what recommendations do local personnel and TAC/RTAC staff have for future technical assistance programs?

The reports were circulated among the evaluation team for review, comment, and cross-case analysis. In looking both within and across the sites, we examined the patterns of assistance and the available evidence of changes in the schools. The primary sources of information about the volume and content of technical assistance services were the month-by-month summaries, teachers' and principals' descriptions of the services and their assessments of the usefulness of the services, and TAC/RTAC staff comments. The primary sources of information about changes were the interview

responses of teachers and principals and student outcome data, when such data were available to us. Responses from district personnel and TAC/RTAC staff also were helpful in understanding the changes that occurred in the schools.

Our general strategy for looking at changes in the schools and the impact of technical assistance was to ask respondents to describe the changes and the impact of the assistance. When they identified changes, particularly those they attributed to technical assistance, we invited them to provide examples and evidence. This might include sharing samples of new materials they were using or descriptions of new instructional strategies they had tried. It also included respondents' accounts of changes in the amount and quality of teacher interactions or input in decisionmaking. Our cross-case analysis focused on similarities and differences across the sites, particularly in the assistance that was provided and the impact it had.

II. TECHNICAL ASSISTANCE PROVIDED UNDER THE NINE-SITE INITIATIVE

This section describes those features of technical assistance that have been generally similar across the sites and schools, as well as noting important variations within and across the sites. Specifically, the section discusses the amount of assistance delivered, who participated in the various activities, topics and issues addressed, mode of delivery, and collaboration with other technical assistance providers. The data relate primarily to the technical assistance services provided during the third year of the Nine-Site Initiative.

Quantity and Distribution of Services to Individual Schools

Amount of Technical Assistance Provided to Schools

The amount of TAC/RTAC assistance to individual schools during the third year of the Nine-Site Initiative varied widely, from 81 hours at a school in Baltimore to 12 hours at a school in Chicago.[5] Overall, half of the participating schools received less than 43 hours of assistance, with the average number of hours of assistance per school being about 40. One-quarter of the participating schools received less than 24 hours of assistance. How do these amounts of service compare to the amounts that might otherwise be available? The Chapter 1 Implementation Study (Millsap, Moss, & Gamse, 1993) found that the "typical teacher" received an average 23 hours of staff development during 1990-91. Thus, for a quarter of the schools participating in the Nine-Site Initiative, the amount of assistance available to teachers was *less* than the average amount of staff development normally available to teachers in Chapter 1 schools. Further, the average amount of assistance provided during the third year of assistance was only 17 hours more than the average amount of assistance available to teachers in Chapter 1 schools in general. Finally, as we discuss in more detail below, individual teachers in the participating schools often did not participate in all of the technical assistance activities, so the amount of services they received is lower than the total amount provided

[5] At sites where the TAC/RTACs delivered services to groups of schools, we counted the numbers of hours of on-site assistance to individual schools and the number of hours of on-site assistance available to all schools in the total number of hours of assistance to these schools. Our estimates of the numbers of hours of technical assistance in several of the BIA schools do not include services provided by consultants hired by the RTAC under the Nine-Site Initiative. RTAC reports did not include detailed information about this component of services.

in their schools. Therefore, a significant percentage of participating schools received low levels of assistance, relative to the amount that might normally be expected; for these schools, Nine-Site initiative services could hardly be called intensive.

Much of the variation in the level of service to individual schools can be accounted for by the fact that within sites, TAC/RTACs tended to concentrate their services on a few schools. For example, among the three participating schools in Baltimore, one school received 81 hours of TAC assistance, half of all TAC hours at the site and almost twice as many as the next school. In Detroit, the two schools that received the most assistance got twice as many hours as the third participating school. In Mississippi, each of the four schools that received the most RTAC assistance received two to three times as many hours of RTAC services as any of the other participating schools.

Across sites, TAC/RTACs that delivered services sitewide or to groups of schools furnished participants with more hours of service (albeit in larger groups) than TAC/RTACs in those sites where there were no combined activities, with a few exceptions. In Iowa, Mississippi, the BIA schools, and Kentucky, where RTACs offered a number of services sitewide or to groups of schools, the median number of TAC/RTAC on-site hours available to each school was 50, of which an average of 30 hours were devoted to sitewide activities. In sites with almost no sitewide activities, TAC/RTACs spent a median of 25.5 hours at each school, with a quarter of the schools receiving less than 15 hours of service. Sitewide sessions allowed TAC/RTACs to achieve economies of scale and deliver training more efficiently. Sitewide activities were effective, however, only when they functioned as part of an integrated assistance strategy; this was true in some cases and not in others.

Many schools received less intense service in terms of continuity over time, as well as in terms of total number of TAC/RTAC on-site hours. In Baltimore, Iowa, and Los Angeles, TAC/RTACs provided assistance to each individual school every month of the year. In most other sites, however, individual schools did not receive on-site assistance every month. Schools in the BIA, Chicago, and Mississippi sites sometimes went three to four months without a visit from TAC/RTAC staff. In these sites, some schools received as few as two or three visits from TAC/RTAC staff during the year. Again, assistance this irregular cannot be called intensive.

Drop in the Number of Participating Schools

The number of schools that received services under the Nine-Site Initiative declined by one-third over the three-year period of ED support. Of the 68 public schools and Chapter 1 programs for

religious-school students that began receiving assistance during the 1990-91 school year, 44 received assistance during the 1992-93 school year.[6] (See Exhibit 2.)

Exhibit 2
School Participation Patterns During the Nine-Site Initiative

Site	1990-91	1991-92	1992-93
Baltimore	10	9	3
BIA Schools	7	7	7
Chicago	10	10	9
Dade County	6	6	0
Detroit	7	7	3
Iowa	8	8	8
Los Angeles	6	6	2
Mississippi	9	9	9
Kentucky	5	5	3
Total Schools	68	67	44

One school left the initiative at the end of the first year, and 23 schools left at the end of the second year or the beginning of the third year, shortly after ED indicated that this would be allowed. While no site had fewer than five participating schools at the beginning of the initiative, there were three or fewer schools receiving assistance in five sites at the end of the initiative. The number of participating schools remained the same in two sites.

[6] We counted schools in three sites as not participating even though the TAC reports indicated that they were still included in the Nine-Site Initiative. For example, in Dade County, TAC staff met with principals and one or two Chapter 1 staff in the two schools we visited; however, according to TAC staff, TAC reports, and district Chapter 1 staff, the TAC provided almost no assistance to these or other Dade County schools during the 1992-93 school year. Therefore, we counted all Dade County schools and the Chapter 1 program for religious-school students as non-participating. In Los Angeles, the TAC assisted two schools throughout the year and provided a single workshop in a third school. The third school was also counted among those not participating. In Chicago, one school received three visits from the TAC in 1992-93 to "discuss conditions and needs" and "to assess progress," according to the TAC monthly service summary reports. This school was counted as not participating.

Schools left the initiative for various reasons. In Baltimore, four participating schools were included in a district-supported experiment in which the schools were to be run by a private contractor. Inclusion in this experiment precluded participation in the Nine-Site Initiative. According to TAC reports, a decision was made to drop a fifth school from the initiative because it had recently gone through its third change in building leadership in as many years. One other Baltimore school left the initiative at the end of the first year. According to the TAC staff, this school dropped out of the Nine-Site Initiative because there were too many other initiatives under way at the same time and because the school staff did not think that the TAC had contributed much to their efforts. In Detroit, district Chapter 1 officials and the TAC agreed that the TAC would serve only three schools in the third year because they concluded that assistance had been spread too thin during the first two years. In Dade County, the aftermath of Hurricane Andrew and the presence of other reform initiatives led to a decision to focus TAC assistance at the district level instead of at the school level. In Kentucky, Chapter 1 officials decided to drop one school because of the school's inability to organize itself to receive assistance. In the words of one district administrator, "[Local education agency staff] decided not to waste any more money on a bad situation." According to RTAC staff, the second school decided to drop out because it was implementing site-based management and was making considerable progress without RTAC assistance.

Teacher Participation Patterns

Teacher participation in technical assistance activities varied among schools. In Baltimore, Iowa, and Los Angeles, technical assistance was targeted to clearly defined groups of school staff: third-grade teachers in Baltimore; Chapter 1 and classroom teachers who were members of the "IRISE" team in Iowa; and teacher aides in Los Angeles. Membership in the target groups remained generally stable, with the result that essentially the same staff attended TAC/RTAC assistance activities every month. This pattern ensured that a relatively small subset of school staff received relatively high levels of assistance. At other sites, teacher participation was more broadly distributed, but also more uneven. TAC/RTACs targeted different groups (aides, Chapter 1 teachers, upper elementary reading teachers, etc.) for different assistance activities. While larger numbers of staff had an opportunity to work with the TAC/RTAC at one time or another, individual teachers typically received much less assistance than was available to the school as a whole. In some schools, TAC/RTAC activities were open to all interested teachers, so that the most enthusiastic teachers received the most assistance. In other schools, decisions about which teachers would participate in technical assistance activities reflected little planning. As one indicator of teacher contact with the TAC/RTAC in schools outside Iowa, Baltimore, and Los Angeles, teachers participating in focus group interviews (who tended to be those most involved with the TAC/RTAC) said that they attended

a TAC/RTAC activity or met with a TAC/RTAC staff member two to four times in the last year. In some cases, these activities took place several months apart.

Inconsistent participation patterns and lack of communication to teachers about TAC/RTAC activities produced frustration at some schools. At one rural school, there were complaints of staff development opportunities being "spotty," with teachers often unaware of upcoming events until the last minute and therefore finding it inconvenient to attend. In another rural site, one teacher expressed her frustration at not knowing more about the various technical assistance activities; she said that the only reason she knew anything about RTAC assistance was that she asked other teachers what they were doing with the RTAC.

In some schools, TAC/RTAC staff spent limited amounts of time with teachers. TAC/RTAC assistance with parent involvement programs in two schools, for example, involved only one or two teachers. In one urban site, TAC staff worked with the school-community liaison and principal; at another school, also in an urban site, the TAC staff member served as a consultant to the head of the parents' organization. In other schools, TAC/RTAC staff worked primarily as consultants to the principal, providing information on topics the principal wanted to know more about or helping solve problems in planning, assessment, and staffing.

Content of Technical Assistance

In all sites, the content of technical assistance usually included: (1) training in new instructional practices, especially "hot topics" like cooperative learning, whole language, and math manipulatives; (2) assistance with Chapter 1 program administration and the interpretation and use of student test data; and (3) assistance or training related to local or state initiatives, from school-based parent involvement programs to district curriculum initiatives to new statewide assessment programs.

An analysis of the number of hours TAC/RTACs spent addressing various assistance topics shows only a few sites with a clear content focus over the course of the third year. In Baltimore, a little over half of TAC time on site was devoted to topics the TAC declared were central to technical assistance in the site: cooperative learning, teaching advanced skills and problem-solving in math, and preparing students for the Maryland Student Performance Assessment Program. In Iowa, 40 percent of RTAC time was devoted to professional development in integrated literature-based language arts instruction. In Los Angeles, 55 percent of TAC time was devoted to staff development on teaching reading through literature in bilingual or ESL programs.

In other sites, TAC/RTACs addressed several different topics simultaneously; a typical TAC/RTAC agenda might center on introducing whole language teaching practices to teachers and include working with a principal or program improvement committee to interpret test data or develop a new Chapter 1 program improvement plan as well as dealing with other miscellaneous topics requested by teachers. In some sites, technical assistance appeared to have no focus at all. TAC/RTAC monthly reports typically mentioned a long list of topics, with very little time devoted to each. In one urban site, for example, TAC reports listed the following topics, with less than 10 percent of TAC time devoted to each: coordination of Chapter 1 and the regular program, team building, tutoring programs, reading/writing/whole language, general instruction, parent involvement, Chapter 1 program improvement and evaluation, test-taking skills, cooperative learning, staff development plans, math and math manipulatives, team teaching, extended-day programs, student behavior, and authentic assessment.

Instructional Practices

TAC/RTACs differed in their approach to the introduction of new instructional practices. The most ambitious TAC/RTAC efforts to introduce innovations in classroom instruction attempted to ground teachers in the research and rationales underlying whole language, literature-based language arts, or the teaching of problem solving and other advanced skills in mathematics. This assistance aimed to help teachers use new materials and activities in their classrooms, integrate them with other activities, and understand and articulate why they were valuable. In Iowa, for example, the primary focus over three years was on developing a literature-based language arts program and integrating language arts across the curriculum. During a focus group interview, teachers who experimented with literature-based language arts activities in their classrooms were able to explain and debate the merits of children's literature versus basal readers for the teaching of reading. This pattern of technical assistance attempted to alter teachers' beliefs about how students learn and, subsequently, their entire approach to teaching. Evidence from our site visits, particularly the focus group interviews, indicates at least some success for these attempts.

In other sites, assistance strategies had a more limited goal of introducing information about discrete instructional practices that teachers could use immediately. In experimenting with these activities, teachers added to their teaching repertoires but did not develop a clear understanding of the rationale for the new activities and were unable (or disinclined) to integrate these activities with other things they did in the classroom. For example, teachers in one rural site described RTAC demonstration lessons with great enthusiasm but were hard-pressed to explain how these lessons might influence their teaching in general. One RTAC demonstration lesson was an extension activity for the

children's book Knots on a Counting Rope, in which a Native American child discovers the story of his birth from conversations with his grandfather about a counting rope. In the extension activity introduced by the RTAC, students interviewed their parents and other relatives at home about the story of their own births and then presented these stories in class, creating their own class counting rope. The activity provided an opportunity for teachers to take their students' life experience as a starting point for learning, a basic precept of whole language teaching. While teachers were impressed with how their students enjoyed the activity and planned to use it the following year, they were unclear about how they could use similar activities in the rest of their teaching. What they talked about was repeating the activity, not expanding on it.

Chapter 1 Administration, Evaluation, and Data Collection

In many sites, a fair amount of technical assistance was devoted to working with principals, Chapter 1 teachers and administrators, and district administrators on topics including Chapter 1 program evaluation, coordination with the regular program or other state/local initiatives, and interpretation of test data.

