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ABSTRACT

Organizational change in educational systems' research has provided valuable lessons that address the improvement of schools. School-improvement programs specifically target schools with underachieving and high-poverty populations of students with the intention of improving educational inequities. While these and other current reform initiatives have incorporated recommendations from research regarding the implementation of innovative programs, less is known about enhancing the sustainability of such programs after the initiatives end. To investigate the sustainability of reform initiatives centered in research-based practice, a study of districts was conducted, termed the "Enhancement Initiative," that had initiated a state-sponsored reform effort 10 years prior to the investigation. It established seven focus areas to be addressed by a district involving a sample of its schools. The Enhancement Initiative promoted locally designed, developed, and implemented reform that focused on identifying measurable student learning goals, research-based and innovative instructional strategies, and school-community partnerships. Four districts that had participated in the Enhancement Initiative from 1990 to 1994 were studied nine years after the reform's beginning to determine whether changes that were implemented were sustained. District representatives were questioned about reform changes that had and had not been sustained, and factors that promoted or hindered the retention of changes made under the reform program. The report presents a review of the pertinent research, and then presents the study methodology and results of factors influencing the sustainability of reform. An appendix includes instruments used for case-study interviews. (Contains 42 references.) (DFR)

**SUSTAINING EDUCATION REFORM:
INFLUENTIAL FACTORS**

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Table of Contents

Acknowledgments	iv
Sustaining Education Reform: Influential Factors	1
Sustaining Education Reform	3
Methodology	5
Enhancement Initiative	5
District Sample	6
Data Collection	8
Analysis	8
Findings	11
Sustained changes	11
Sustainability Factors	12
Ongoing engagement and development of human capacities	13
School and district cultures that value learning, innovation and collaboration	16
District and school structures, policies, and resource allocations	18
Leadership that maintains a consistent vision,	20
Political context demands, pressures, and supportive activities	21

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Sustaining Education Reform: Influential Factors

Research of the last three decades that focused on organizational change in educational systems has provided valuable lessons that address the improvement of schools (McLaughlin, 1990; Nunnery, 1998; Bodilly, Keltner, Purnell, Reichardt, & Schuyler, 1998). Lessons regarding the implementation of education reform have influenced policy in the form of programs such as the federal Comprehensive School Reform Demonstration (CSRD) Program, which currently provides funding to nearly 1800 schools nationwide, as well as similarly structured programs directed by state departments of education such as those existing in Colorado, Hawaii, North Carolina, Tennessee, Oregon, West Virginia, and Wisconsin (U.S. Department of Education, 2000; OESE, 2000). These school improvement programs specifically target buildings with underachieving and high poverty populations of students with the intention of ameliorating educational inequities. While these and other current reform initiatives have incorporated recommendations from research regarding the implementation of innovative programs, less is known from research about enhancing the sustainability of such programs after the initiatives end.

In order to investigate the sustainability of reform initiatives centered in research-based practices, we conducted a study of districts that had initiated a state-sponsored reform effort 10 years prior to the investigation. The initiative studied, designated the Enhancement Initiative in this paper, was similar to CSRD in structure (see Table 1). It established seven focus areas to be addressed by a district involving a sample of its schools. As can be seen in Table 1, the first six of the seven Enhancement focus areas listed are similar in design to the first six of the nine components that schools engaged in CSRD are required to address. In general, the Enhancement Initiative promoted locally designed, developed, and implemented reform (i.e., school reform plans) focused on identifying measurable student learning goals (i.e., outcomes-based education), research-based and innovative instructional strategies, and school-community partnerships. The state provided an infrastructure of support that included technical assistance from regional technology centers, university faculty, regional school-community service centers, and the state department of education. A network of participating districts was also established, funded, and managed by the state department of education. The state initiative did not solely target Title 1¹ schools, as the CSRD program does, and thus the participating districts in this study ranged from having 6% to 55% of students living in poverty (NCES, 1996).

¹“Local Education Agencies [i.e., school districts] allocate Title I funds to eligible school attendance areas based on the number of children from low-income families residing within the attendance area. A school above 50 percent poverty may use its Part A funds, along with other Federal, State, and local funds, to operate a schoolwide program to upgrade the instruction program in the whole school. Otherwise, a school operates a targeted assistance program in which the school identifies students who are failing, or most at risk of failing, to meet the State's challenging performance standards and who have the greatest need” (U.S. Department of Education.; 2000, November 13).

Table 1.
Components of the Enhancement Initiative and the federal CSRD Program

Enhancement Initiative	CSRD Program¹
1 Research-based instructional practices such as cooperative learning, heterogeneous grouping of students, active learning, etc.	1 Innovative strategies and proven methods for student learning, teaching, and school management
2 Development of a state-approved school reform plan that is consistent with the district's longterm educational improvement plan. Activities should include communication of efforts with the community and receipt of a waiver from compliance with state administrative rules.	2 Comprehensive design for effective school functioning that aligns curriculum, technology, and professional development into a schoolwide reform plan designed to enable all students to meet challenging state standards
3 Outcomes-based education including a shared mission statement, exit outcomes, curriculum framework, instructional plan, and criterion-based assessment system	3 Measurable goals for student performance tied to state standards and benchmarks for meeting the goals
4 Involvement of parents and community in development of the school mission, and school improvement as well as school involvement in community planning and school-community partnerships	4 Meaningful involvement of parents and local community in planning and implementing school improvement activities
5 Collaboration with institutions at the state, regional and national levels to bring about change through applications of current education research	5 High quality external technical support and assistance from a comprehensive school reform entity with expertise in schoolwide reform and improvement
6 Evaluation to assess change in teacher beliefs and understandings, instructional practices, and student learning, and the education change process more generally	6 Evaluation of the implementation of school reforms and the student results achieved
7 Access to, training in, and use of technological applications for instructional and managerial purposes	7 Coordination of resources (federal, state, local, and private) available to the school are utilized to support and sustain the school reform
	8 High quality and continuous teacher and staff professional development
	9 The program is supported by school faculty, administrators, and staff

¹Information obtained from SEDL (1999, March 29)

For our research, four districts that had participated in the Enhancement Initiative from 1990 to 1994 were studied nine years after the reform's beginning to assess whether changes that were implemented were sustained. Staff that were and/or are currently instrumental in the district's improvement efforts were the primary source of data for this study. More central to this paper, district representatives were questioned about (1) reform changes that have and have not been sustained, and (2) factors that promoted or hindered the sustainability of changes made under the reform program. Hence, this study addresses the sustainability of successfully implemented change in educational systems.

It is hopeful that the results of this multiple case study project will be useful to districts and schools involved in implementing and sustaining locally-designed and developed comprehensive reform efforts. However, this study is limited in that only four reform districts from a single state were studied, and the investigation relied on qualitative data. These methodological constraints preclude our making strong and general conclusions. Therefore, although conclusions regarding sustaining education reform are drawn in this paper, it is likely that some important issues are missing because of their failure to emerge in this investigation or at these particular sites. Additionally, the relevance of the findings reported here to a district or school depend on the specific features of that education system. Therefore, the results of the four cases studies reported here will not necessarily be applicable to any educational setting. In particular, the districts studied were located in rural or small town settings, and therefore many of the roadblocks and solutions occurring in these settings may not be found, for example, in urban settings.