TAC/RTAC staff began their work in many sites by helping administrators interpret test data and make decisions about service delivery. They built on this traditional TAC/RTAC function in some sites by adapting their evaluation expertise to local needs. For example, RTAC assistance to the district office in Kentucky focused on developing a set of measurable desired outcomes to evaluate Chapter 1 programs under the state's initiative to substitute new state assessments for the Comprehensive Test of Basic Skills in Chapter 1 evaluation. During 1992-93, an interim year in the transition to a new state assessment system, districts were to use locally developed desired outcomes to determine Chapter 1 program improvement status. The RTAC helped the district develop the outcomes and design behavioral checklists that classroom teachers would complete to record progress toward the desired outcomes. In a similar project in Mississippi, RTAC assistance included help in designing districtwide instructional management objectives that are coordinated with the Chapter 1 program. The RTAC then helped the district develop "mastery checklists" for teachers to use in the classroom. The RTAC was instrumental in selling the use of these checklists to teachers and reluctant administrators.

TAC/RTAC staff also helped district staff with other initiatives. In Dade County, where the TAC primarily assisted the district office, the TAC helped the district prepare proposals for parent involvement and computer-assisted instruction programs, and helped plan their implementation.

In sites where TAC/RTACs helped teachers and administrators examine their program plan improvement efforts, school staff appreciated the expertise and perspective TAC/RTAC s. brought as outside consultants. In addition to helping schools use test data and evaluation information to design sound programs, TAC/RTACs provided information on other programs and objectivity. As one urban principal noted, the TAC provided examples of what other schools were doing, "kept us clear on the regulations, and helped with understanding the statistics. It is helpful to have someone who is not in the school [to bring perspective]." In a rural site, school and district administrators said it was especially valuable to work with an outside expert who had no monitoring responsibilities. Because the RTAC did not have to enforce compliance with Chapter 1 regulations, Chapter 1 administrators could discuss problems openly without fear of sanctions. As a result, according to one district Chapter 1 director, "I can tell [the RTAC] things. I don't feel like I'm airing my dirty laundry. I can tell [the RTAC] about my insecurities." As an RTAC staff member explained, "When you want to improve, but don't know how, it's much easier to go to someone like us. You're not so comfortable discussing your problems with the superintendent, but you can admit to an outsider that you need help."

Schoolwide Projects

Some TAC/RTAC assistance included help in developing schoolwide projects, an endeavor on the minds of staff in many of the schools we visited. Some were preparing their evaluations as their three-year schoolwide project was ending. Others had recently become schoolwide projects and needed help in developing new service delivery options. In several schools, TAC/RTAC staff consulted on schoolwide project plans or third-year evaluation designs. In Mississippi, the RTAC helped launch a schoolwide project by enlisting teachers from an established schoolwide project to make presentations to reluctant teachers at a school that had just gone schoolwide. In Detroit, TAC staff arranged for district Chapter 1 administrators to attend a national schoolwide project conference.

State and Local Reforms

In most sites, TAC/RTAC assistance attempted to strengthen school-level efforts to meet the requirements of state and local reforms. For example, Chapter 1 program improvement in Baltimore was integrated into the district's own school improvement initiative. The topics addressed through the Nine-Site Initiative in Baltimore--the use of manipulatives for concept development, problem-solving strategies, advanced applications of mathematics concepts, and cooperative learning--were closely aligned with the curriculum and assessment priorities that the district had emphasized over the past

few years. In addition, a number of TAC activities specifically addressed the Maryland State Performance Assessment Program, which, among a long list of other requirements, required students to solve some problems in cooperative groups.

RTAC assistance in Kentucky provided the best example of assistance geared to state-level reforms. A key theme of early assistance in Kentucky was to examine the potential overlap between the mandates of KERA and Chapter 1 program improvement requirements. Chapter 1 program improvement was not a priority for either teachers or principals, but understanding and responding to KERA mandates were. By showing the relationship between the two sets of requirements, the RTAC provided a valuable service, helped schools see a way through a dense thicket of reform initiatives, and established itself as a credible source of assistance. Addressing KERA mandates came to be a dominant theme in RTAC assistance in Kentucky; assistance in the third year included an ongoing review of KERA assessment requirements, portfolio assessments in mathematics, and a variety of issues related to instruction and assessment in writing.

Technical assistance in the BIA schools addressed some local concerns that included and surpassed Chapter 1. The BIA had encouraged schools to seek North Central Accreditation, and the RTAC provided training and assistance in the application process. Also, alternative assessments were extremely popular throughout the region, given the historically low performance of Native American children on norm-referenced tests. One of the schools we visited was pursuing portfolio assessment as an alternative to norm-referenced tests for showing what students know and can do; alternative assessment was a focus of RTAC assistance during the Nine-Site Initiative.

Planning

Planning for Nine-Site Initiative activities took up an average of 20 percent of TAC/RTAC on-site time across all sites. In many sites, planning activities ranked first or second among topics for technical assistance in the number of on-site hours devoted to them. In some sites, time devoted to planning appears to have been a necessary preparation for the technical assistance activities that were to follow. For example, in Iowa the RTAC devoted a considerable amount of on-site time to planning activities (29 percent of all on-site hours), but an examination of month-by-month reports shows that these activities were a fundamental part of a long-term technical assistance strategy that hinged on carefully tracking technical assistance in order to maintain a focus and adhere to a strategic plan. In several other sites, what were identified as planning sessions appeared to have had the more limited purpose of deciding what to do in the immediate future without much attention to what had already been done or reasons to choose a particular activity. In one urban site, more than half the

TAC on-site time was devoted to Nine-Site Initiative planning and needs assessment, leaving little time for other kinds of assistance. The fact that so much time was devoted to planning in the third year of the initiative probably indicates that TAC/RTAC services were not an integral part of ongoing school improvement efforts or that no such efforts were made.

Strategies for Organizing and Delivering Technical Assistance

In several sites, TAC/RTACs had clearly identifiable strategies for delivering technical assistance. In sites where TAC/RTACs used cross-site activities or activities involving groups of schools, they achieved some economies of scale by presenting workshops to large groups that included participants from a number of participating schools, thereby providing more contact hours to schools and teachers than visits to individual schools alone would allow. Iowa, Mississippi, and the BIA are good examples of sites where TAC/RTACs used this strategy.

In Baltimore, the TAC pursued a different but equally well-defined strategy. TAC staff there spent almost half their on-site time--a very high concentration relative to other sites--in classroom observation and demonstration teaching in the third year. Combined with consultations with individual teachers outside of class, this one-on-one assistance took up almost two-thirds of the TAC's time on site. Los Angeles represented a combination of these two strategies: according to monthly reports and interviews with TAC staff, assistance in one of the participating schools in Los Angeles included a series of large group workshops closely followed by one-on-one sessions in classrooms that included observations and consultation.

Technical assistance in Iowa reflected the most thoroughly developed strategy for organizing and providing technical assistance. In Iowa, the same people participated in the technical assistance for all three years. When the Nine-Site Initiative first started, the RTAC required each school to send a team to the kick-off meeting in Ottumwa; the team was required to include, at a minimum, the principal, Chapter 1 teachers, and classroom teachers. The RTAC focused all technical assistance on activities that would bolster the teams' capacity to work together and support school improvement efforts--team planning sessions, team attendance at workshops, team consultation about school-specific issues and strategies. Teams did not do anything beyond attending RTAC activities together--they did not take on management functions or other governance roles within the school per se. However, their participation in RTAC activities--as a group--ensured attendance by the same staff at each activity and created a cohort of teachers at the school who shared a knowledge base.

With the exception of Baltimore, in sites where one-on-one sessions were the dominant TAC/RTAC strategy, sessions tended to be discrete, isolated events with no relation to one another; they did not necessarily follow from careful diagnosis, nor build on previous activities. In some schools where one-on-one sessions were the dominant mode of assistance, only a few teachers even knew about the assistance, and it was in no way a part of the institutionalized routines of the school. Scheduling concerns in some cases played a major role in shaping the pattern of assistance; where group activities were difficult to schedule, activities tended to involve only one or two teachers. Even these small-scale activities were sometimes difficult to fit in; teachers in one rural school said that while they knew in advance which days the RTAC would visit their classes, they did not know what time RTAC staff would arrive or how many lessons they planned to observe. In contrast, principals in the Iowa schools we visited planned in advance to have substitutes or school staff not on the RTAC team cover classes to release the team teachers for RTAC activities. RTAC staff reported that substitutes were available to cover classes during RTAC workshops and training in Mississippi.

Cumulative Versus Reactive Assistance

In sites where a clear content focus and a well-defined strategy for delivering services guided the technical assistance process, the assistance was much more likely to be cumulative over the three years of the initiative. In sites without these elements, technical assistance tended to be tentative, even random. In several sites, the TAC/RTAC itself brought a well-developed assistance plan to the schools and, following some initial successes, persuaded the schools to "buy into" the approach. Once again, technical assistance in Iowa was the best example. The RTAC approach, with the support of the state Chapter 1 coordinator, was to encourage and assist the schools in forming teams and to focus the content of assistance on literature-based language arts programs. In Mississippi, following RTAC observations over several visits, the RTAC convinced one school that assistance should focus on the instructional aides. In addition, RTAC staff organized a number of technical assistance activities to address problems they personally had identified on visits to schools: very dirty, drab buildings; apathy among students and teachers; and lack of coordination in staff development, among other things. These examples suggest that while questions and requests from school staff were important ingredients in setting the agendas for assistance, the TAC/RTACs were more likely to be the sources for clear, long-term plans for cumulative technical assistance.

In sites where there was no clearly defined agenda for assistance, TAC/RTAC services appeared to be mostly reactive, as TAC/RTAC staff attempted to respond to requests from all quarters. In these sites, most technical assistance activities addressed questions raised by teachers. Principals or Chapter 1 teachers conveyed teacher requests to the TAC/RTAC before scheduled visits,

and the staff prepared sessions that targeted specific requests and inquiries. One Chapter 1 teacher who helped organize RTAC visits to a rural school commented:

> [RTAC staff] always found out what we needed most. . . . Some teachers wanted to observe [a] reading [lesson taught by the RTAC staff], some wanted help with writing or math portfolios. When [the RTAC staff member] went to the classroom, if [the teacher wanted] writing, math, [or] a reading class, whatever, she did it.

Not surprisingly, teachers appreciated this highly individualized assistance, which they perceived as responsive to their expressed needs. On the other hand, several administrators we spoke to saw a problem with this approach. One called it "spray and pray," implying that the technical assistance lacked a guiding framework. A state Chapter 1 administrator observed:

> [There should be] an underlying theme. You can't talk about authentic assessment one day and team teaching the next and hope something catches. You need a focus for what you're working towards.

Assistance topics at the two schools we visited in an urban site illustrated how assistance activities in some places lacked continuity over time. In one school, the first meeting of 1992-93 focused on ways to develop and use the school's new management teams. The next assistance activity, which did not occur until mid-January, included team-building workshops for the management teams. The month-by-month reports mention no further work with the teams. Instead, the February sessions, which were the final ones of the year, were spent working with groups of aides and career service staff. In the second school, the first visit by the TAC, which took place in January 1993, resulted in a decision to have monthly, voluntary afterschool "shop talk sessions." The first session was held the following day. TAC staff did not visit this school again until June for a session that was intended to "review initial report and observe and note progress in regard to report."

To be sure, technical assistance activities that respond to teacher concerns and requests, no matter what those requests are, play an important role in the best-designed technical assistance initiatives. In Iowa, one of the RTAC's goals for the Nine-Site Initiative was to build the capacity of teams from each school to identify their own needs. For example, when a team decided to explore math manipulatives, the RTAC was quick to deliver information and materials. According to an RTAC staff member working in Mississippi, workshops that teachers found immediately applicable to their classrooms, no matter what the topic, played an important role in developing the trust of teachers. Her first workshops were designed to give teachers suggestions they could use immediately in class, keeping teachers within their comfort zone:

> If I show them something they can do, then they'll change. . . . Because what I gave them in the beginning was so easy, they listened to me when I gave suggestions. It's an important motivator if they know I care and they know they will get something out of it.

At some sites, TAC/RTACs had difficulty settling into a comfortable relationship with schools and consequently were slower to develop coherent, cumulative assistance programs. In one urban site, for example, the TAC floundered to some extent as it tried to launch technical assistance under the Nine-Site Initiative. Some schools did not find the assistance useful compared with other resources available to them. Others found unsatisfactory the proposed plan for delivering the assistance to all teachers in a central location (requiring lots of teacher travel time). In some schools, personality conflicts blocked the success of assistance efforts. As different strategies failed to achieve positive results, the TAC would develop a new plan. It appears that this was less a conscious trial-and-error system, through which the TAC made a concerted effort to learn from its mistakes, and more an ongoing attempt to fulfill contractual obligations while responding to immediate, expressed requests from the schools.

Collaboration and Coordination

One way TAC/RTACs can extend the impact of their activities is to collaborate with other assistance providers serving schools, including district staff. Coordination and collaboration among assistance providers has the potential to marshall more assistance resources for schools and allow schools to align different, and sometimes competing, assistance agendas. However, collaboration and coordination also require an investment of time and resources that made it difficult for TAC/RTACs, working within limited budgets, to develop collaborative relationships with other technical assistance providers. As a result, we found few examples of TAC/RTAC collaboration with other external assistance providers.

In Detroit, TAC staff made an effort to work closely with area administrators[7] in the third year of the initiative in order to increase the impact of the technical assistance. Area administrators participated in a general meeting at the beginning of the year and formed teams to support technical assistance at the two participating public schools. TAC staff worked with area-level administrators, encouraging and advising them on their activities in participating schools and providing them with current research on Chapter 1. Area administrators attended some of the TAC workshops for

[7] The Detroit school district is divided into six administrative areas, each with its own Chapter 1 office, curriculum director, and teacher specialists.

teachers and joined them in meetings at the schools. At one school, they plan to replace TAC staff with a person from the area office who will provide support for the program improvement teams at the school in 1993-94. Although these collaborative efforts have succeeded in bringing district administrators into the schools more often, area administrators noted that they have had difficulty fulfilling all the obligations assigned to them due to their other responsibilities.

In the BIA schools, the RTAC tried to continue targeting assistance to the schools beyond the 1992-93 school year by coordinating with one local education agency. The RTAC included local agency staff in several planning and technical assistance training sessions during the 1992-93 school year in order to help the school and agency staff link the district's school improvement efforts (e.g., new curriculum, use of math manipulatives) to those of individual RTAC-assisted schools. In Mississippi, administrators in both the districts we visited said that the RTAC played an active role in coordinating its efforts with other district staff development activities; many times the RTAC did this by suggesting staff development activities that complemented RTAC services.

At other sites, attempts to collaborate with district administrators in delivering technical assistance produced fewer tangible results. In Dade County and Chicago, initial plans for technical assistance called for supervisors from the district's regional offices to work with the TAC to plan and conduct follow-up activities and coordinate technical assistance with other staff development activities; however, these activities never happened. In the case of Chicago, staff reassignments necessitated by budget shortfalls prevented administrators from being as involved as they had planned. Supervisors in Dade County said they had only limited involvement with technical assistance activities and that much of their time was spent monitoring compliance with Chapter 1 requirements. In reflecting on TAC experiences in one site, a TAC staff member concluded that:

> District support [for a variety of programs] is not always positive. It may not always fit in and it may be a day late. I have not spent a lot of time with district staff and I am not sure what they know [about what we are doing].

In one urban site, TAC staff concentrated their limited resources on working almost exclusively with teachers instead of attempting to build a collaborative relationship with the district:

> We never set out to draw a schematic of all the forces that affect the schools we worked with in [the site]. We simply didn't have the resources and never even considered it. We sought to narrow our focus, not expand it.

In Mississippi, the RTAC worked actively to coordinate its activities with those of technical assistance providers outside the district. These efforts at collaboration were as important as the

assistance the RTAC provided directly to schools. The RTAC staff in Mississippi were instrumental in seeing that teachers from at least one district in the site attended a number of whole language seminars, such as the Wright Group whole language workshop, and professional meetings, with funding from the district's Chapter 1 program. While the district sent teachers to these activities independent of RTAC assistance, the Chapter 1 director credits the RTAC with introducing the concept of whole language teaching in the first place and convincing the district that teachers needed additional professional development. We heard many times in Mississippi about various workshops that teachers had attended, paid for by the district Chapter 1 program, that the "RTAC knew about" or the "RTAC sent us the information on." Usually these workshops directly complemented the RTAC agenda. For example, all principals in one district attended a workshop on "Inviting Schools," suggested by the RTAC because of the RTAC's concern about cleanliness in the districts' schools, although this workshop was not formally sponsored or paid for by the RTAC. RTAC staff also introduced a number of new programs that districts later adopted, including "Books and Beyond" and several NDN programs. In order to help school districts find the money to train teachers, the RTAC worked with district staff to coordinate Chapter 1, Chapter 2, and Eisenhower funds. While the amount of additional professional development these efforts made possible was relatively small, one district administrator told us that the fact that it was coordinated with other activities sponsored by the district multiplied its effects.

III. CHANGES IN SCHOOLS AND OUTCOMES OF TECHNICAL ASSISTANCE

Data from the end of the third year of the initiative, together with a review of the data collected during the second year as part of the formative evaluation, revealed changes related to school improvement in most of the participating schools we visited. However, the magnitude and scope of these changes varied widely. While a few schools experienced significant changes in organization, climate, or instruction, many made only modest progress in improving their instructional programs. In addition, a number of the changes were clearly due to factors other than the technical assistance (e.g., state or local reform mandates, other external assistance, or self-initiated programmatic adjustments). In some schools the pace of change was slowed by these and other factors; a lack of progress cannot always be interpreted as a sign that the technical assistance did not achieve its goals. In this chapter, we discuss the changes we observed in the schools we visited during the third year of the Nine-Site Initiative. These changes occurred in five broad areas: (1) Chapter 1 service delivery and program design; (2) teachers and school-level administrators; (3) instruction and assessment; (4) student outcomes; and (5) state and district administration of Chapter 1.

Several factors affect analysis of the outcomes of the Nine-Site Initiative. First, given the complexity of school change and the relatively short time span of the Nine-Site Initiative, limited resources and unclear goals lessened the potential impact of TAC/RTAC assistance from the outset. Second, participants in the initiative had different sets of expectations that translate into different definitions of success. For example, some of the TAC/RTACs, in their own evaluations of the initiative, list as a major accomplishment gaining access to schools and getting the attention of school staff. This represents a much less ambitious agenda than, for instance, facilitating the creation of teacher networks that can generate reform agendas and activities on their own, which the research suggests is a desirable outcome of external assistance (Hargreaves & Fullan, 1992). Some principals also expected the technical assistance to attack low test scores, the trigger for identification for program improvement, directly by working with teachers on test-taking strategies.

A third, and perhaps the most important, mitigating factor is the effect of local context. Just as technical assistance affects school and district organization and events, it is also shaped by them. Indeed, the local context not only helps define needs but also defines opportunities for and constraints on external assistance. It is unfair and unhelpful to compare outcomes across schools and across sites without taking into account the dramatic differences in local contexts and the variations in the initial

circumstances into which technical assistance was introduced. It is well beyond the scope of the evaluation of the Nine-Site Initiative and this report to describe fully all the local circumstances that buffet the schools that received assistance under the Nine-Site Initiative. However, as examples of factors that influence what happens in schools, consider the following:

- In Chicago, the school reform initiative, with its emphasis on transferring control of schools away from the Chicago Public Schools, has politicized many communities and focused attention on school governance. Early reports on the reforms suggested that attention to governance deflected attention from efforts to improve curriculum and instruction. More recently, it has been reported that while the reforms have yet to affect classrooms in many schools, they have begun to make a difference in some. However, even as this news was announced late in the 1992-93 school year, state and local budget analysts were predicting that enormous budget shortfalls would make it extremely difficult, if not impossible, for schools to open in the fall unless there were major budget cuts and possibly layoffs.

- In Los Angeles, teachers' concerns about a budget shortfall and the prospect of layoffs and salary reductions led them to take four strike votes in 1992-93. District financial problems were solved, at least temporarily, by some last-minute maneuvering in the state legislature. Soon after this crisis eased, a report that was highly critical of the organization and management of the district was released amidst a flurry of charges and countercharges of serious mismanagement. Among other things, the report called for a complete restructuring of the governance of the nation's second largest school system.

- In September 1992, Hurricane Andrew swept through Dade County and left a trail of destruction that took its toll throughout the entire school year. In the schools included in the site visit, which were spared serious damage, the aftermath of the storm created almost unbearable stress for teachers. They had to cope with students' fears about the storm and the havoc it wreaked on their lives. In addition, many teachers faced serious problems of their own as they coped with the tasks of relocating, rebuilding, and, by the end of the school year when repairs were completed, moving back into their homes. According to the principals, a district decision to eliminate teacher professional development days as a way of coping with the shortened school year added to the problem by taking away opportunities for "teachers to relax and recharge their batteries."

- In Detroit, a teachers' strike delayed the opening of school by five weeks. The disruption made it difficult to initiate technical assistance activities during the fall. Problems continued as teachers struggled with trying to make up for lost time by working longer hours. In one of the participating schools, the strike exacerbated existing tensions among the staff and resulted in even lower staff morale.

- While all of the schools included in the Nine-Site Initiative must cope with the effects of poverty, some of the schools included in the visits to Mississippi, Los Angeles, and Chicago face particularly acute problems that stem from extremely high concentrations

of poverty, students' lack of proper nutrition, inadequate health care, and the almost complete absence of support from families and communities.

All of the sites posed formidable challenges to the TAC/RTACs; however, the urban sites, in general, appear to have been more difficult places in which to work with individual schools. A shorthand way of characterizing the difference is to say that there is more "noise" in the urban sites than in the rural sites. Nearly all of the accounts of extenuating circumstances we heard--teachers' strikes, budget shortfalls, and complicated bureaucracies--we heard in cities. From the beginning, the TACs had to negotiate large, complex urban school bureaucracies for which the Nine-Site Initiative was but one more program competing with myriad other programs that were already under way, although not always in the schools slated to participate in the Nine-Site Initiative. In the rural sites, there were fewer competing programs and other conflicts affecting the schools. It was also easier, for reasons that we do not fully understand, to gather teachers from all or most of the schools in the rural sites and to take advantage of some economies of scale in providing assistance. On balance, district-level support and advocacy for the assistance provided under the Nine-Site Initiative also seemed stronger in the rural sites.

Our analysis of outcomes is based on a snapshot study. We do not have enough information to precisely pinpoint the changes that took place in the schools we visited over time, nor can we accurately predict what will occur next year.

Chapter 1 Programs

Our findings from the formative evaluation of the Nine-Site Initiative, along with the results from several larger studies of the implementation of the program improvement provisions of the 1988 Hawkins-Stafford Amendments (Millsap, Moss, & Gamse, 1993), lead to the conclusion that identification for program improvement is rarely the driving force behind meaningful school improvement. In fact, in many schools, it does not even inspire much tinkering with the Chapter 1 program beyond writing a new plan. Our evidence from the participating and comparison schools included in our evaluation supports this conclusion; although we saw some schools making serious efforts to improve, these efforts most often came about for reasons other than identification for program improvement.

When we first visited the nine sites, we found that designation for Chapter 1 program improvement had caused a degree of consternation among some principals and teachers. Some were simply confused by the new accountability system and what they were required to do. Most

principals and teachers understood that the problem was related to low test scores and that the obvious remedy was to "get the scores up." Requirements to prepare and implement program improvement plans generally added more work and increased the levels of confusion and frustration. A more fundamental problem was that principals and teachers in the schools we visited, including the comparison schools, tended not to trust the identification process, and consequently did not see addressing the Chapter 1 program improvement requirements as a high priority or a schoolwide responsibility.

If anything, we detected less concern about complying with Chapter 1 program improvement requirements at the end of the 1992-93 school year than at the time of the first round of site visits. In general, the principals and teachers with whom we spoke were concerned about the quality of their school programs. However, their overall lack of understanding of the Chapter 1 program improvement requirements, their inexperience with using Chapter 1 student achievement data to inform decisions about improving curriculum and instruction, the absence of any serious rewards or sanctions, and the almost complete lack of serious sustained support and follow-up by state and local Chapter 1 administrators make Chapter 1 program improvement requirements a hollow bureaucratic shell in the professional lives of principals and teachers. Further, most schools do not have the expertise to examine their programs critically, the flexibility to redirect existing resources or tap into new ones, or the information they need to make serious changes in instruction or school organization. Indeed, these are the very weaknesses that school-level assistance is often designed to address.

To the extent that a program of technical assistance can help foster substantive change, an important first step is to address these capacity issues. An examination of the Chapter 1 program is a logical starting point. This section examines the effects of the technical assistance activities on the organization of Chapter 1 programs, including design and service delivery, as the TAC/RTACs worked to enhance the capacity of the schools to improve.

Increased Knowledge About Chapter 1 Requirements

Our evidence indicates that, in many of the schools that received technical assistance during the third year of the initiative, teachers and administrators know more about Chapter 1 requirements, regulations, and options now than they did three years ago. Staff in almost all of the study schools credited the TAC/RTACs with helping them better understand program improvement, which has proven a somewhat elusive concept in many schools since the enactment of the 1988 Hawkins-Stafford Amendments. The TAC/RTACs served as an important resource for sites on Chapter 1 regulations; however, bringing district staff up to speed on compliance issues was not the focus of

assistance in any site. Instead, this kind of assistance served as a necessary first step toward program improvement. In Iowa, for example, the schools we visited reported that they had previously understood coordination between Chapter 1 and regular program teachers regarding lesson plans to be illegal; the Chapter 1 programs in these schools were cut off from contact with the regular program. Guidance from the state Chapter 1 coordinator and RTAC staff on new Chapter 1 program designs and the regulations governing them encouraged teachers to consider alternate program designs and integrate Chapter 1 into the regular school program.

Most of the schools we visited were in joint program improvement planning with the state education agency, because the law requires that the state must intervene in schools that do not demonstrate improvement after two years of identification. However, in no site did we see evidence of sustained joint planning. Some schools were unaware of this requirement; others reported attendance at one meeting related to continued identification but no follow-up. In addition, we found no evidence of monitoring of program improvement activities, although there is considerable attention to test results as determinants of whether or not a school is designated for program improvement. Principals with whom we spoke reported little or no feedback on Chapter 1 program improvement plans.

In the rural sites, schools reported that they lacked basic information about Chapter 1 prior to their exposure to the RTACs; staff were either misinformed about regulations or unaware of opportunities (e.g., schoolwide projects) for which they were eligible. In these places, teachers and administrators found the RTAC to be a valuable resource as an accessible source of accurate information about Chapter 1 regulations and the options for program design and evaluation. For example, the BIA schools had recently taken on responsibility for their Chapter 1 programs; they do all the paperwork and must deal with federal regulations that the agencies used to handle. Staff in these schools used the RTAC as a resource as they learned the basics of running a Chapter 1 program, from filling out an application to testing students for eligibility. In Kentucky, the RTAC's work with the district was an important contribution as the district embarked on the process of internalizing and implementing KERA. In the individual schools, the enactment of KERA generated confusion as schools struggled to understand the myriad requirements of the new law. During the Nine-Site Initiative's first year, the RTAC helped the schools and district explore the overlap between KERA and Chapter 1 program improvement requirements.

In contrast to these rural schools, schools in the urban sites generally had access to information about basic regulations and evaluation requirements. Large urban districts generally have a sizable Chapter 1 staff that is responsible for keeping schools in compliance and making sure they have the opportunity to explore allowable new options. For example, in Detroit, where both

participating public schools were schoolwide projects, district Chapter 1 staff worked with school staff to apply for schoolwide status and design acceptable plans for implementation. The Michigan state Chapter 1 staff enthusiastically encouraged all eligible schools to become schoolwide projects and supported district staff with information and assistance. Although the TAC was not the major force behind the schoolwide projects, technical assistance providers offered support for the district's efforts as the schools implemented their new schoolwide plans at the beginning of the Nine-Site Initiative, providing ideas for new instruction and organization, helping with evaluation, and taking some district staff to a national schoolwide project conference.

Problems with Chapter 1 requirements lingered in some urban schools at the end of the third year of the initiative. In at least some schools, teachers and principals remained somewhat baffled by program improvement and unsure how to make the improvements that they sensed were expected of them. In one urban school, the principal acknowledged the TAC's help in understanding the requirements, but still claimed confusion:

> Testing is my biggest thing. I still don't know what NCEs are. At the beginning I had no idea about what a program improvement plan was. I have still never seen any program improvement planning guidelines. At first, the only thing that made me feel better was that when we went to Washington [for the initial meeting about the Nine-Site Initiative], nobody there seemed to know what was going on either.