In this paper, we first present a review of research about sustaining change in educational organizations. Next, we present the study methodology and results of factors influencing the sustainability of reform. Finally, we develop recommendations of district and school capacities and external assistance that may be required to benefit from the precepts of this and similar research.

Sustaining Education Reform

Studies investigating sustained education reform are few in number, in part because few education reforms are implemented sufficiently such that continuation can be observed (Tyack & Cuban, 1995; Cohen & Ball, 1999). Sustained reform is most often defined as a continuation of classroom practices or other activities that have been implemented during the reform program's existence, and the decisions, actions, and policies by school and district leaders that support that continuation (Berman & McLaughlin, 1977, 1978; Yonezawa & Stringfield, 2000; Hargreaves & Fink, 2000). Institutionalization of education reform, in contrast, has been defined more specifically as the integration of new practices into routine activities, and having those practices survive organizational changes such as administrative turnover or budget cycles (Huberman & Miles, 1984; Yin, 1978). In comparison, the intended outcomes of innovations, such as student achievement results, have not been used as variables in research of reform continuation, in part because methodologically longitudinal studies that could use student achievement data are less frequent than retrospective studies (Datnow & Stringfield, 2000). Also, frequent changes in assessment measures used by schools, districts, and states in the past decade make valid longitudinal comparisons nearly impossible.

In this report, sustained education reform is defined as the perception by those involved in the education system of continued implementation and practice of a change that occurred initially as a consequence of a reform program. The practice would need to be continued after the reform program has formally ended in order for sustained change to be attributed to it. For example, if the practice of site-based management was implemented as part of a reform program, and informants report that the practice is a continuation of change implemented during the program, it is considered to be sustained even when the practice itself is found to have changed drastically in character. When using this definition of sustained reform in research, it is important to include as participants individuals who are familiar with the history of an education system in order to assess change that has been sustained over several years.

The following factors have been found to contribute to sustained education change in two or more research studies (Datnow & Stringfield, 2000; Stringfield, 1998; Yonezawa & Stringfield, 2000; Berman & McLaughlin, 1977, 1978; Hargreaves & Fink, 2000; Fullan, 1999; Huberman & Miles, 1984):

- a. methods or practices that teachers experienced as effective in accomplishing school goals;
- b. school principals who effectively promoted, supported and managed change;
- c. political support for new practices from district and, if possible, state levels;
- d. continual, high-quality professional development and/or assistance for staff; and
- e. active recruitment for highly qualified faculty.

In addition to these general findings, Berman & McLaughlin (1977) found that reforms that were larger in scope were more likely to be implemented and continued, and that teacher involvement in decision-making from the onset of a new program contributed to continuation of reform. Also, these researchers found that the amount of resources (financial and material) that supported the reform, the specific teacher practices that comprise the program, and formal evaluation were less vital than other factors to the implementation and continuation of innovative programs.

Additional important factors observed by Yonezawa and Stringfield (2000) are the alignment of the reform design with the local organizational context and the integration of reform structures into the daily lives of the school community. Stringfield (1998) reports in his research of longterm, high-performing schools with large populations of low SES students that the following factors were common: the schools had clear goals, relied on rich sources and amounts of data for monitoring improvement, valued reliability over efficiency or low costs, and were intensively involved in informal improvement efforts. Hargreaves and Fink (2000) report that succession in leadership, staff retention, and community support also influence the continuation of innovative change.

Additional factors that research has identified as contributing to the continuation of reform include the restructuring of resources to support the main goals of the district and school and ongoing

evaluation or monitoring of success (Elmore & Burney, 1998; Klein, Medrich, & Perez-Ferreiro, 1996). (This last factor contradicts the earlier finding of Berman and McLaughlin [1977] that evaluation was not an important factor for implementation and continuation of program practices.)

Other research has focused on strategies and capacities that support ongoing school improvement, rather than sustaining specific practices. Hopkins (2000) and others claim that effective school improvement strategies are dependent in part on a school's current performance. For example, he suggests that a successful school that desires continued success is likely to depend less on external support than on exposure to new ideas and practices, open discussion of values, within school collaboration, and external collaboration with consortia-type arrangements. If schools at different degrees of effectiveness require different strategies for ongoing improvement, it can be argued that the goal of education reform is not simply the implementation and continuation of effective practices, but also enhanced capacity for ongoing school improvement. Continual improvement need not imply a revolving door of school programs and practices, but rather can mean the continuation of effective practices and programs accompanied by the elimination and innovation of practices in areas where a school is ineffective (Tyack & Cuban, 1995).

Stoll (1999) presents a model of school capacity for lasting improvement that is comprised of capacities organized around the following three areas: 1) individual teachers as learners (including capacities such as self-efficacy, motivation to learn, knowledge, and experience), 2) the school learning context (including school culture, structures, and leadership), and 3) the external context (including community, professional learning context, and political context). Stoll additionally posits strategies for developing these capacities from within a school and through external support to schools. From within, schools can build capacity for ongoing improvement by implementing a systems perspective among staff, high expectations for students, employees who are learning experts and staff who understand the change process, modifiable structures, and a broad definition of school leadership. Stoll's recommendations for those attempting to develop school capacity from outside are respecting teachers as professionals, supporting ongoing professional development, helping schools interpret and use data, being critical friends, and supporting education in a wider social context (for example, in social and health programs as well as schools).

We return to this research of sustaining educational change and strategies and capacities for ongoing school improvement in the results and conclusion sections of this paper. Next, the methods of the current study are presented.

Methodology

Enhancement Initiative

The Enhancement Initiative was a three-year program – funded through state legislation and operated by the state department of education from 1990 to 1994 – designed by an education committee appointed by the midwestern state's governor. This committee proposed the initiative as a response to current state challenges that included outmigration, delivery of rural education, changes in student populations, a desire to be a competitive location for economic growth, increasing learning

needs of adults, and the increasing public demand for accountability. The committee's proposed approach to helping schools meet these demands was to provide incentives and support for locally driven change. In general, the initiative's goals were stated as the three R's: Revitalizing instruction, Reaching individual student achievement, and Relinking schools and communities. Participating districts received extensive technical assistance in designing and implementing outcomes based education, instructional methods, curriculum development, educational technology, and school-community partnerships. In general, the evaluation of the initiative documented the following changes across sites: 1) increased cross-disciplinary units and classes, 2) increased authentic instruction based on real world, culturally diverse, and community-based issues, and 3) curriculum more likely to relate to specified expected student outcomes (Cicchinelli & Keller, 1994; Cicchinelli, Keller, Stiller, & Thomas, 1995).

District Sample

Four of the eight districts that had participated in the Enhancement Initiative for all three years of the program were selected for this study based on the following three criteria: only districts that had successfully implemented Enhancement based on the initiative's evaluation reports were considered (Cicchinelli, Keller, Stiller, & Thomas, 1995); the ability to find a similar comparison district within the state was considered; and a variety of districts in terms of location within the state and student demographics were sought. Based on these criteria and a desire to identify a manageable number of participating districts, four districts were selected out of the eight that had participated for all three years of the initiative. Table 2 contains demographic information for the selected Enhancement districts.