This principal decided that the best strategy to get out of program improvement was simply to show the students how to score higher on the test; she requested a test-taking workshop for the whole faculty from the TAC. In Dade County, a primary focus of technical assistance during the first half of the Nine-Site Initiative was to help school and district staff develop their ability to understand and use student test data. In the second year, the TAC augmented this focus with a number of workshops on test-taking skills.

In some schools, an apparent lack of understanding about Chapter 1 program improvement provisions was due not to confusion or misinformation, but to the integration of Chapter 1 program improvement with the district school improvement initiative. Several local school improvement initiatives explicitly linked improving Chapter 1 programs with broader building-level improvement efforts. In Baltimore, Detroit, and Dade County, schools were required to integrate their plans for Chapter 1 with overall school improvement plans. In Baltimore, we found considerable evidence of staff familiarity with the details of school improvement plans; principals explained that one of the key features of the planning process is that they were required to develop annual objectives and then delineate (1) the enabling activities that the school would engage in to achieve each objective, (2) the resources needed to conduct the activities, (3) a schedule of the activities, (4) the people responsible

for carrying out the activities, and (5) monitoring and evaluation procedures that would be used to measure progress toward each objective. Finally, schools had to indicate which of four possible funding sources, including Chapter 1, would provide support for the activity.

In some cases, then, there is no real reason for schools to consider Chapter 1 program improvement as an effort separate from other school improvement efforts. What could be interpreted as inattention to the Chapter 1 program improvement mandate can also be the realization of the goal behind that mandate--to improve the education of disadvantaged students by ensuring that it is a schoolwide responsibility. An effort to combine planning for general school reform efforts with Chapter 1 program improvement has the potential to convey the message that the two can and should be entirely consistent.

Changes in Service Delivery

Most of the schools we visited made some type of change in their Chapter 1 programs during the course of the three-year initiative (as did most of the comparison schools). Most teachers and principals, however, did not attribute these changes primarily to the technical assistance; they were more likely to ascribe them to the normal cycle of revision and to the Hawkins-Stafford Amendments, which sent a signal to schools that change in the service of improvement is good. In a few places, the TAC/RTACs helped inspire change, either by making concrete suggestions about possible changes or by imbuing school staff with enough confidence to create change themselves. In most cases, however, the technical assistance providers offered support for changes that probably would have happened anyway (and possibly helped schools achieve more than they might have been able to do without assistance). This section examines the types of changes in the delivery of Chapter 1 services that occurred in the study schools over the past three years.

Overall, changes in service delivery were not accompanied by a measured examination of how current practice fails to accomplish the school's goals and how alternatives may better achieve them. The exploration of new service delivery models in many sites was approached on a trial-and-error basis. The change in service delivery model that we observed most often was a switch to a schoolwide project. While a few schools used this opportunity to try new instructional techniques, others used the additional resources to reduce class size or hire noninstructional coordinators, as the following examples indicate:

- Both Detroit schools that we visited became schoolwide projects in the first year of the Nine-Site Initiative. One school used the opportunity to hire a full-time staff

coordinator, who most recently worked as a technical assistance provider in one of six district area offices. We did not discern any major changes to Chapter 1 service delivery in this school due to the schoolwide project; Chapter 1 teachers still pull out their students. In the other school, also a schoolwide project, the Chapter 1 teachers began to experiment with instruction in the regular classrooms instead of relying solely on pull-outs. This was not attributed directly to the technical assistance; however, the TAC staff member was involved in the school improvement planning activities and probably had some input into the decision to change. According to the Chapter 1 teacher, some teachers were resistant to Chapter 1 instruction in the classrooms and preferred their students to be pulled out.

- In the BIA site, one school had been a schoolwide project since the beginning of the Nine-Site Initiative; all classrooms had a Chapter 1 aide, and students were not pulled out as frequently as they had been. In addition, for the past two years the school has used Chapter 1 funds to offer a five-week summer school to enrich the academic experience of students and provide staff development opportunities for teachers.

- One participating school in Kentucky became a schoolwide project this year, using the extra funds for teacher training and visits to other schools. This school was unable to find enough of these added activities to spend the large allocation it received for staff development as a schoolwide project. In contrast, an energetic principal at the comparison school, which also became a schoolwide project this year, worked closely with his staff to identify a wide range of activities and quickly used the extra funds.

Some of the schools we visited experienced problems obtaining or keeping schoolwide project status. One of the participating schools in Dade County (as well as the comparison school) failed to meet the three-year accountability requirements for schoolwide projects and reverted to a traditional, targeted program. The other school was anticipating the evaluation this year and was worried about suffering the same fate. The principals and teachers in schools that lost their schoolwide projects believed that the resulting increases in class size hurt the quality of their instructional programs. The TAC played a limited role in the implementation of schoolwide projects, although negotiations between the TAC and the district are continuing to identify TAC services that can contribute to the development of schoolwide projects during the 1993-94 school year. One of the BIA schools applied for schoolwide project status for the 1992-93 school year. However, the approval came too late for the principal to hire additional teachers for the purpose of lowering class size; instead, the school switched from a pull-out model to an in-class model, which has been unpopular among staff because teachers are unaccustomed to team teaching and uncertain what their roles should be in the classroom.

One of the Mississippi schools was a schoolwide project until last year, but declined to continue the project due to a staff preference for pull-out services. RTAC monthly reports noted that several schools in the Nine-Site Initiative dropped their schoolwide projects because cuts in state funding made it impossible for districts to meet maintenance-of-effort requirements. The other school

in this site became a schoolwide project at the beginning of the Nine-Site Initiative and was awaiting its evaluation results.

In almost every school we visited that was a schoolwide project, this facet of their Chapter 1 programs was far more important to staff members than identification for program improvement. Meeting the third-year accountability requirements to ensure continuation of schoolwide project status garnered more concern and attention than did testing out of program improvement. In many of the schools in which the technical assistance addressed issues related to evaluation, these accountability requirements were the subject of much of the assistance.

In addition to the switch to schoolwide projects, some schools began to move away from their narrow reliance on pull-out instruction, experimenting with in-class techniques and team teaching. For example, both schools we visited in Iowa reported such experimentation, which teachers said resulted from the close working relationships that developed between Chapter 1 and regular program teachers on the program improvement team. The Chapter 1 teachers in these schools still relied primarily on pull-outs; however, lessons from Chapter 1 teachers were much more likely to complement lessons in the regular classroom than they were prior to the RTAC services. Some of the changes in service delivery that we observed were unrelated to the Nine-Site Initiative; for instance, one school in Chicago expanded the use of computer-assisted instruction for Chapter 1 classes, with technical assistance provided primarily by the software vendor.

Teachers

Impact on Teachers

In most of the schools we visited, the bulk of the time spent on technical assistance directly involved teachers and often included principals, Chapter 1 coordinators, and teacher assistants. The impact of the technical assistance activities on these participants varied widely from site to site and from school to school, for a number of reasons.

First, as Section II of this report indicates, exactly who participated in a particular school often varied from one technical assistance activity to another. In schools in Iowa and Baltimore, a stable team of teachers participated in every activity over the course of the year. This pattern of consistent participation made the technical assistance a fairly big deal in the lives of the participating teachers. It also provided the teachers with a built-in support network, fortified by frequent

interaction and shared experiences, as they worked to try new instructional strategies. In contrast, teachers in Kentucky and Chicago reported that the technical assistance providers usually met with different teachers on each visit to the schools included in our study. Thus, regardless of how many hours the technical assistance providers spent in the schools, the activities had a low profile and low priority for most teachers, because they happened only occasionally at best.

In addition, we did not observe a multiplier effect from the technical assistance. The impacts on teachers who participated in the activities fairly frequently and regularly did not extend to their colleagues who were not involved with TAC/RTAC activities. Teachers in some sites made it a priority to share their experience and information with the rest of the faculty but found it difficult to create enthusiasm or momentum second-hand. In a number of schools, principals mentioned plans to have teachers who participated in the technical assistance train other teachers in order to create a "ripple effect" and extend the impact of the technical assistance activities. However, we did not hear of any specific instances in which these plans were carried out.

Second, the principals' support appeared to be an important, although not necessarily essential, factor in determining impact. For example, the principal at one BIA school was an active consumer of technical assistance, organizing the school to best receive and make use of assistance for ongoing reform efforts and coordinating assistance activities. She maintained that the RTAC's single-minded focus on Chapter 1 program improvement facilitated her vision for the school; it allowed her to attend to the myriad responsibilities that principals face while knowing that the RTAC would help her maintain a focus on improving instruction. Teachers in one Iowa school believed that the strong support of the principal--who attended all workshops with his staff, freed team members for all activities, and worked to increase inservice staff development time--gave them the confidence to experiment with new strategies and innovations they might not have tried otherwise. In two other sites, where the comparison schools were making more progress toward school improvement than the participating schools we visited, the principals of those comparison schools actively sought outside assistance and professional development opportunities, working in conjunction with teachers. They also provided opportunities for teachers to share the new ideas with colleagues through workshops and classroom demonstrations.

We also saw several examples of a principal choosing to stand aside and let the technical assistance provider work with teachers. One Baltimore principal commented, "I could never have made this school faculty competent in cooperative learning. [The TAC] did that," implying that he had too many other responsibilities to devote the amount of time to teaching and coaching teachers that is required to make lasting change. In the other Iowa school we visited, the principal permitted the team teachers to participate fully in all technical assistance activities. However, the school had a

separate program funded through another federal grant to which the principal accorded greater priority. The principal reported that she had made no plans to provide time for the team to continue to meet together or attend workshops as a group after the conclusion of the Nine-Site Initiative.

In schools where either the principal or another person was considered the instructional leader, the TAC/RTACs sometimes had limited opportunity to work closely and frequently with teachers. One Detroit principal hired a staff coordinator with schoolwide project funds. The coordinator strongly believed that it was her role to provide whatever technical assistance teachers needed. In this school, the TAC staff member spent a substantial amount of his time working with the principal and the school improvement team on administrative and classroom management issues.

Teachers' Criteria for Judging the Value of Technical Assistance

Teachers had several criteria for determining the value of the technical assistance, all of which focused on short-term changes and quick judgments about usefulness. First, most teachers liked the new ideas they learned, finding them interesting and relevant to their classrooms. They told us that most of the ideas they picked up through the technical assistance were things they could use right away (e.g., how to regroup using manipulatives to teach addition and subtraction, having students keep a "buddy journal" while reading a literature book, and the use of "webbing" as a pre-writing activity). They particularly appreciated the accessibility and personalized nature of the on-site assistance, seeing it as a welcome contrast to district staff development programs that consist of a room full of hundreds of people listening to a lecture. In most of these schools most teachers were not hostile to the new ideas and information contained in technical assistance activities (although there were usually the stereotypical "resisters" who dug their feet in and shut their doors).

One major contribution of the TAC/RTACs in many sites was sharing information and ideas from other states and districts. Many teachers told us how much they appreciated learning what goes on someplace else, partly because it helped them feel less isolated and partly because they felt their own, local ideas might have been stale. The infusion of new ideas helped fuel enthusiasm for program improvement in some of the schools, particularly in those rural schools where we observed such enthusiasm. For example, virtually all the teachers and administrators in the participating schools in Mississippi grew up in the area and attended the local state college; therefore, workshops given by Delta State faculty, which comprised most of the non-RTAC technical assistance, offered little in the way of fresh ideas. As a result, the link to programs outside the region supplied by the RTAC helped secure teachers' interest in RTAC services. In Iowa, the RTAC brought a team of teachers and administrators from a whole-language-based school in Ohio to serve as a model at the

beginning of the Nine-Site Initiative. This kind of exposure encouraged teams to request visits to other schools to get new ideas and see models of good programs; teachers from one Iowa school, for instance, traveled to Hannibal, Missouri, to visit a school implementing a whole-language, integrated language arts program.

Second, in the sites where TAC/RTAC staff often worked in the schools with teachers individually (including Kentucky, Iowa, Detroit, and Baltimore), teachers appreciated the chance to see how new instructional strategies worked in their classrooms with their students; demonstration teaching was often mentioned as a favorite strategy. Teachers value demonstration lessons because they permit them to build craft knowledge through observation and discussion of in-class logistics with other teachers (as opposed to reading a research article or discussing theory). One teacher put it this way: "I can get the theory on my own if I want it. I like staff development that gives me ideas of lots of things I can do tomorrow with my children."

As testimony to the value of demonstration teaching, one Chapter 1 teacher said, "She knows my kids so she can offer [appropriate] material." Another commented, "The person who is assisting should come in and do actual teaching and model lessons. Any teacher can do what she sees done and incorporate it into her lessons." One teacher in an urban site said:

> I find this very helpful. You can talk all about a teaching strategy, but once the kids are there, anything can happen. It's good to see someone try it with your students. Then if it works well, of course you are going to do it.

In addition to demonstration teaching, teachers liked receiving (free) new materials; one teacher in a rural site said, "I was tickled to death to get supplies that I could use right away in my classroom." Another teacher said, "I have stacks this high of strategies, things I can do with the kids. . . . I have new materials--it's a new lease on life."

Third, as discussed in Section II, teachers saw TAC/RTAC staff as "outside experts." In some sites, this gave them a lot of credibility. Teachers and administrators in participating schools seemed convinced that federally funded technical assistance can bring many more resources to bear than local efforts. They saw TAC/RTAC staff as better prepared and more expert than local trainers. One teacher in a rural site echoed the opinions of a number of teachers:

> [The local state-sponsored staff development agency] tries, but they can't afford quality. They don't do quality. We've seen plenty of bad workshops. . . . With the RTAC, it's crystal clear. These people have experience.

One rural principal said, "Sometimes a consultant, an outsider, has more credibility. If the person's traveled more than 100 miles, you have to listen to him." Yet, an RTAC director bemoaned what she saw as an unnecessary dependence on outsiders for assistance: "Principals are less likely to schedule an inservice just [for teachers] to talk. Somehow that's less impressive than someone walking in with a briefcase." One principal noted that the TAC had the same effect on parents: "Parents tend to pay more attention to things that they hear from an outside expert. They listened to him even when he said things that we had already told them." Teachers and principals also appreciated the perspective of an outsider who could examine weaknesses in the school with a clearer eye than school staff. One principal said, "When we ran into a problem, she was a problem-solver, a catalyst. . . . If there were situations that she, as an outsider, could deal with more safely, then she did. She made it easier for me to deal with some things." Another principal commented:

> TAC has been very supportive. [The TAC staff member] has been my cheerleader. Each time she came, she would show us more about what was happening. She helped us understand and articulate our progress. Sometimes we didn't know how much we had done, but she helped us see it.

In other sites, the "outside expert" tag was a disadvantage, when TAC staff worked with teachers who were accustomed to a constant flow of experts who drop in, drop something off, and drop out of sight. The TAC working in Los Angeles wrote in their final report on the Nine-Site Initiative:

> Los Angeles Unified School District is very large, and is confronted daily with offers from many organizations, both public and private, to help heal what ails the system. On any given day of the week in the Nine-Site Project schools, there is an offer by some special project, some special initiative, or some special funding to combat the enormous problems the schools face. . . . These offers are viewed differently by each school. In the experience of the TAC, the first response is often one of suspicion. . . . It was a tenuous task for the Region F TAC to convince schools that we were there to support their efforts and to build on what they were already doing in their schools--and not to bring in another outside project and layer it on top of all the other projects in the schools.

A teacher in one urban comparison school said, "We do things best when we develop them. We can get more help from our neighbors down the street than from a consultant from far away. . . . The problems that we have here are our own. When you're trying to get it together, an outsider can make it worse." This teacher worked in a district where the teachers' union recently voted to call for a moratorium on all district and state reform efforts in an attempt to relieve teacher frustration and stress resulting from constant mandates for reform with no additional resources.

Fourth, teachers appreciated having the same technical assistance providers return time after time to follow up on the assistance. Knowing that they would see the person again inspired--or intimidated--some teachers to try new strategies. One teacher said, "[The RTAC staff member] asked us to write down three things we would do, checked up, and told us when we needed to improve." Another teacher in this site added, "She came in when I was doing a traditional lesson, and I nearly died." A teacher in Detroit said:

> What I liked is the follow-through--she checked. It was like, here she is again. We see it's not going to go away so we might as well use it. That's what happened. You see it working with someone else so you try it.

Fifth, and perhaps most influential, teachers almost universally liked the technical assistance providers personally and respected them professionally, which added to their inclination to enjoy the activities. In Iowa, Kentucky, Mississippi, Baltimore, one Detroit school, and one Chicago school, teachers and principals consistently mentioned the individual TAC/RTAC staff when explaining why they considered the technical assistance valuable. Comments included the following:

- "It's the way it was presented that was influential. They showed us good results, materials, and ideas. You have to have someone with [the RTAC director's] personality. I thought, if [the RTAC director] is there and has enthusiasm, then this is good."
- "RTAC staff answered my questions and went the extra mile to help us."
- "They're a good friend. They've been real nice. They go the extra mile to help. Anything we ask for, we get. We have a real good feeling about them."
- "They were always supportive and encouraging, and they never talked down to us or told us what to do or that what we were doing was wrong."
- "She is sort of like a mother to us. She reminded me of my first grade teacher, my role model."
- "[He is] a member of [our family]." (This comment came from the principal of a school that has not been a particularly enthusiastic participant in technical assistance activities.)
- "Other consultants talk down to us, like we're stupid or backward. [The RTAC staff member] is like one of us."

Higher Expectations of Teachers

In many schools, the TAC/RTAC helped enhance the professional image of teachers, convincing administrators as well as teachers that teachers were capable of improving their work and interested in performing as well as possible. Teachers and administrators in the sites in which teachers had frequent contact with the TAC/RTAC staff noted that the increased confidence of teachers who participated in the technical assistance was a major factor in their willingness to try new instructional activities and practices, perhaps more so than the specific content of the technical assistance. One teacher said, "It's not so much what she did, but she showed us it was all right to try new things." Another commented, "Three years ago, I was waiting for something different. I was bored, but didn't know there were other options. This is more fun. I hated worksheets. Someone gave me the okay to do what I love to do." In both Iowa and the BIA, we heard that the technical assistance helped teachers feel confident enough to "let go of the basals" and move into more literature-based teaching strategies. By contrast, in one school where not much progress was made, a teacher commented that "people here don't believe change will happen."

In Kentucky, where the impetus for instructional change came from KERA, not from the RTAC, the primary impact of the technical assistance was support for teachers as they worked to understand their new responsibilities. In a few instances, the assistance helped teachers overcome initial reservations about using new approaches (for example, RTAC staff convinced teachers that noisy classrooms that result from students working together can be good).

In the two schools we visited in Iowa, one notable outcome of the technical assistance process was that all teachers on the team expected more of themselves, holding themselves--and each other--to higher standards. This was true for Chapter 1 teachers as well as others; just as Chapter 1 students were included in the effort to move away from basals into literature-based reading, Chapter 1 teachers were treated as equal members of the school improvement team. In one school, the Chapter 1 room was almost an afterthought to the school; the path to it included a detour through the gym, the music room, and several narrow, twisting hallways and steep stairways. Although this isolation symbolized the role of Chapter 1 in the school three years ago, the Chapter 1 teachers were full participants in the technical assistance and at the end of the initiative strove toward the same goals as their colleagues.

Collegiality and Climate

The degree to which teachers are encouraged to interact professionally, receive the support and the time they need to do so, and see value in the interaction is another indicator that a school has the capacity to sustain--and maybe even generate--change. This was not always the case in the schools we visited. An early TAC monthly report to ED identified several features in the organization of an urban district that influenced choices about how assistance would proceed:

> These schools are separated by long distances and congested travel routes within the urban area so combining them for services is difficult if not impossible. In addition, the schools have varied schedules and lack time in those schedules for staff meetings and staff development. In some schools, teachers are with their students for the entire day including lunch. The only time available for planning and meeting is the last hour of the day, a time that is not particularly conducive to learning or activities requiring concentration. Most schools do have 30 minutes available in the morning for school activities, but a 30-minute block of time is not adequate to conduct meaningful assessment or development activities. Contractual considerations prohibit extending the school day for staff development; however, staff in some schools do volunteer to work on their own time.

Schools in some sites had more flexibility in their schedules than the schools in this site; nevertheless, lack of time was a constant concern everywhere. Some schools were able to get around the problem by hiring substitutes or having teachers and principals cover classes so that teachers could participate in the assistance activities. In other schools, either it was not possible to adjust schedules or no effort was made to do so to facilitate participation.

In a few of the schools we visited, we saw evidence of more teacher interaction and higher degrees of collegiality than staff reported existed prior to the Nine-Site Initiative. In some places, this was due largely to increased levels of basic coordination and communication between Chapter 1 and regular program teachers about lesson plans and student progress. In others, the interaction was deeper; teachers met to discuss instructional issues, coordinate their plans for improvement, and learn new techniques.

In Mississippi, the RTAC and school staff maintained that staff cohesiveness had changed dramatically over the past three years. Teachers reported that three years ago, staff relations were marked by tension and adversity, with teacher aides critical of teachers and vice versa. In contrast, teachers told us this year that they were proud of the fact that they shared materials and ideas in meetings and used each other as instructional resources. Teachers also reported making more use of aides in class. In addition, teachers were more likely to share what they learned in workshops with

other teachers. The comparison school appeared to enjoy little of the collegiality that was developing in the participating schools.

In Baltimore, the technical assistance revolved around the formation of study groups, which remained in place throughout the initiative. These teachers, who taught the same subject at the same grade level, were able to form a tight network that offered companionship and support as the teachers struggled with a new state math program.

In the best example of improved collegiality, the formation of teams in Iowa laid the groundwork for change in the schools by giving teachers a forum to develop relationships, share information, exchange support and critiques, and discuss emerging concerns. During workshops in Ottumwa and the round-trip van rides to get there, team teachers discussed the content of the workshops, explored their plans for program improvement, and developed both professional and personal relationships. These teachers did not have formal joint planning time other than the technical assistance activities; the time they spent together through the Nine-Site Initiative allowed them to discover each other as resources. A Chapter 1 teacher said, "Before, they didn't know what we were doing. Now, they see us as a support-type thing, not just another place to pull your kids." Principals in both schools steered new teachers to the team teachers to get information about their practices and guidance on instruction. However, the lack of joint planning time in the schedule will make it hard for these teachers to continue to meet when their monthly trips to Ottumwa stop. Teachers hoped to continue some of the activities they started with the RTAC's help, including a monthly study group for Chapter 1 teachers from all participating schools.

One school at another site offered an example of how a lack of collegiality and communication among staff can undermine school improvement efforts. One teacher noted that although the principal had gotten the schools into the Effective Schools Program three years ago, this was the first year that the staff were really aware of this and were actually involved in activities. Staff also reported tension, apathy, and alienation among the instructional staff and between teachers and administrators. In contrast, the principal at another school in this site made an active effort to encourage leadership among staff to build their capacity for sustained growth, creating school improvement committees to work on specific climate and relationship improvements along with academic activities.

Like increased collegiality, improved school climate is a building block for school change that can facilitate substantive reform. Our observations indicated that several schools experienced improvements in morale and climate during the three years of the initiative. In some cases, teachers and principals told us that the infusion of new ideas and the repeated presence of outside experts

generated enthusiasm among school staff. In the Mississippi schools, one of the RTAC's major accomplishments was to improve the physical plants of some schools, lifting spirits in the process. At one of the BIA schools, the principal reported that the new, positive attitude in the school was a result of the increased amount of staff development and training, much of which was provided by the RTAC.

In a few schools, climate actually worsened, although we would attribute this to factors including school conditions, societal problems, and budget cuts rather than to the technical assistance. In many of the urban schools, where the flow of "experts" is constant and thick, the arrival of the TAC had little uplifting effect--in some sites, this cycle of descending and departing experts has bred cynicism about "another new program." Teachers in Los Angeles schools were especially skeptical when the TAC lost its contract after the first year of the initiative, rendering useless the time-consuming process of laying the groundwork for assistance. In Dade County, the trauma caused by Hurricane Andrew distracted school staff and pushed technical assistance well down the list of priorities competing for attention.

While problems that affected children, teachers, and schools varied in severity from one site to the next, coping with them was very much a part of the professional responsibilities of all of the teachers with whom we spoke during the site visits. In some of the schools we visited, the frustration of dealing with these problems resulted in very low morale and an absence of staff cohesiveness. Teachers said they wanted help in these areas, which fall outside the realm of curriculum and instruction; one of their criteria for effective technical assistance was that it provide such help.

Instruction and Assessment

In most sites, much of the technical assistance focused on classroom instruction and assessment of student learning. In almost every school, we heard about at least a minimal change in these areas, as teachers learned of and tried new activities. However, our evidence leads us to believe that these changes did not often translate into efforts to rethink instructional philosophies or make lasting changes in instructional practice.

Classroom Instruction

In every school, most of the teachers who participated in technical assistance reported that they learned about new instructional techniques (and also, in some cases, new ways to organize

governance teams or involve parents, evaluate performance, and design Chapter 1 programs), and they believed the TAC/RTACs were very good at bringing them this information. Many of the teachers further reported that they actually tried some kind of new strategy. The most frequently cited examples of new activities or strategies included math manipulatives, literature-based reading strategies, and cooperative learning.

Although most teachers were open to hearing about new ideas for specific techniques or activities, some did not find the information or new techniques useful and decided not to make any changes. For instance, in one school where the technical assistance activities focused on cooperative learning, one teacher told us that she believed that cooperative learning hurts students because they expect to be able to work together for tests. This teacher reported that the technical assistance provider had tried to convince her to change her mind, but although she occasionally let the students do projects together, she held firm in her refusal to change her practice. Others tried the new techniques presented and later decided to return to their original teaching methods. Again, on the subject of cooperative learning one teacher told us, "We've tried grouping--it's noisy. We're not doing it now. The kids tried to copy, or let one do all the work. At first it worked beautifully, but then they got to where they wanted to cheat a little, so we had to put a stop to that." We saw no evidence that the RTAC tried again to convert this teacher.

In some sites, teachers and principals were more willing to participate and try new things than they might otherwise have been because they perceived the quality of the technical assistance offered through the Nine-Site Initiative to be higher than that of other available assistance. In Mississippi, for example, a district administrator noted that because the RTAC offered better-designed staff development programs and higher-quality workshops and presentations than previous assisters, the Nine-Site Initiative helped sell teachers on the idea of professional development. The administrator said, "We finally convinced teachers that inservice is good. Now they're asking for inservices before and after school." The comparison school, by contrast, provided a striking example of underutilized staff development.

In Iowa, teachers universally believed the RTAC workshops were an improvement over other sources of assistance; many of them told us that they were initially skeptical about the initiative, but after attending the opening workshop they looked forward to each activity, confident that it would be valuable. Chapter 1 staff in Dade County also said they learned about the value of school-level assistance as a result of their work with TAC staff. Referring to staff development provided by the district, one teacher in a comparison school said:

> Most workshops are not useful. They are hit or miss in terms of their content and general relevance. On-site activities would be interesting. It has to be something that is worthwhile and of high quality. It has to keep your attention.

On the other hand, in several of the schools in Los Angeles, principals who were not convinced that the TAC assistance would be better than other available resources (namely, the Achievement Council) were unwilling to allocate professional development time to the Nine-Site Initiative activities.

Many teachers noted that they received plenty of free materials through the TAC/RTACs--they had more literature books in their classrooms, binders full of worksheets and articles about teaching, subscriptions to journals, or math manipulative kits. In Iowa, teachers noted that they also spent their personal and school discretionary funds differently, choosing literature books more often than phonics materials and stocking their classrooms with research information and personal libraries.

Beyond these impacts--teachers learned about specific new strategies and had some new materials--we saw little evidence that the technical assistance affected the teaching and learning in the schools we visited. The schools were replete with isolated examples of instructional experiments. However, we saw little evidence of changes in practice or beliefs. A very small number of teachers went beyond occasional experimentation with new materials or strategies to include new techniques as a regular part of their instruction or to redesign their lesson plans to fit into a new framework that included broad changes in practice.