An additional four comparison districts that had not participated in the Enhancement Initiative were selected in order to determine whether sustained changes could be attributed to Enhancement or were instead natural outgrowths of the educational progress in the state and nation overall. Comparison districts were individually matched to the Enhancement districts based on the following characteristics: geographic setting of district (i.e., rural vs. small town), number of students served, minority composition, proximity to the Enhancement district, median household income, and percentage of population in poverty, as determined from national and state data sources (NCES, 1996; Quality Education Data, 1997).

Each Enhancement district was asked to select one of their elementary schools to be included in the study that had been actively involved in the initiative and that would be most likely to exhibit remnants of program's changes. Comparison school districts were asked to chose the elementary school that they believed was "furthest along" in terms of education improvement. For each selected school, the principal and a group of three or more teachers were interviewed. District superintendents and a second district administrator were also interviewed, individually or together. The original Enhancement site coordinator at each of these districts and two individuals from the state department were also interviewed.

Table 2.
Demographics of Districts in Study

District Name	Size	District Context	Median Household Income	% School-age in Poverty	% White	% American Indian	% Hispanic	% Black	% Asian
1. Lewis (E)	645	Rural	\$24,192	5.8%	98%	1%	0%	0%	0%
Washington (C)	616	Rural	NA	NA	94%	NA	NA	NA	NA
2. Wilder (E)	2,118	Rural	\$13,327	54.9%	9%	90%	0%	0%	0%
Lincoln (C)	1,009	Rural	\$11,105	70.2%	1%	98%	0%	0%	0%
3. Sitting Bull (E)	1,454	Small Town	\$18,703	17%	89%	8%	0%	0%	2%
Jefferson (C)	3,185	Small Town	\$22,125	14%	95%	4%	0%	0%	0%
4. Sacagewea (E)	4,232	Small Town	\$21,867	15.2%	95%	2%	0%	0%	0%
Roosevelt (C)	2,629	Small Town	\$22,912	15.1%	95%	4%	0%	0%	0%

Notes. District names are pseudonyms. E = Enhancement Site, C = Comparison Site, NA = Information Not Available, FRL = Percentage of student population that is eligible for the federal free and reduced lunch program. Some percentages do not add up to 100 due to rounding. These demographics were taken from the 1995-96 Common Core of Data available from NCES, the 1997-98 QED School Guide, and state department of education publications.

Data Collection

First, interviews of two state officials familiar with the Enhancement Initiative and districts' work since the initiative were conducted to assess these individuals' perceptions of the long-term influence of the initiative, the state's current reform activities, and to obtain their judgments of the eight districts in this study. Second, the Enhancement Initiative site coordinator from each of the Enhancement districts was interviewed to assess changes made during the reform and impressions about what changes were sustained and what factors played a role in maintaining each change. Third, the status of each district's improvement effort was assessed through two interviews with district office staff: the superintendent and one other district administrator. School-level reform was assessed through an interview with the elementary school's principal. Separate interview protocols were constructed for state department representatives, Enhancement site coordinators, superintendents, district administrators, and principals. A protocol for a focus group of school staff members was also constructed, and three to six teachers participated in this activity by addressing questions about school culture, instructional issues, professional development experiences, leadership opportunities, and community involvement. The instruments used appear in the Appendix.

Analysis

Interviews were recorded and transcribed, and the transcriptions were checked for inaccuracies. Two or three researchers reviewed each Enhancement district transcript, using guidelines for qualitative data analysis developed by the primary researcher (Miles & Huberman, 1994; Erickson, 1986; Strauss & Corbin, 1990). Changes in policies, structures, and practices implemented during the Enhancement Initiative and factors influencing the sustainability of changes were coded. The reviewers discussed the coding according to identified categories. Consensus was reached regarding the identification of Enhancement changes and factors that influenced the continuation of those changes. Coders also judged whether the changes had been sustained beyond the end of the Enhancement Initiative. Discussion of these judgments continued until consensus was reached. Table 3 contains the identified elements and reviewers' judgments regarding continuation of those elements for each district in which they were reported. Reform elements that were reported by respondents in two or more districts are included in Table 3.

Reviewers next identified and categorized the factors reported by participants as influencing the sustainability of education reform. The categories of factors were identified through a combination of review of the identified factors and consideration of "perspectives," "lenses," and "frames" of school reform presented by other researchers (House & McQuillan, 1998; Fink, 2000). The definitions of the five categories used to organize the sustainability factors appear in Table 4. Again, reviewers' categorizations were discussed until consensus was reached.

Four changes were found to be sustained at each of the Enhancement districts that implemented the change during the initiative: innovative, research-based instructional practices; school-community partnerships; use of technology in instruction; and site-based management. Following the analysis of the Enhancement districts, the data collected from Comparison districts was then analyzed for the presence of these four, consistently sustained changes. For each of the four changes, a list of district and school structures, policies, and practices that address the element was

Table 3.
District Elements Identified at Two or More of the Four Enhancement Sites and Current Status

Element	Definition	L	W	SB	S
Innovative instructional practices	Research-based, innovative curricula and/or instructional practices (see enhancement component 1 in Table 1)	C	C	C	C
School-community Engagement	Involvement of parents and community members in school functioning, and partnerships with community members and organizations (see component 4)	C	C	C	C
Instructional Technology	Dissemination of current information regarding instructional technology, training opportunities for staff, and use of technology for instruction (see component 7)	C	C	C	
Site-based Management	Shared decision making by consensus through an established committee of school staff and community members	C			C
Outcomes-based education	Outcomes-based education in which system components (curriculum, instruction, assessment, management, and professional development) are aligned with established student learning outcomes (see component 3)		C	C	D
Teacher planning time	Time during the school day when teachers can work together (without students) to plan, discuss, and reflect on student learning and instructional practice	C		D	C
Authentic assessment	Criterion-based holistic assessment practices using, for example, created rubrics. Also assessment based on real-world and relevant problems and assignments	C	D	C	D
Networking	Networking and collaboration with other school districts working on similar reform endeavors for the purpose of sharing information and garnering support	C	D	D	C
Site coordinator	School level position with the responsibility of facilitating the implementation and maintenance of school reform (usually a half-time position)	C	C	D	D
District leadership committee	District level committee(s) that address the implementation and maintenance of district level improvement with respect to district goals		N	R	D

Notes. C denotes Continued changes, D denotes Discontinued changes, R denotes changes that were Reinstated after discontinuation, N denotes cases in which not enough information was available to draw a conclusion, and an empty cell denotes cases in which a district did not report implementing a reform element. L = Lewis, W = Wilder, SB = Sitting Bull, and S = Sacagwea School Districts.

Table 4.
Definitions of sustainability factor categories

Category 1: Ongoing engagement and development of capacity

This category has to do with ongoing engagement and development of capacities attained during the reform initiative. For example, instructional skills acquired during the program might have become “routinely used” by teachers, or managerial skills such as working on a committee might continue to be used and enhance the committee’s functioning. The internalization of practices and continued use of practices are sustaining factors that fall into this category.

Category 2: School and district culture

Culture consists of shared behavioral regularities, norms, values, attitudes, perspectives, and relationships within the school and district. Activities that are not formal structures, such as maintenance of relationships, communication and sharing of information with staff and community members, informal networking and visiting with other districts, soliciting community input, valuing and soliciting teacher input into decisions, etc. are a part of the culture. Attitudes such as trust, a continual improvement perspective, innovation, valuing of community input, commitment, support of stakeholders such as community members are components of Culture.

Category 3: Structures of education system

Structures include established committees, positions, and regularly scheduled meetings such as for networking. Structures include resources such as allocated funding and available time for activities such as professional development or instructional planning. Policies for activities such as hiring, curriculum review, involvement of all schools, etc. Adaptation of subsequent programs to support the reform initiative’s goals is considered a type of structural support.

Category 4: School and district leadership

Leadership includes features of administrators (principals, superintendent, etc.) and school board, as well as relationships of these individuals or groups with others within the education system. For example, school board support for some policy falls under Leadership. Conflicts with the community fall under Culture, but conflicts of leaders with others in the education system (such as between administration and the school board) fall under leadership factors.

Category 5: Political context

This category has to do with state pressures and policies, and their influence on schools and districts. Other features of the political context include preservice (i.e., college and university) practices, and any other features of the greater context of the school and district influenced by its relevant regional, state, or national environment.

constructed for both the Enhancement and the matched Comparison districts. For each change, a judgment was made regarding whether the Comparison district exhibited and supported that practice (e.g., innovative, research-based instructional practices) to a greater, equivalent or lesser extent than did the Enhancement district.

Findings

In this section, we present the reform changes that informants reported were sustained since the Enhancement Initiative. Second, we present the factors that influenced the sustainability of change, organized in the five major categories: human capacity, culture, structure, leadership, and political context.

Sustained changes

As indicated earlier, four changes implemented during Enhancement were found to be sustained in all Enhancement districts that reported implementing these elements. These sustained changes are teachers' use of innovative instructional practices, engagement of schools with community, integration of technology into instruction, and site-based management. These sustained changes were central parts of this reform – that is, there was statewide technical assistance and infrastructure created to support implementation of these reform components – and finding that these elements were attributed to Enhancement and sustained is a significant outcome for this ambitious initiative. Table 3 reports the reform changes identified in the Enhancement districts and the current status of these changes.

When matched comparison sites were examined for these four changes as described in the methodology section, a majority of these elements had not been implemented to the extent that they had been in the Enhancement districts. First, innovative, research-based practices had been implemented and sustained in all four of the Enhancement districts. Three of the four Comparison districts had not implemented innovative, research-based instructional practices and support structures to the extent of the matched Enhancement districts. In the fourth case, the Enhancement and Comparison districts were both using innovative practices and supported those practices with structures and resources. Second, all four Enhancement districts had implemented and sustained school-community engagement and collaboration. Three of the four Comparison districts had not implemented school-community engagement and collaboration to the same degree as the Enhancement districts. In the case of the fourth pair of districts, the majority of the Enhancement district's constituencies were families of university students whose transiency precluded them from longterm, active involvement in the education system, and the Comparison district in this case, in contrast, had a more stable population of students and families participating in the system which contributed to community engagement at that site.

Third, the use of technology in instruction was implemented and sustained at three of the Enhancement districts. Two of the three Comparison districts failed to demonstrate the use and integration of technology into instruction to a degree similar to the Enhancement districts. In the case of the third Comparison district, the isolation of the school district from neighboring cities was greater

than was the case for the matched Enhancement district, and this Comparison district was investing in and implementing distance learning technology that the district viewed as necessary to provide adequate course offerings for high school students. In this case, the Comparison district's need for instructional technology was probably greater than that of the similar Enhancement district.

Fourth, site-based management had been implemented and sustained in two of the Enhancement districts. In one of the Comparison districts, site-based management was not implemented. In the case of the second Comparison district, not enough information was collected to definitively conclude whether or not site-based management had been implemented.

In summary, the four areas and types of changes that had been implemented and sustained by Enhancement districts were less likely to be observed in the Comparison districts. A conclusion that the Enhancement Initiative contributed to ongoing improvement in these four areas at the participating districts is supported by this result.

Elements of the Enhancement Initiative that were sustained or reinstated after discontinuation at only some of the four districts are the following: outcomes-based education, teacher planning time, authentic assessment practices, networking with other districts, a site coordinator position, and district leadership committees.

Sustainability Factors

Data were also coded for factors contributing to and detracting from the sustainability of reform changes. These items were organized into five general categories of school work that other researchers have referred to as "perspectives," "lenses," or "frames" of school improvement (House & McQuillan, 1998; Fink, 2000). For example, House and McQuillan propose that school improvement consists of the technological, political, and social perspectives. In Fink's longitudinal study of an innovative school's path examined the school through the lenses of context, meaning, leadership, structure, culture, and teachers' work and lives. The five categories used for this analysis were derived from the coded sustainability factors in concert with the dimensions identified in previous research. These five categories of sustainability factors are the following:

- a. Ongoing engagement and development of human capacities engaged during the reform initiative;
- b. School and district cultures that value learning, innovation, and collaboration;
- c. District and school structures, policies, and resource allocations that support reform goals;
- d. Leadership of schools and district that maintains a consistent vision, a well-designed strategic plan, and positive relationships with members of the education system; and
- e. Political context demands, pressures, and supportive activities.

In this section, each of these categories are delineated with respect to the study's data and illustrated with examples from the Enhancement districts.

Ongoing engagement and development of human capacities. Human capacity for education reform has been defined as individuals' knowledge and skills that address reform ideas, abilities to help others develop reform skills, commitment to reform, and disposition to learn (Spillane & Thompson, 1997; Century, 1999). This definition explicates that teaching or managerial knowledge and skill is not enough to enact or sustain reform (although this aspect of human capacity, also labeled the technology of education reform, is important; House & McQuillan, 1998), but that commitment and a disposition for learning, accompanied by the ability to develop knowledge and skills in others are also necessary. In this study, human capacities were mainly skills and knowledge that had been integrated into practice, but a flexibility in these practices that provides opportunity for continual improvement was also observed.

Informants from districts reported that teachers and administrators acquired understanding and mastery of practices that are still very much in use because these new capacities were integrated into routine practice. That is, new capacities continued to be engaged after the initiative, and in some cases attention was paid to the professional development focused on these skills for new staff. Two types of new practices had been integrated at these sites: instructional methods and organizational governance practices. For example, the original site coordinator at Sacagewea mentioned that "the district experienced the opportunity to see and work with different methods of teaching. These different instructional methods are still in place." At Sitting Bull School District, a teacher stated that "there are hands-on things going on in I think every classroom" that are a result of Enhancement.

Additionally, administrators from two sites reported that teachers have a strong sense of efficacy about instructing students in the state's new standards because of teachers' having already implemented a somewhat similar, outcomes-based education system during the Enhancement Initiative that required learning of all students to established criteria on a number of outcomes. That is, these districts had already mastered the practice of teaching specified outcomes to all students, and that experience had prepared them for the high expectations of all students that are necessary for teachers to have in a standards-based system. Thus, in the midst of a changing political context, teachers were able to sustain engagement of reform capacities at some sites.