Cooperative learning, a common TAC/RTAC topic well-received by teachers, is a good example of an instructional technique that teachers can use either as a set of activities now and then or as the basis for deeper changes in practice or beliefs. In one school where cooperative learning was the focus of the technical assistance, we saw evidence of both kinds of impact. Most of the teachers added activities to their repertoires that involve students working in groups, such as creating groups for science lab experiments or holding math contests between groups. A few teachers went further and had students work together in cooperative groups most of the time, with students assigned specific roles like reporter and facilitator. These teachers showed us that their desks were in groups instead of in rows, but with one exception they did not talk about why they made this change (beyond the fact that the technical assistance provider suggested it) and how their teaching changed as a result. Few, if any, teachers appeared to have actually changed their beliefs; most saw cooperative learning simply as a discrete new strategy, not as a fundamental change in the way students learn.

Teachers in another school reported that cooperative learning as taught by the TAC swept the school and that all teachers used it in their classrooms. The TAC provider was much more

circumspect; he said that although many teachers liked the idea and enjoyed talking about it, "they aren't applying the concepts of cooperative learning." Teacher interviews indicated that teachers learned specific teaching strategies that were taught to them directly. Only one teacher spoke of arriving at a new level of understanding about the learning process as a result of the TAC assistance. Study groups in one urban site were presumably intended to go beyond the level of specific activities and encourage teachers to devote serious and ongoing attention to the teaching of mathematics. However, when asked about the impact on their teaching, the teachers in the math study group at one school reported learning two specific strategies: how to regroup using manipulatives and "counting on." One teacher at the other school reported using writing during math now; another mentioned math manipulatives.

Iowa stands in contrast to these two sites. During our interviews with participating teachers, none of them mentioned cooperative learning as something on which the RTAC had explicitly focused. However, visits to their classrooms, in most of which the desks were arranged in groups and students generally worked together with little teacher intervention, indicated that teachers instituted cooperative learning in order to facilitate the substantive changes they had made in their teaching. One teacher said, "Three years ago, the desks were not in little groups. Now, there are kids on the carpet and in cooperative learning groups. It changed because of the [RTAC] program. It's okay--they don't have to sit quietly." Another teacher commented that although the RTAC had not explicitly encouraged cooperative learning, "it flows naturally from the literature units. We just started doing it. It makes sense."

In fact, Iowa was the only site where we found evidence of teacher changes that transcended the episodic use of new instructional strategies or techniques. This was also the only site where the technical assistance, for all three years, was guided by an agenda (imported by the RTAC) that stood out as clear, coherent, iterative, and focused. The RTAC decided up front to do two things: create strong and stable teams in each school, and help teachers learn how to teach reading and writing differently. In these schools, the team teachers added many new language arts activities to their repertoires (e.g., story mapping, predicting); many reported almost complete changes in their instructional methods for reading and writing. Most other teachers in the schools used literature books at least twice a quarter (twice more than they used to) by the end of the Nine-Site Initiative. Team teachers had many more literature books in their rooms than they used to, and all of them had created binders full of RTAC materials about new activities and practices.

Beyond this activity-oriented improvement, many teachers on the teams, especially in one school, significantly changed their practices across all or most of their instruction: they had their students working cooperatively in groups; they developed interdisciplinary units where students

worked on science, reading, math, and writing in the process of doing a project on, say, plants; they moved away from basals (completely or partially) into literature-based reading instruction. Finally, we believe that at least several of the participating teachers changed their beliefs about teaching. They saw their students as active learners and themselves as facilitators. They had more confidence in their own judgment and were more creative in planning instruction. They believed that teaching and learning reading in the context of literature--real stories--as opposed to phonics generates a valuable love of reading and writing. They thought more of their students' ability to deal with complex assignments (e.g., writing and publishing books). Both RTAC staff and the state education agency Chapter 1 coordinator, as well as the teachers, credited the consistent theme and integrated content of the technical assistance program (and the personal characteristics of the RTAC director) with its success.

Assessment

The TAC/RTACs worked on assessment issues in two ways. First, they worked with administrators, and sometimes Chapter 1 teachers, in some schools to help them use test data better to identify weak areas (a traditional TAC/RTAC specialty). In Dade County, for example, TAC staff spent a large proportion of the technical assistance hours working on testing and Chapter 1 evaluation issues with district Chapter 1 staff. In schools in Detroit and the BIA, TAC/RTAC staff helped prepare the third-year evaluation for schoolwide projects.

Second, a few schools called on the TAC/RTACs as sources of expert assistance as they developed alternative assessments. In the BIA schools, Chapter 1 assessment was a sensitive topic, as many Native American educators felt their students were at a disadvantage when taking nationally normed tests. In response, one school was working to develop portfolio assessments; the RTAC staff assisted teachers in this effort, both in group training sessions and in individual consultations. Teachers responded well to the training, especially the individual assistance. The principal felt confident that portfolio assessment could directly address Chapter 1 desired outcomes and thereby contribute to program improvement efforts.

In Mississippi, the RTAC worked with the testing coordinator in one local education agency to develop instructional management objectives that were coordinated with the Chapter 1 program. The RTAC then helped the district develop "mastery checklists" for teachers to use in the classroom to track students' progress; regular and Chapter 1 teachers met every nine weeks to review the forms and set goals. In Kentucky, one of the most visible parts of the efforts to implement KERA mandates was the development of student assessments; teachers worked hard to prepare students for the new

performance-based assessments. Along with assisting in this endeavor, the RTAC, working with the district, focused on developing a set of measurable desired outcomes that could be used to evaluate programs in preparation for the elimination of the CTBS test for Chapter 1 evaluation. The state, under a waiver from ED, used only desired outcomes to identify schools for program improvement in 1993-94, during the transition to the KERA assessment system. Tests developed for KERA will be equated to national norms to fulfill Chapter 1 accountability in the future. This was the only case where we found evidence of TAC/RTACs working with districts to develop new assessments to fulfill Chapter 1 accountability requirements; however, assistance in several places did include looking at other assessment strategies as a technical assistance topic.

Student Outcomes

Some of the schools in the Nine-Site Initiative demonstrated gains in student achievement, while others remained in program improvement. There was wide variation in the extent to which the changes were attributed to technical assistance, to Chapter 1, to school improvement efforts, or to other factors. This section catalogues the experience of the schools with respect to identification for program improvement.

Iowa was the only site in which both schools we visited tested out of program improvement after the first year. This did not affect their zeal for improvement, however; their momentum surpassed the initial impetus of identification for program improvement. Nationally normed test scores did not appear to be a cause for much concern in these schools; one principal was not entirely sure what his school's program improvement status was. A local test did carry some weight; some teachers in one school were unwilling to move away from basals completely because they felt that students needed basic decoding skills to do well on that test.

In Baltimore, the BIA, Chicago, Los Angeles, and Mississippi, both study schools we visited were in program improvement during the third year of the initiative. In Kentucky, one school tested out at the end of the first year and was identified again at the end of the second year of the initiative. A second school had tested out of program improvement by the third year of the initiative. An administrator in one BIA school implied that the technical assistance might have actually contributed to the failure to improve achievement, at least in the short term. While noting that his staff has had more professional development over the past four years than in the previous 17, he complained that the wealth of staff development may have had an adverse effect on student achievement because of the amount of time teachers spent out of the classroom.

In Dade County, three participating schools tested out of program improvement during the initiative's second year. In its summary report to ED, the TAC claimed credit for "a 50 percent success rate" among the six schools it served. In another report, the TAC concluded that this was, in part, the result of "creating and maintaining the necessary awareness . . . for changes to take place," including identifying weak areas and suggesting alternative instructional approaches. District Chapter 1 staff had a different perspective; they saw the TAC contribution as "sensitizing teachers to the need to help their students develop test-taking skills."

In two sites, other evaluation requirements carried more weight than program improvement. Both Detroit schools were coming up on their third year as schoolwide projects and were preparing for that evaluation. One of the schools, which tested out of program improvement after the initiative's first year, was also a participant in the Detroit Compact, which evaluates schools according to grades, test scores, attendance, tardiness, and other measures. In Los Angeles, schools were under a state mandate that extends program improvement for three years in order to avoid the common phenomenon of schools bouncing in and out of program improvement planning requirements. Of the schools we visited, only the comparison school showed improvement in scores over the three years.

Teachers in some of the sites were quick to point out that despite continued low test scores, they saw evidence of student improvement in other areas. At one BIA school, teachers reported improvements in their students' writing ability. In addition, attendance and homework completion rates increased in response to incentives (e.g., banana splits and parties). The principal in one Baltimore school noted that "[TAC work] has not yet manifested in student achievement, but I can see a change in the attitudes of students," including increased metacognitive skills, a reduction in disciplinary referrals, and more efficient math computation skills. In Mississippi and Iowa, teachers imparted anecdotal evidence that children were reading more and had more positive attitudes toward reading; teachers in both sites attributed these changes to the technical assistance.

District and State Administrators

In several sites, significant portions of the technical assistance services were devoted to working with state and district administrators. Dade County was the most striking example; during the third year of the initiative, 70 percent of the hours spent on technical assistance were focused on the local education agency. In several other sites, TAC and RTAC staff spent smaller but still significant percentages of their time with administrators. As was the case at the school level, we found that the technical assistance had more impact on raising awareness of Chapter 1 regulations and

program options than on actual changes in the organization of district Chapter 1 programs, the way that local administrators work with schools, or the use of technical assistance in the site.

In two of the rural sites, the technical assistance did help engender changes in district/state administration of Chapter 1. In Kentucky, Chapter 1 testing looked different than it had in the past. As we noted above, the RTAC helped the district make the transition from norm-referenced testing to the use of desired outcomes for the purpose of identifying schools for program improvement. In Iowa, where the state Chapter 1 coordinator took an active role in the technical assistance, his experience with the Nine-Site Initiative led him to rethink the way the state Chapter 1 office provides technical assistance to schools throughout the state. During the third year of the initiative, he formed two other clusters of schools similar to the cluster that participated in the Nine-Site Initiative. The RTAC ran the kick-off team-planning workshop for each of these clusters, using resources available through its regular contract with the state. State Chapter 1 staff will conduct the activities similar to those conducted by RTAC in the participating schools. A third cluster will follow next year. Both the state coordinator and the RTAC director expected the state contract with the RTAC to be structured very differently than it has in the past as a result of the positive experience of the Nine-Site Initiative.

In Mississippi, RTAC staff helped administrators in two districts that merged develop new Chapter 1 data and recordkeeping systems and begin to align Chapter 1 curriculum with that of the regular programs. RTAC staff also helped the new district develop a unified approach to delivering Chapter 1 services.

IV. CONCLUSIONS AND NEW DIRECTIONS FOR TECHNICAL ASSISTANCE

Many federal and state technical assistance programs are organized to convey information about options for improving instruction or some other element of educational practice. Some technical assistance goes a step further to include a review of implementation strategies for using the information. In either case, the assistance providers are "experts" who transmit information and impart skills to their audiences.

Most educators and sponsors of assistance expect this approach. For them, good assistance effectively and efficiently conveys useful information and provides some guidance about how to use it in daily practice. Good assistance also does not disrupt the schedule--or, if it does, the trade-off is worthwhile because of the quality and usefulness of the content. Ineffective assistance, on the other hand, is assistance whose content is not useful for the target audience or assistance that seriously disrupts other important work.

The assistance provided under the Nine-Site Initiative was, within the narrow limits of this model, generally good assistance. The TACs and RTACs understood local demands for assistance and worked hard to meet them. One indicator of their success in meeting local demands is that in five of the nine sites, negotiations are under way or contracts have been signed to extend TAC/RTAC assistance into 1993-94. Our findings about the amount, content, organization, and outcomes of the assistance lead to several favorable conclusions:

- The technical assistance activities and services generally met teachers' and principals' standards for quality and were therefore considered effective.
- The TAC/RTACs provided the schools with a large amount of information and materials about instructional practices, curriculum, and student assessment.
- Many of the teachers who participated in the assistance activities reported that they had experimented with the new strategies in their classrooms and found that these strategies "worked"--they held students' attention, they relieved teachers' boredom, and they offered new entries for lesson plans.
- Follow-up visits, although usually limited in duration and frequency, gave teachers a chance to review progress and seek additional advice on how to use the information. Repeated visits over the three-year period, even though they were not always frequent or regular, conveyed the sense that the TAC/RTACs were committed to working with the schools and that they understood local needs and concerns. These long-term

relationships helped set TAC/RTAC assistance apart from assistance that teachers and principals reject as not helpful.

- In several sites and schools, TAC/RTAC assistance extended the standard model in two additional ways. First, it was targeted to stable groups of teachers whose participation was sustained for a long period of time. Second, the assistance topics were cumulative--each individual activity was part of a framework that connected it to a broader vision.

In short, the assistance provided under the Nine-Site Initiative conformed to a generally accepted and reasonably popular model of assistance as the transfer of skills from experts to practitioners. This model is directly analogous to staff-development approaches that train the participants in specific skills. Although these models of technical assistance and professional development currently prevail as the most popular, they have serious shortcomings. There is widespread agreement within the education policy and research communities that a transfer of knowledge and skills is rarely sufficient to help schools improve in meaningful, lasting ways. Little (1993) makes a distinction between transferring specific skills and fundamentally reforming schools:

> To fit opportunities for professional development to a campaign for the principled redesign of schooling is arguably a different matter from organizing the training and support to implement a program or a set of readily transferable practices. (p. 132)

Little and others, notably Michael Fullan (1991, 1992), argue that fundamental school reform requires a transformation of the culture of schools and school systems. Teachers, principals, parents, and other members of the school community establish a new organizational culture conducive to initiating new practices and policies. Proponents of systemic reform go a step further to suggest that, if these local efforts are to have lasting significance, they must be encouraged and supported by leadership from the top. The leadership sets national standards and policy mandates to support their implementation.

These more recent perspectives on school change differ from the earlier perspectives in at least three important ways. All of them have implications for planning and implementing technical assistance programs. At present, most technical assistance is organized around several assumptions:

- The skills-transfer model defines the focus of technical assistance as isolated problems or issues in school practice, with solutions delivered by the technical assistance provider.
- Because the solutions are brought in from the outside, school staff are seen as essentially passive receptors of the new ideas and practices.

- The impetus for change also comes from outside, with the result that the external assister assumes a central leadership role in the process. As a result, the process often collapses when the assistance ends.

In Little's terms, this approach represents the "dominance of training over problem solving" (p. 143). The more recent cultural views of change stress the importance of school-based initiative and leadership, often supported and encouraged by policy mandates from the top. These perspectives on change include an expanded and redefined role for technical assistance. However, this perspective places the school itself at the center of initiating and directing the change process, while the technical assistance provider moves away from the center of decisionmaking and authority.