Organizational governance processes such as site-based management using shared decision-making were also a part of the Enhancement Initiative. When these practices were integrated into school and district practices and policy, they continued as status quo after the initiative formally ended. For example, an elementary school principal from Sacagewea School District mentioned that teachers are very willing to be a part of the school-staff advisory team, and that some of the group process skills were probably implemented with Enhancement. She told us the following:

Teachers are very open and willing to be part of a team. They like to have that partnership. I've just never had any difficulty with people wanting to step to the plate and be a part of making decisions at school.... Probably some of the training that they received during the [Enhancement Initiative] they sort of-- helped them to understand what groups are all about and how they should operate and function. And people are

much more willing to head up a committee, you know, take turns in terms of having to report or be the chairperson.

At Sitting Bull School District, the original site coordinator informed us that the technology committee was established during Enhancement and sustained. She described the committee's work in the following way:

A district technology committee was developed [during Enhancement]. This committee became a powerful committee, and gained oversight of all technology funds. The committee did strategic planning for technology short- and long-term needs...so that such a plan was not written by any one person in isolation. We learned to make decisions by consensus, and that became a part of the way we do business here. That process is still in place. The new superintendent is more "top down" in terms of the budget, but he promotes teacher leadership.

The Sacagewea and Sitting Bull examples illustrate that governance practices can be developed and integrated into routine district operations in a manner that supports the continuation of those practices.

As a last illustration of the importance of integrating practices, there was a case in which authentic assessment did not become routine and was therefore not sustained. The original site coordinator at Wilder School District told us the following:

The district had began performance assessment [during Enhancement] and matching of student outcomes to learning objectives, funded in part by NSF. We had several practice sessions in which we created assessments at each grade level that were performance assessments that had relevance to these students [of which 90% are Native American]. For example, students might be asked to calculate the amount of fry bread ingredients needed to serve at a function with X number of guests given the amount of each ingredient needed for four servings. These performance assessments were developed by teachers, and were a staff development experience. This never became systematic, and would have been worthwhile. The district has multiple measures for their Title I funding, but it isn't the same as locally developed performance assessments [that were used during Enhancement].

Other research similarly documents the importance of integrating new practices into routine activities for sustaining those practices (Datnow & Stringfield, 2000; Yonezawa & Stringfield, 2000). Indeed, some researchers suggest that unless new practices are integrated into routine activities (which requires support from school and district leaders as well as the school's culture and political context, as are described below), these new technologies will not survive budget cycles or successions in leadership.

There are factors that influenced the routinization of new practices (some of which are presented under separate headings below). Two of these factors are described here: observable, positive outcomes can sustain the support of practices and training for new staff can ameliorate the

negative influence of staff turnover on sustaining reform.

Positive outcomes was one factor that supported the continuation of integrated practices. In particular, research has demonstrated that when practices are found by staff to be useful in meeting reform goals, these activities are more likely to become institutionalized and sustained than when activities do not promote desirable outcomes (Berman & McLaughlin, 1977, 1978; Huberman & Miles, 1984; Yonezawa & Stringfield, 2000). In this study, the continuation of site-based management at one site was attributed by the superintendent, in part, to the positive results of this management structure. He told us the following:

We developed [site-based management] probably seven or eight years ago but we've sustained it because it's worked well for us. It's led us into some areas that we feel very good about – those areas being student learning, student achievement, student goals, kind of moving our district forward.... through that process we gained some direction, some new things that we could do that we took on. Some places have failed at that [sustaining site-based management], have gone back to a different form of management but it's worked well for us here and we've sustained that.

Thus, when new practices are perceived to result in positive outcomes, they are more likely to be supported and, hence, established as routine activities. Also, although it often requires effort to abandon practices that have become routinized, observable positive outcomes contribute to staff commitment to integrated practices rather than enticing staff to adopt novel, commercialized programs that are often touted to schools and districts (Fullan & Miles, 1992).

Additionally, the training or induction of new staff is vital to sustain integration of practices at a school or district level when staff turnover occurs. For example, a principal at Lewis Schools reported the following observation regarding the professional development needs of new staff:

Our new staff here, the ones who were not here during [Enhancement], don't really understand a lot of the active teaching techniques and the focus on teaching for understanding. Some of our new staff are still in the mindset of how it was when they went to school. And so that's the way they are teaching because they haven't been taught any other way and so we need to make sure that they have a chance to learn all the more active ways of teaching.

This principal reported that the district addresses this professional development need, in part, through a teacher who was an instructional leader during Enhancement and models effective instructional practices for new and veteran staff. Another principal at a different district described attentively familiarizing new staff with school practices such as the site-based management team:

What I try to do with new staff, I try to bring them on with the staff advisory [team] right away. Because those are the [teachers] that are sort of new to the school and they need to hear what's been happening. And then new staff members become a part of how the school grows and how you – you know – progress as a school. So the new staff members are brought into the group process right away as a new staff member.

These examples highlight the importance of induction of new staff so that routinized practices and activities can continue at a school or district level when changes in staffing occur.

School and district cultures that value learning, innovation and collaboration. School culture can be defined as the values, guiding philosophy, attitudes, norms, and relationships that exist in the organization (Boyd, 1992; Elmore, 2000; Fink, 2000). Traditionally in the U.S., school and district culture does not value focusing on instructional improvement, which makes reform a formidable challenge (Elmore, 2000; Cohen & Ball, 1999). In this study, sites reported that the Enhancement Initiative promoted districts' and schools' being more committed to learning, innovative, and collaborative, and that the resulting culture contributed to sustaining education reform.

For example, Wilder School District representatives referred to a "district philosophy of education and theory of teaching and learning" that was implemented during and sustained since Enhancement. Wilder's student education outcomes and corresponding curricula that were constructed during Enhancement were based on the culture of the 90% of the student population that is Native American. The established student learning outcomes were sustained by the district and adapted to conform with the state's newer standards because the district's philosophy includes teaching material in a manner that makes it relevant to students' lives and location. Thus sustaining parts of the Enhancement Initiative such as a commitment to culturally relevant curricula even when faced with a state emphasis on learning standards was promoted by the district's culture that included a commitment to a specific philosophy of education.

At Sitting Bull Schools, the previous site coordinator told us that the most important longterm effect of the reform initiative was "promotion of culture and school climate for continued staff learning and staff growth. [Enhancement] fostered a belief that staff development is the way to continual improvement, and that continual improvement is valuable. That had incredible ramifications for our view of student improvement." Thus, during the initiative a culture that values continual improvement and teacher learning was created and has contributed to the district's sustaining, for example, funding for and participation in staff development.

At a third district, one representative attributed the district's change to block scheduling as a result of the district's "continuing to look at different teaching methods" since and beginning with the Enhancement Initiative. Thus, these districts adopted a culture of innovation and continual learning (Fullan, 1999; Stoll, 1999) during Enhancement that has helped to sustain these districts' continual striving to attain their reform goals, which remained fairly constant over time.

School and district culture at some sites also included a shared focus on improved instruction and student learning. For example, the superintendent of Lewis School District reported a belief that Enhancement helped the district focus on instruction, which led to a lot of hard work from staff that he believes is now reflected in the district's relatively high state assessment scores. At Sacagewea, a teacher (and previous site coordinator) described the most positive longterm effect of Enhancement as the "teachers' individual awareness of need to change style in the classroom [in response to students' needs]. ... teachers [became] more aware of individual learning styles."

Collaboration and unity of staff became norms in these districts during Enhancement through the initiative's promotion of the processes of decision making by consensus and common planning time for staff. The curriculum director at Sitting Bull Schools told us the following about Enhancement's effect on staff unity:

I think we needed, as a district, the [Enhancement Initiative] to be able to do what we're doing now because of that mindset, because of that way of thinking and also with the [Enhancement] it really gave a sense of unity, you know, to the staff. ... We were looking more at this as our district and we were looking more at the big picture, you know, at the K-12 picture rather than my first graders or my third graders. We had that sense of unity. And that's another part that stayed with us after—after that time.

Other writing supports this observation that ongoing collaboration that includes reflection is important for continual improvement (as opposed to a hopping from one reform program to another; Fullan, 1999; Zimmerman, 1998). Furthermore, when collaboration of staff disappeared from a school or district's culture (because of, for example, a change in leadership), that change created a barrier to maintaining a course of continual improvement.

Collaboration with the community was also a part of these district's and schools' cultures. Districts reported an increase in valuing community representatives and organizations as a result of the Enhancement Initiative. A teacher at Sitting Bull Schools said that Enhancement affected "the way that we viewed our community and parents, and to be more inclusive." At Sacagewea Schools, the previous Modernization coordinator had the following to say about community involvement:

[Enhancement] was a 'real eye-opener' in terms of the opportunity and awareness that it brought to the community about what schools are doing. Community input and teacher communication with the community was a result of [Enhancement]. The current school advisory committees, and the relationship between the schools and local businesses are all remnants of [Enhancement]. There is also more volunteering from the community in the schools. ... Relations with businesses were begun during [Enhancement], and there are not the same forums now as there were then for these partnerships. Nonetheless, there has been effort to continue this collaboration between school and businesses. The schools learn what's going on in industry, and get answers to the questions of 'how come I need to know this?'

In this example, community partnerships contributed to schools' knowledge base regarding what businesses expect high school graduates to know and be able to do, and these relationships promote local industry's awareness of what is happening in the schools. All of the study's districts reported to us that the inclusion of and communication with community was much more valued by schools and districts as a result of their participation in the Enhancement Initiative, which highly promoted school-community partnerships.

In one instance, changes in district and school culture that occurred subsequently to the Enhancement Initiative derailed the district's reform effort. At Lewis, a new principal (who left the district during the year prior to our interviews) devalued the staff collegiality and collaboration that

were staples of the reform. We were told that reform practices are now used “behind closed doors” at that school and have been internalized and integrated into practice by senior staff, but that these practices are not shared among teachers. The principal mentioned a lack of trust among staff that currently prevents the continuation of staff sharing and collaborating around instruction. Under brand new leadership, that school is expecting to reinstate many of the practices and beliefs that were a part of their Enhancement program.

Add negative influences of funding on morale of staff

In summary, the importance of school and district culture should not be underestimated for sustaining progress toward reform goals after the ending of a specific reform initiative. Shared valuing of student learning and quality instruction, innovation, and collaboration within and outside of the education system were promoted by Enhancement in these districts. Furthermore, these changed values promoted sustaining districts’ and schools’ reform focus.

District and school structures, policies, and resource allocations that support reform goals. District and school support in the form of policies, structures, and resources is crucial for sustaining new educational programs or practices (Bodilly et al., 1998; Glennan, 1998; Hargreaves & Fink, 2000; Berman & McLaughlin, 1977, 1978; Yonezaga & Stringfield, 2000; Datnow & Stringfield, 2000). Furthermore, structures work in concert with culture to perpetuate reform in at least two ways. First, culture is formatively influenced by structures and policies (Elmore, 1996, 2000; Cohen & Ball, 1999). For example, districts that reserve time each week for all teachers to work collaboratively promote collegiality and norms of cooperation among staff members. Secondly, school and district policies can focus educators’ work on curriculum, instruction, and expectations for student learning and such explicit goals contribute to changes in teachers’ practices, skills, and knowledge. Some research suggests that in order for staff collaboration or professional development to result in positive changes in instruction, clear organizational goals that address instruction and student learning need to be established (Elmore, 2000).

Districts in this study reported multiple structural and policy-related changes that they enacted to support sustaining reform; for example, creating new positions and restructuring responsibilities of existing positions, establishing new committees, modifying hiring practices, and changing funding allocations during or after the initiative. By paying attention to the structural needs for sustaining reform, these districts established new ways to support the path of continual improvement that had been begun during Enhancement.

For example, in Sitting Bull Schools, the position of curriculum director was created at the end of Enhancement, and the roles and responsibilities of curriculum review committees were established during and sustained since the initiative. A staff development committee has been sustained since Enhancement to attend to and support teacher learning. Regarding the formal adoption of standards, the original site coordinator told us, “We developed district content standards during [Enhancement] and continue to refine those today -- we consider them to be better than the standards that the state developed.”

Additionally, the flexibility of structures emerged as important at this site. Sitting Bull's structures for parent involvement changed from a district-level school-community committee to school-level parent advisory groups, and this change was adaptive for this district's university setting where the community's mobility precludes ongoing parent involvement at the district level, while at the same time parents are willing to be involved in their children's school and classroom activities.

The creation of formal structures supporting professional development is another district activity that supported sustaining reform. At these sites a majority, if not all, teachers participated in the Enhancement Initiative's training opportunities, partly because the initiative's design elements – such as funding for substitute teachers and weekly early releases of students – supported broad-based participation by teachers. Some of these districts reported witnessing for the first time the value and impact of intensive professional development for teachers. More than one district told us that staff development committees were implemented and district funding for professional development was increased after Enhancement. Both Lewis and Sacagewea retained the structure of early release time for students that provided regular district-wide professional development and collaboration time for teachers. At Sitting Bull, the curriculum director reported that over 90% of teachers currently participate in after school study groups that focus on various educational issues. Thus, district structures supporting staff development contributed to continual learning and capacity-building in these systems.

The use of resources is an important component of the federal CSRD initiative, for which the reallocation of resources around school goals is the intended mechanism to sustain reform after three years of funding (OESE, 1998). In this study, careful allocation of resources contributed to sustaining reform practices. In Sitting Bull Schools, we were told that the district's funding of staff development and curriculum committees (and these committees' auspices over funds) became a part of the district's operations. At Sacagewea, the district directed a new program to pick up where Enhancement left off. The original site coordinator told us, "Tech Prep [the new program after Enhancement] was the initiative in which hands-on instruction applied to the real world was continued, and so the momentum of [Enhancement] was not effected. The same people were involved in both initiatives." In Lewis, an Annenberg Rural Challenge grant to the nearby university now funds activities of the same community committee that was established during and sustained since Enhancement.