In our view, critics of conventional staff development and technical assistance have identified a crucial flaw in these approaches, one that inevitably limits their effectiveness. The Nine-Site Initiative, despite some real contributions, had a limited impact on participating schools specifically because the assistance conformed to the standard models of external assistance and school change. It was designed to support training and the transfer of information and skills, not problem solving. If the intent of the initiative was to generate serious attempts at Chapter 1 (or broader) improvement, then the traditional model of technical assistance was not a good choice.

Hindsight is easy. At the time that the Nine-Site Initiative unfolded, there were several reasons why the TACs and RTACs were unlikely to pursue an alternative model of assistance. First, the recent history of government-sponsored technical assistance led teachers and principals to expect a certain type of service, most likely one that revolves around a set menu of options for workshops and presentations related to specific instructional techniques and how to install them into daily lesson plans (Fullan, 1991). They had been trained to appreciate and use this kind of assistance, and they had no incentives to question it. In addition, the fact that the initial technical assistance services generally followed a pattern--needs assessment, planning, and workshops--that very much resembled other school improvement programs and external assistance led principals and teachers to think about them in much the same way that they thought about these other activities.

Further, given the link between the assistance and Chapter 1 program improvement, schools were unlikely to think much at all about what kind of help they needed. The general failure or unwillingness of most schools and districts to view Chapter 1 program improvement as much more than a bureaucratic event initially led them to be skeptical, or worse, about the possible contributions of the Nine-Site Initiative, even in schools where serious schoolwide reform efforts were under way.

The expectations of the participating schools were most conducive to conventional technical assistance. Moreover, the structure of the Nine-Site Initiative, its fairly hasty start-up, and the confusion regarding ED's goals in establishing the initiative gave the TAC/RTACs little reason--or opportunity--to rethink their traditional approach to technical assistance. Originally established to help state and district Chapter 1 administrators meet federal evaluation requirements, the TAC/RTACs have spent years developing suitable methods for working with large groups of people to transmit information about specific, limited tasks, with support and encouragement from ED. In the case of the Nine-Site Initiative, ED's strong suggestion that the Nine-Site Initiative begin with the TAC/RTACs cleaning up Chapter 1 test data to be sure that schools had been properly designated for program improvement, together with a sometimes uphill battle to establish themselves as credible sources of assistance, led the TAC/RTACS to stick with familiar strategies and topics and shy away from consideration of alternatives.

In some ways, by the TAC/RTACs' own admission in many cases, the Nine-Site Initiative has been as much a learning experience for the participating TAC/RTACs as it has for the schools they have assisted. At the outset of the initiative, they had precious little time to plan a brand-new and much more complicated technical assistance process while trying to understand local context and create niches for themselves in complex and troubled schools; in addition, they were still responsible for carrying on their other work. Hence, they chose the rational and reasonable course of following the technical assistance model of the day--their clients (ED) implicitly demanded it and their target audiences (schools) expected and happily received it. To expect something different, given the circumstances, would have been somewhat wishful.

If ED's goal in sponsoring the Nine-Site Initiative was to identify effective strategies for school-level technical assistance to improve Chapter 1 programs, much can be learned from the initiative. Assistance activities in Iowa, Baltimore, and Los Angeles illustrate how relatively small amounts of funds can be used to provide assistance over a long period of time that is considerably more intensive than most government-sponsored assistance. These sites offer examples of assistance that targets groups of teachers and is planned and implemented in a cumulative and iterative manner. Services in several sites, most notably Kentucky, show the value of linking technical assistance for Chapter 1 to other state and local reform initiatives geared toward schoolwide reform. Activities for clusters of schools in Mississippi and Iowa are examples of how economies of scale can be achieved while maintaining the personalized nature of assistance. Assistance in all of the sites demonstrates the value of at least some follow-up visits and the importance of establishing long-term relationships between external assisters and the target audiences.

On the other hand, the very fact of linking the assistance to a categorical program's mandate placed serious constraints on its reach and ultimate effects. Early experience in all of the sites demonstrates the problems of initiating mandatory assistance that is linked to compliance with the requirements of categorical programs. Administrators and teachers in all of the schools had little understanding of Chapter 1 program improvement at the time the Nine-Site Initiative began. For most of them, it represented a set of bureaucratic requirements that did little to inspire serious thinking about opportunities and directions for change. As we learned, the goal was to "to get out of program improvement." Some schools did test out during the second or third year of the initiative. A few schools that demonstrated gains did not sustain them and were identified for program improvement a second time. Other schools remained in program improvement status at the end of the third year. We did not find any clear evidence to suggest that the changes in program improvement status were linked to anything that the schools or the TAC/RTACs did in the way of program improvement.

Another way of stating this conclusion is that the organization, content, and, ultimately, the impact of the technical assistance were limited by the lack of clear and well-articulated visions of how the schools might be different. Although the Chapter 1 requirement for program improvement plans was intended to stimulate such visions, in fact the school plans did not reflect careful thought about curriculum, instruction, assessment, or staff development, nor did the plans appear to have emerged from extensive participation and deliberation by teachers and other members of the school staffs. In the absence of such visions or any incentives to develop them, teachers searching for new techniques and tricks welcomed and valued technical assistance that offered information about innovations in instruction, curriculum, and student assessment, and in some cases facilitated experiments with them. Similarly, assistance that helped administrators understand Chapter 1 regulations and student test data were useful. But its effects were modest; there were few noticeable changes in professional collegiality or schools' capacities to change or to be self-reflective.

If ED's goal in sponsoring school-level technical assistance is to contribute to the fundamental redesign of education for disadvantaged students, the lessons from the Nine-Site Initiative are not the lessons of a success story. They suggest several possible new directions for ED to consider in designing future technical assistance efforts.

1. Through competitive procurements and reporting requirements, give assistance providers incentives to go beyond conveying information about successful practice, and foster professional development of teachers.

Federal support for all the providers of technical assistance should reflect clear expectations about the purposes of the assistance. By the same token, because assistance that nurtures self-reflection and critical thinking is largely uncharted territory--few providers and probably fewer federal officials know how to do it--the government should avoid excessive prescription about the content and methods of assistance. ED could encourage or require potential contractors to propose alternative models of technical assistance and explain why the models are appropriate for intended target audiences. In addition, potential contractors could be encouraged or required to provide evidence that potential target audiences are disposed to use the alternative forms of assistance. Indeed an important task in providing new kinds of technical assistance will be to help recipients develop the capacity to use it.

The importance of these expectations could be underscored with new and different reporting requirements. ED could reduce or eliminate the current emphasis on aggregated totals (e.g., total number of people served, workshops, or telephone requests) and replace it with a system that includes information about implementing the new models, the difficulties encountered, and the extent to which these problems were overcome. A revised reporting system also would require contractors to provide the quantitative information necessary to support observations and assertions about implementation and effectiveness. The month-by-month reports that we used to collect information on services in the third year of the Nine-Site Initiative are examples, albeit very simple ones, of reports that permit easy analysis of assistance patterns and diagnosis of problems or gaps.

2. Create a technical assistance network that connects to and leverages state and local support for professional development.

In observing that a different model of technical assistance could have done much more to foster school improvement, we are drawing on the recent literature on professional development and its potential contribution to reform. Technical assistance in support of school problem solving must go hand-in-hand with more ambitious and unconventional forms of professional development.

In fact, even conventional forms of technical assistance demonstrate the necessity of a connection with local professional development. Even when assistance is available to the target audience at "no cost" for the services, there are costs associated with participation. These may

include paying substitutes to cover classes, paying stipends for participation during non-school time, or simply ensuring that normal allotments of staff development time are allocated to the assistance activities. The size of these commitments grows rapidly as they include opportunities for teachers and others to continue working together between visits by external assisters. Without such commitments, the contribution of technical assistance is seriously impaired.

3. Create an assistance network organized primarily around themes or topics, rather than categorical programs, and include both process and content specialists.

The experience of the Nine-Site Initiative demonstrated the problems that external assisters face when their assistance is linked to a program that is not central to local improvement efforts. A more compelling foundation for an assistance network would be to foster ambitious reform in the name of a broader goal--such as bringing all students to high levels of academic performance.

By offering assistance from specialists in both process and content, policymakers would recognize that both are needed. The initial process tasks in school change include much more extensive attention to identifying local needs and creating a vision that will guide efforts to address them. Process specialists would initially help schools build norms of collegiality and cooperation and define goals, problems, and improvement tasks. Content specialists would then be available, at the request of schools and districts, to help solve the problems and carry out the tasks.

In making decisions about funding, it would be necessary to balance support for those schools most in need with support for those schools that are ready to change. Schools that are not ready for change will require more of the early capacity-building services and represent greater risk of a low return on the investment than schools in which the norms of collegiality and cooperation already exist.

4. Integrate new technologies into the technical assistance network.

Recent advances in computer hardware and software offer a range of possibilities for exercising this alternative. For example, it would be relatively easy to include large amounts of printed text in on-line systems that are in place in many school districts. Video packages containing workshop sessions and demonstrations are also increasingly available at relatively low cost. More sophisticated interactive technologies have also shown great potential in a small number of experimental programs.

Nevertheless, the experiences of the Nine-Site Initiative suggest caution in using these new technologies. First, none of the schools we visited have the facilities to take advantage of much more than a routine electronic dissemination system, and even those facilities are available in limited numbers. Second, even when the facilities are available, we saw little evidence that they are used. An exception is the dissemination of information about KERA mandates and their implementation over a statewide educational television network: all of the Kentucky Schools receive these broadcasts via satellite transmission. Third, given the extent to which teachers valued the interpersonal dimensions of their relationships with TAC/RTAC staff, it is unlikely that they would avail themselves of the electronic dissemination services in the first place. Overall, even though the promises of this alternative are great, there is also the very real risk that the schools that need the assistance most are least likely to benefit from this element of the network.

5. Support capacity-building for the providers of technical assistance.

A central theme in these alternatives is that future technical assistance programs will provide services very different from those now being provided. Facilitating changes in the culture of schools will, for example, require assisters to establish long-term relationships and pay sustained attention to local issues and concerns. More specialized help in studying, implementing, and assessing recent innovations in instruction, content, and assessment require sophisticated understanding of the underlying theories as well as detailed knowledge of practice. Both sets of responsibilities, along with others that will almost certainly emerge, also demand understanding of and the ability to apply principles of sound consulting and effective adult education.

As we saw in the Nine-Site Initiative, a shift in focus to school-level assistance combined with the need to establish and maintain long-term relationships with schools and districts were learning experiences for the TAC/RTACs. The alternative assistance strategies discussed here represent even greater changes in perspective and practice. Therefore, we expect that there will be a need for training and staff development opportunities to prepare technical assistance providers to carry out their new responsibilities. The on-line information systems being developed and used by the TAC/RTACs are but one example of internal capacity building. Networking activities among the ten Eisenhower National Regional Consortia for Mathematics and Science Education are a second example. More focused in-house staff development activities, including training and staff seminars, are a third possibility. We do not propose massive new investments in the professional development of assistance providers, but an exclusive reliance on "learning by doing," with no built-in opportunities for reflection, is a formula for mediocrity.

In conclusion, it is certainly fair to say that the Nine-Nite Initiative affected a significant number of teachers, principals, district administrators, and technical assistance providers by involving them in some conventional ways of working on issues related to improving education for disadvantaged students. However, our evidence indicates that for most of these participants, the impact was not very deep and the effects of the initiative will probably not last long. Thus, the challenge for future technical assistance programs is not to figure out ways to make the traditional approaches more effective. Instead the challenge is to create and support technical assistance programs that recognize and address the complexity of school change as a cultural process and the professional needs and capabilities of educators.

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APPENDICES

Appendix A

Nine-Site Initiative On-Site Service Hours by School, July 1992 - June 1993

BALTIMORE	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per School/LEA	Percent of Total
SEA	1.25			2									3.25	2%
LEA		2			2		2.5	2.25					8.75	5%
School A			3.5	9	11.25	7	17	14.75	7.75	6.5	2.75	1.5	81	50%
School B			2.5	4	1.5	4.5	4.75		7.25	7.75	7.5	2.5	42.25	26%
School C			1.5	2	5.5	4.5	1.25	4.75	3	2.25	2.25		27	17%
Column Totals	1.25	2	7.5	17	20.25	16	25.5	21.75	18	16.5	12.5	4	162.25	100%*

* Percents may not sum to 100 because of rounding.

Source: TAC monthly service summary reports.

Appendix A: Nine-Site Initiative On-Site Service Hours by School, July 1992 - June 1993

BIA*	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per School/LEA**	Percent of Total
All schools			16		16								32	20%
Agency 1		2							1	7			10	6%
School A		1							6	7	4		18	11%
School B		.75											.75	0%
Schools A,B				5									5	3%
School C														
LEA staff		1											1	1%
School staff				20					12				32	20%
School D														
LEA staff							2	1		5			8	5%
School staff		1							2	3			6	4%
Agency 2													0	0%
School E		14						1					15	9%
School F														
LEA staff		1											1	1%
School staff				6							2		8	5%
School G		3		2				1		2			8	5%
Schools B,F,G			10										10	6%
Schools A,B,E,F,G		3											3	2%
Other schools		1											1	1%
Column Totals	0	27.75	26	33	16	0	2	3	21	24	6	0	158.75	100%***

* Each individual BIA school is considered an LEA for Chapter 1 purposes. Each school works directly with the BIA Central Office (comparable to an SEA for Chapter 1 purposes) on matters related to Chapter 1. Each school belongs to one of two educational agencies, larger units which are analogous to districts but have more limited administrative functions. When the RTAC delivered assistance to school staff in their capacity as administrators of Chapter 1, it was counted as assistance to "LEA staff" within the school; when the RTAC delivered assistance to school staff acting in other capacities (mainly instructional), it was counted as assistance to "School staff."

** To calculate the total number of service hours per school in this site, add the number of on-site hours for each individual school to the number of hours for all schools or groups of schools including that school.

*** Percents may not sum to 100 because of rounding.

Source: RTAC monthly service summary reports.