Structures addressing the hiring of new staff is another area attended to by districts after the reform ended. For example, Lewis Schools' new high school principal was an Enhancement site coordinator at a neighboring district, and was hired in part because of her familiarity with the initiative. Regarding Sacagewea schools, a state department representative told us that "the community network ... recruited for a different kind of [superintendent] than they would have without [having participated in Enhancement]. I think [Enhancement] positioned them for real forward looking leadership and I also think that it made them real attractive to those kind of candidates."

The best example of changes in hiring policies comes from Sitting Bull, where the Enhancement contact person told us the following:

The district became more aware of ways to go through the hiring process as a result of [Enhancement], and hiring practices were formalized in particular at every elementary school. Potential new staff are now interviewed by large teacher teams and by administrators and possibly even school board members. The interviews are geared around things valued such as interdisciplinary instruction and authentic learning and assessment.

Thus, implementing a system of flexible structures, policies, and funding that address reform goals, in combination with the other categories of factors presented in this paper, promote the sustainability of reform.

Leadership that maintains a consistent vision, a well-designed strategic plan, and positive relationships with members of the education system. In this study, consistency in district leadership emerged as an important factor in sustaining reform elements. In Sacagewea and Sitting Bull, new superintendents have been hired since the end of the Enhancement Initiative, but the constancy of other administrators was credited with continuing reform. For example, the current assistant superintendent at Sacagewea was involved in the initiative and is credited with sustaining some of the initiative's vision. At Sitting Bull, low turnover in administration in general is believed to have contributed to sustaining curricular and instructional practices since Enhancement's end. Similarly, Wilder School District, which experiences an average of 15% turnover in staff each year, had a core group of administrators that is credited with sustaining the vision and strategic plan in spite of recurrent staff change.

In contrast with these three districts, Lewis School District was on its third superintendent since Enhancement, and we were told that the second superintendent's leadership and management style conflicted with the collaborative culture that had been established in the district during Enhancement and resulted in factions within staff. We also learned that collaboration and trust has not yet been fully rebuilt since the exit of the second superintendent three years ago, but that the district still has high hopes for reinstating parts of the reform and district culture that had been in place when Enhancement ended.

Consistency in building administrators also emerged as important. At Sitting Bull, the Enhancement contact told us that 70% of building administrators remain with the district since Enhancement, and these administrators continue to promote parent and community involvement with both new and veteran staff members. This informant told us that she believes the district has improved in including parents and community in school activities, and that inclusion of community "is a part of school culture" that is promoted by principals. Similarly, teachers reported to us that parent and community support and involvement is greater currently than it had been during Enhancement, in part because principals focus on this issue.

The importance of stable district and school leadership for both implementing and sustaining reform is well-established (Berman & McLaughlin, 1977, 1978; Hargreaves & Fink, 2000; Bodilly, et al., 1998; McAdams, 1997). Yonezawa and Stringfield (2000) observed that principals where reform had been institutionalized had changed from assuming the role of a visionary leader to being a cooperative leader. That is, while it may be important for leaders to spearhead reform during its implementation, the supportive and cooperative role of principals may be more vital for sustaining

reform. When turnover in administration is unavoidable, the perpetuation of attention to and valuing of reform goals by new leaders is vital for continual progress. Research suggests that the careful recruitment of new administrators who are willing to consolidate and continue a reform that is in progress is necessary (Ross, 2000; Fink, 1999, 2000). In conclusion, although reform should not be identified with only one or a couple of people in the district's administration, constancy in leadership as a whole – at both the district and school levels – had a dramatic influence on sustaining reform in the districts in this study. Furthermore, consistency in leadership ameliorated some of the potentially negative impact on reform progress that can be caused by high staff attrition at one site.

Political context demands, pressures, and supportive activities. The influence of state policies and practices on school and district reform emerged as a complex issue in this study. First, we were told that the state's focus on inputs (e.g., mandating the number of classroom hours spent on instruction in specific academic domains and the number of student-teacher contact days in the school calendar) as well as outcomes (i.e., student assessment results from the state's norm-referenced testing program) is not conducive to innovation. More than one superintendent told us that the state's current requirements inhibit their districts' continual progress of reform.

On the positive side, state flexibility with respect to requirements was observed in the study. For example, Lewis School District sustained a state waiver since Enhancement that increased the number of professional development days and decreased the number of student-teacher contact days in that district's school year. However, other districts had difficulty convincing their communities and school boards of the value of such a waiver. Thus, state policies and requirements hindered reform progress at sites, although flexibility in state policy benefitted at least one district in the study.

Standards-based education and student test scores have recently gained in stature in the state's accountability system. State standards are requiring districts to overhaul curricula and accelerate teacher familiarity with new learning objectives. Furthermore, because the state's assessment is a norm-referenced test, teachers are being asked to present specific academic content at a much earlier age than in the past. The elementary school principal at Sacagewea had the following to say about influence of the new state standards on teachers:

My fear is that, I'm thinking just with math as an example, that we used to remediate and enrich [as a result of Enhancement] and now we're on standards and we don't know really where that's taking us. You know, until we get to know the standards and say ``OK. Here are the standards. We've taught them a year. Can we have our enrichment again? Can we have our remediation?'' and work that whole program through ... And teachers are very-- kind of uncomfortable with the standards. That's my perception..."

At Lewis, a teacher commented that the state standards and testing program conflicts with the district's previous reform agenda: "[The state's governor] made [the standards] much more specific, you know. Much more teach this skill, keep this skill, teach this skill, and so that influence I think is very visible in our school, and maybe not as much in our school as other schools, but you can tell the difference. So it's made a difference."

In response to state testing practices, one district has contracted with a proprietary company for the use of assessment questions aligned with the state's testing program. At that district, the superintendent reported a positive side of the new accountability focus in the state. He said that pressure from the state creates the feeling of "let's slow down and get it right." This superintendent valued the state's focus on student test performance, though he acknowledged that it would be more appropriate for the state to use a criterion-referenced test than its current norm-referenced exam.

Representatives from two districts mentioned that the state's support and funding of innovation decreased drastically after the Enhancement Initiative ended, and that the absence of continued state support interfered with continuing reform. Thus, state support for innovative practices by school districts is another way in which political context can influence the continuation of reform.

Preservice education was credited by some teachers with having sustained reform in the area of technology. That is, new teachers from local colleges and universities are coming into the school districts with capacity in the area of technology that supports the district's reform goals in that area. Thus, preservice education is another arena in which political context (in part through what states and accrediting agencies support and require of institutions of higher education) influences district capacity to sustain reform.

The local political context also greatly influences the sustaining of reform (Elmore, 1996; Fullan, 1999). Communication with and support from the community proved vital for sustaining parts of the reform in these districts. For example, at Lewis, it was the support of the community and school board that maintained the weekly early student release time that had been so important to that district's reform. Communicating the importance of that professional development time for teachers to the community and parents was essential for gaining approval of the district schedule that releases students for one afternoon a week. In several of the other districts we heard that it was the community, and consequently the school board, that placed a roadblock to having student release time implemented even though teachers and administrators realized the potentially powerful impact of additional planning time for teachers.