Appendix A: Nine-Site Initiative On-Site Service Hours by School, July 1992 - June 1993

CHICAGO	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per School/LEA	Percent of Total
LEA				3			5						8	4%
School A						1.5	2	2	25	8			38.5	20%
School B					1.5		1.5	8.25		8	5		24.25	13%
School C						3.75	10.5	9		0.5			23.75	13%
School D					2.5	1	1		1	12			17.5	9%
School E					2		11	3.5					16.5	9%
School F							12.5					3	15.5	8%
School G							5		6	3			14	7%
School H					6				4		2		12	6%
School I							9					3	12	6%
School J						1.5	2					3	6.5	3%
Column Totals	0	0	0	3	12	7.75	59.5	22.75	36	31.5	7	9	188.5	100%*

* Percents may not sum to 100 because of rounding.

Source: TAC/RTAC monthly service summary reports.

Appendix A: Nine-Site Initiative On-Site Service Hours by School, July 1992 - June 1993

DADE COUNTY	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per School/LEA	Percent of Total
LEA	12	2	6	10.5	1	14			24	3	2.5	10	85	70%
School A				2.5		2.5					3		8	7%
School B				2.5		3					1.5		7	6%
School C				2.5		2					2		6.5	5%
School D				2.5		2.5							5	4%
School E				2.5		2.5							5	4%
School F				2.5									2.5	2%
Other schools											3		3	2%
Column Totals	12	2	6	25.5	1	26.5	0	0	24	3	12	10	122	100%*

* Percents may not sum to 100 because of rounding.

Source: TAC monthly service summary reports.

Appendix A: Nine-Site Initiative On-Site Service Hours by School, July 1992 - June 1993

DETROIT	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per School/LEA*	Percent of Total
LEA***	2.5	3		3		6	1.5				1		17	16%
All schools											2.5		2.5	2%
School A				2			3	3.5	6	1	7	15.5	38	37%
School B	2	2.5		2	6		4.5	3.5	2		3.5	4.5	30.5	29%
School C			1	2	1.5		2	2	2	2	1		15.5	15%
Other schools		0.5											0.5	0%
Column totals	4.5	6	1	9	8	7.5	11	9	10	3	15	20	104	100%**

*To calculate the total number of service hours per school in this site, add the number of on-site hours for each individual school to the number of hours for all schools or groups of schools including that school.

**Percents may not sum to 100 because of rounding.

*** TAC assistance to the LEA in December included a participant from the SEA as well.

Source: TAC monthly service summary reports.

Appendix A: Nine-Site Initiative On-Site Service Hours by School, July 1992 - June 1993

IOWA	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per School/LEA*	Percent of Total
SEA		3		1		3	2	2		2			13	11%
All schools		2		4	5	6	6		6	5	6	3	43	37%
All principals		2											2	2%
LEA 1			2										2	2%
Schools A,B, & C					2				2				4	3%
School A									6.5				6.5	6%
School B									2				2	2%
School C													0	0%
LEA 2													0	0%
School D			2	2						4	6		14	12%
LEA 3													0	0%
School E			2	2	6								10	9%
LEA 4													0	0%
School F			2	1					5.5				8.5	7%
LEA 5													0	0%
School G			2	2				2.5					6.5	6%
LEA 6													0	0%
School H			2					2					4	3%
Column Totals	0	7	12	12	13	9	8	6.5	22	11	12	3	115.5	100%**

*To calculate the total number of service hours per school in this site, add the number of on-site hours for each individual school to the number of hours for all schools or groups of schools including that school.

**Percents may not sum to 100 because of rounding.

Source: RTAC monthly service summary reports.

Appendix A: Nine-Site Initiative On-Site Service Hours by School, July 1992 - June 1993

LOS ANGELES	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per School/LEA	Percent of Total
LEA				2.5				1					3.5	4%
School A			3	2	5	11		4	3.5	6.5	6.5		41.5	45%
School B			2		2.5	5		6.5	8.5	7.5	2	2	36	39%
School C	2.5	2.5											5	5%
School E			1.5	0.5		0.5		0.5					3	3%
School F								2					2	2%
School G				0.5				0.5					1	1%
Column Totals	2.5	2.5	6.5	5.5	7.5	16.5	0	14.5	12	14	8.5	2	92	100%*

*Percents may not sum to 100 because of rounding.

Source: TAC monthly service summary reports.

Appendix A: Nine-Site Initiative On-Site Service Hours by School, July 1992 - June 1993

MISSISSIPPI DELTA	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per School/LEA*	Percent of Total
All LEAs	2												2	1%
All schools				6				12					18	12%
LEA 1				2			3			5			10	7%
Schools A, B, & C		15.5		5.5			9.5						30.5	21%
School A				5									5	3%
School B				3									3	2%
School C				1.5									1.5	1%
LEA 2													0	0%
School D		12.5		6.5			7.5			2			28.5	20%
LEA 3													0	0%
School E		6.5		4			3						13.5	9%
LEA 4													0	0%
School F		3		4.5			4.5						12	8%
LEA 5		2					1.5			2.5			6	4%
School G				2.5						2.5			5	3%
LEA 6		2		3.5			2						7.5	5%
Schools H & I							3						3	2%
Column Totals	2	41.5		44			34	12		12			145.5	100%**

*To calculate the total number of service hours per school in this site, add the number of on-site hours for each individual school to the number of hours for all schools or groups of schools including that school.

**Percents may not sum to 100 because of rounding.

Source: TAC/RTAC monthly service summary reports.

Appendix A: Nine-Site Initiative On-Site Service Hours by School, July 1992 - June 1993

PIKE COUNTY	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per School/LEA*	Percent of Total
SEA					1.5								1.5	1%
LEA		1		1	1	2.5	5.5	2.5	6	5			24.5	18%
All schools			7.5		8								15.5	11%
School A			2.5		4.5	4.5	5.5	4.5	8.5	6	7.5		43.5	31%
School B		3	5	3.5	5	2.5	5.5			3	2.5		30	22%
School C		3.5			2.5	4.5	6			2.5	2.5		21.5	15%
Other schools								2.5					2.5	2%
Column totals	0	7.5	15	4.5	22.5	14	22.5	9.5	14.5	16.5	12.5	0	139	100%**

*To calculate the total number of service hours per school in this site, add the number of on-site hours for each individual school to the number of hours for all schools or groups of schools including that school.

** Percents may not sum to 100 because of rounding.

Source: RTAC monthly service summary reports.

Appendix B

Nine-Site Initiative On-Site Service Hours by Topic Area, July 1992 - June 1993

BALTIMORE	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per Topic	Percent of Total
Cooperative learning				2.75	4	2.5	5.5	13.75	7.75	8.75		1.5	46.5	29%
Math & manip./NCTM			1	2	4	9	7.25	4.75	3		5		36	22%
General instruction					4.5	3	3.5	1	5	5	7.5		29.5	18%
Nine-Site planning	1.25	2	5	9.75	5.5		3.5	1.5					28.5	18%
Chap. 1 prog. imp./eval.			1.5	2.5		1.5	3.75	0.75	2.25	2		2.25	16.75	10%
Social Skills					2.25								2.25	1%
Read./writ./whole lang.							2						2	1%
Self-esteem							1			0.75			0.75	0%
Column Totals	1.25	2	7.5	17	20.25	16	25.5	21.75	18	16.5	12.5	4	162.25	100%*

* Percents may not sum to 100 because of rounding.

Source: TAC monthly service summary reports.

Appendix B: Nine-Site Initiative On-Site Service Hours by Topic Area, July 1992 - June 1993

BIA	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per Topic	Percent of Total
Outcome-based education				20					11				31	20%
Altern. assess./portfolio		6	3.2		3.2			1	9	3			25.4	16%
Needs assessment				13					1	4			18	11%
Math & manip./NCTM		6	3.2		3.2								12.4	8%
Nine-Site planning		11											11	7%
Chap. 1 prog. imp./eval.		3								8			11	7%
General instruction			3					2		5			10	6%
Advanced skills			3.2		3.2						2		8.4	5%
Parent involvement			3								4		7	4%
Read./writ./whole lang.			3.2		3.2								6.4	4%
Culture			3.2		3.2								6.4	4%
Summer school							2			2			4	3%
Team building			4										4	3%
Staff development		1								2			3	2%
Chap. 1 services/coord.		0.75											0.75	0%
Column Totals	0	27.75	26	33	16	0	2	3	21	24	6	0	158.75	100%*

*Percents may not sum to 100 because of rounding.

Source: RTAC monthly service summary reports.

Appendix B: Nine-Site Initiative On-Site Service Hours by Topic Area, July 1992 - June 1993

CHICAGO	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per Topic	Percent of Total
Nine-Site planning				3	9	7.75	23.5	1					44.25	23%
Needs assessment								4.5	25.5	8			38	20%
Chap. 1 prog. imp./eval.							6	2				9	17	9%
Team building							6	6		3.5			15.5	8%
General instruction							2	4.25		6	3		15.25	8%
Parent involvement					3		3		4		2		12	6%
Math & manip./NCTM									6	3			9	5%
Altern. assess./portfolio								2		6			8	4%
Chap. 1 services/coord.							6.5						6.5	3%
Test taking skills							6		0.5				6.5	3%
Extended day							3.5	3					6.5	3%
Staff development							1				2		3	2%
Read./writ./whole lang.										2.5			2.5	1%
Cooperative learning										2.5			2.5	1%
Tutoring							2						2	1%
Column Totals	0	0	0	3	12	7.75	59.5	22.75	36	31.5	7	9	188.5	100%*

*Percents may not sum to 100 because of rounding.

Source: TAC monthly service summary reports.

Appendix B: Nine-Site Initiative On-Site Service Hours by Topic Area, July 1992 - June 1993

DADE COUNTY	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per Topic	Percent of Total
Nine-Site planning	6	0.5	6	17.5	1	2.5			2.5		6.5	10	52.5	43%
Parent involvement				2.5		8.5			13	1.5	1.25		26.75	22%
Chap. 1 prog. imp./eval.		1.5		5.5		13.5					3		23.5	19%
Computer assisted instr.									7	1.5	1.25		9.75	8%
Test taking skills	6												6	5%
Staff development						2			1.5				3.5	3%
Column Totals	12	2	6	25.5	1	26.5	0	0	24	3	12	10	122	100%*

DETROIT	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per Topic	Percent of Total
Chap. 1 prog. imp./eval.	1				1		4.5	5.5			6	15.5	33.5	32%
Nine-Site planning	3.5	6	1	2	0.5		1.5		3		5		22.5	22%
Math & manip./NCTM						1.5	2	2	2	2	1		10.5	10%
At-risk students					5							4.5	9.5	9%
Chap. 1 services/coord.				1					4	1	2		8	8%
Schoolwide programs						6			1				7	7%
Parent involvement				4			2						6	6%
Cooperative learning							1	1.5			1		3.5	3%
Interagency cooperation				2									2	2%
Test taking skills					1.5								1.5	1%
Column Totals	4.5	6	1	9	8	7.5	11	9	10	3	15	20	104	100%*

* Percents may not sum to 100 because of rounding.

Source: TAC monthly service summary reports.

Appendix B: Nine-Site Initiative On-Site Service Hours by Topic Area, July 1992 - June 1993

IOWA	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per Topic	Percent of Total
Read./writ./whole lang.		2			8			4.5	10.5	9	12		46	40%
Nine-Site planning		3	12	5		2	2	2	3	2		3	34	29%
Altern. assess./portfolio							6		6				12	10%
Staff development		2				7							9	8%
General instruction				4					2.5				6.5	6%
Computer software					5								5	4%
Outcome-based education				2									2	2%
Parent involvement				1									1	1%
Column Totals	0	7	12	12	13	9	8	6.5	22	11	12	3	115.5	100%*

LOS ANGELES	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per Topic	Percent of Total
Read./writ./whole lang.			5		6.5	10.5		6	11	8	4		51	55%
General instruction				2		4		4.5		4	2		16.5	18%
Nine-Site planning	2.5		1.5	3.5	0.5	2		4	0.5	0.5			15	16%
Bilingual education					0.5				0.5		2.5	2	5.5	6%
Cooperative learning		2.5											2.5	3%
Math & manip./NCTM										1.5			1.5	2%
Column Totals	2.5	2.5	6.5	5.5	7.5	16.5	0	14.5	12	14	8.5	2	92	100%*

* Percents may not sum to 100 because of rounding.

Source: TAC/RTAC monthly service summary reports.

Appendix B: Nine-Site Initiative On-Site Service Hours by Topic Area, July 1992 - June 1993

MISSISSIPPI DELTA	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per Topic	Percent of Total
Chap. 1 prog. imp./eval.				27.5			5.5			.7			40	27%
Read./writ./whole lang.		14		12.5									26.5	18%
Parent involvement				1			1.5	12					14.5	10%
Self-esteem							14						14	10%
At-risk students		9.5											9.5	7%
General instruction		2		2			2			2.5			8.5	6%
Nine-Site planning	2	5											7	5%
Chap. 1 services/coord		5					2						7	5%
Cooperative learning							6.5						6.5	4%
Teaching assistants		6											6	4%
Staff development				1			2.5			1			4.5	3%
Test taking skills										1.5			1.5	1%
Column Totals	2	41.5	0	44	0	0	34	12	0	12	0	0	145.5	100%*

* Percents may not sum to 100 because of rounding.

Source: RTAC monthly service summary reports.

Appendix B: Nine-Site Initiative On-Site Service Hours by Topic Area, July 1992 - June 1993

PIKE COUNTY	7/92	8/92	9/92	10/92	11/92	12/92	1/93	2/93	3/93	4/93	5/93	6/93	Total per Topic	Percent of Total
Chap. 1 prog. imp./eval.		1	9.5				2.5	3.5	3	5	2.5		27	19%
Math & manip./NCTM						4	13	1.5		4			22.5	16%
Nine-Site planning					2.5	3.5	4.5		3.5	1	1		16	12%
Read./writ./whole lang.				1.5	1		0.5	0.5	7	1	4.5		16	12%
Altern. assess./portfolio		2.5			7.5	3.5		1					14.5	10%
Staff development		1.5	3	0.5	1.5	1	2						9.5	7%
Schoolwide programs			2.5	2.5	2	2							9	6%
KERA and Chapter 1					8			0.5					8.5	6%
Thematic units		2.5								0.5	3		6	4%
Cooperative learning								2.5		3.5			6	4%
General instruction									1	1.5	1.5		4	3%
Column Totals	0	7.5	15	4.5	22.5	14	22.5	9.5	14.5	16.5	12.5	0	139	100%*

* Percents may not sum to 100 because of rounding.

Source: RTAC monthly service summary reports.

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