Also underscoring the importance of school-community relations for sustaining reform was an example of a district in which conflictual relationships derailed reform for several years. The Sitting Bull superintendent told us the following:

A huge public relations problem was an issue here ... That absorbed the teachers in this district, the administrators in this district for at least two full years, until you know, then things changed and they've gotten back ... we're kind of back on the way it used to be, but it was a kind of a hard time. And [Enhancement] ends and this other [public relations problem] begins, so that's been a little bit of a struggle for the district and for the staff. Teachers, now that they're out of that, they're kind of looking forward, saying, hey, let's get back to the [Enhancement].

Thus, maintaining communication and positive relationships with local communities and constituencies is crucial for sustaining progress in a district, because without community understanding of schools' work, supportive funding and structures may be removed and teacher

morale may consequently decrease. The Sitting Bull example also suggests that conflict between schools and communities diverts energy away from the education system's primary work of teaching students.

Summary and Conclusion

In summary, the Enhancement Initiative districts reported sustaining changes that were central components of the reform: namely, the use of research-based instructional practices, school-community collaboration and involvement, and the use of instructional technology. Furthermore, the changes that the Enhancement Initiative districts had implemented and sustained for nine years were less likely to be observed when Comparison districts were examined.

Many factors influenced the continuation of changes made during Enhancement. First, human capacities that were integrated into routine activities were more likely to be sustained. Observations of positive results from those routinized practices and the training of new staff supported the ongoing integration of new activities. Second, the establishment of school and district cultures of innovation and collaboration focused on instructional goals supported continual progress toward reform. Changes in culture occurred during the reform initiative, and these cultural changes were so ingrained at these sites that reform was continued, in part, because of the cultural norms that had been adopted and relationships that were forged. Third, district structures helped to sustain reform. For example, new district positions, reallocations of resources, and new policies promoted continuation of activities such as new curriculum methods. Fourth, consistency in district and school leadership supported continuation. A corollary to this finding is the importance of recruiting, developing, and selecting new administrators who can perpetuate a district's agenda (Ross, 2000; Fink, 2000). Fifth, the influence of political context can not be ignored. Although districts often express feeling out of control on this issue, the flexibility of state policies can sometimes be used to a district's advantage, and the nurturing of relationships with a district's constituencies can promote public support.

Additionally, these five areas of influential factors should be considered in tandem. For example, sustaining reform through structures while ignoring culture has resulted in sustaining reform elements that are no longer effective at one of this study's districts. Similarly, neglecting a district's local political context while focusing on reform goals led to strained public relations that undermined staff morale in one district. It is likely that all five of these areas require attention to sustain continual improvement. Indeed, it seems possible that the comprehensive scope of this reform initiative, accompanied by local design and implementation of reform practices, supported the continuation of changes to the education system. That is, by addressing several of the capacities that might be needed for lasting school improvement (Stoll, 1999) during the initiative's three years, it is likely that the design of the reform itself contributed to the sustained change observed. In future research, the contributions of work in the five areas presented here might be more closely examined for their contributions to sustained reform.

The methodology for data collection in this study – namely, interviews with state department of education representatives, district administrators and teachers – puts limits on the ability to validate

these conclusions. Participants in this study reported experiences and events, and it is likely that biases in memory and perception affected the study's data. Measures were taken to remove some bias from the data, such as including multiple sources of information and matched comparison districts. Nonetheless, the study's use of retrospective reports from individuals as its main source of data constrained both the type and objective validation of information that was collected. By corroborating our findings with similar research, we believe that the findings and conclusions made here are reasonable and accurate. Other research reports additional factors that promote continued reform (such as the use of multiple types of data or evaluation results), and therefore it is reasonable to expect that the five factors presented above are not a complete list of important considerations that should be attended to by districts and schools planning to continue reform. As mentioned early on in this paper, distinct settings are likely to require distinct strategies, perhaps even different strategies at different times, to influence the maintenance of change.

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Appendix

Instruments Used for Case Study Interviews

State Department Staff Interview
Sustaining Complex Education Reform Project, McREL

Name: _____

Position: _____

Interviewer: _____

Date: _____

- 1 What is the state currently doing to support district and school level reform? Probe on 1) standards and documents supporting standards-based instruction (e.g., curriculum frameworks), 2) professional development, 3) assessment, 4) accountability, 5) resources.

- 2 What do you see as the major effects, impacts, and changes resulting from the Modernization Initiative on participating districts?
(Probe with these areas if not already addressed:)
 - a. Capacity building in terms of instruction (around OBE, technology, or what?)
 - b. Development of infrastructure within the state for these districts (e.g., partnerships with TIE, State Department of Education, etc.).
 - c. Structural changes, such as adding block scheduling or teacher planning time.
 - d. District management policies, such as a movement toward site-based management that is data-driven
 - e. Assessment policies to support reforms (e.g., use of waivers, alignment of curriculum and assessment policies, creation of new ones)
 - f. Fostering good relationships within the district
 - g. Fostering community support and involvement (e.g., businesses, parents, local foundations, etc.)

3. Do you think education reform is more sustained in some Modernization Initiative districts or schools than in others? As you think about those districts, what differences among the districts or schools do you think contribute to their ongoing reform progress?

4. For each of the following districts, would you please rate their degree of “reform” toward being an aligned, systemic education system on a scale of 1 to 10. A rating of 1 is not yet beginning reform; 4 is much reform having taken place in theory and policies but not practices, such as having adopted learning outcomes, but not implementing them; 7 is reform that is implemented in policies and practice but not by the entire education system; and 10 is reform that involves a shared vision of student learning and outcomes that is reflected in the policies and practices of all teachers, administrators, and even external partners?

1. Lewis	1	2	3	4	5	6	7	8	9	10
2. Washington	1	2	3	4	5	6	7	8	9	10
3. Wilder	1	2	3	4	5	6	7	8	9	10
4. Lincoln	1	2	3	4	5	6	7	8	9	10
5. Sitting Bull	1	2	3	4	5	6	7	8	9	10
6. Jefferson	1	2	3	4	5	6	7	8	9	10
7. Sacagewea	1	2	3	4	5	6	7	8	9	10
8. Roosevelt	1	2	3	4	5	6	7	8	9	10

5. For each of the Modernization districts, could you recommend a contact person for us to interview about the Modernization Initiative’s immediate and long term effects. This person might be someone who has left the district but is still familiar with the district’s progress.

Modernization Contact Interview
Sustaining Complex Education Reform Project, McREL

District: _____

Name: _____

Position: _____ Number of years in position: _____

Interviewer: _____ Date: _____

1. Would you please describe your involvement with School District during the district's participation in the Modernization Initiative (i.e., between 1990 and 1994)?

2. Are there current district policies and practices that you believe are continuations or outgrowths of capacities that were enhanced through Modernization? (For each, how was the practice sustained? Where did support - financial, administrative - come from? What effect is this practice/policy having on the district/school now?)

3. Are there any practices or policies during Modernization that should have been continued because of their effect and impact but were not continued? Why weren't these activities continued?

4. What do you see as the most positive long term effect of the district's participation in the Modernization Initiative?

5. Have there been any **negative** effects resulting from the district's or schools' participation in the Modernization Initiative?

6. What did the district do to continue its progress after the Modernization Initiative ceased? Were there any specific strategies or policies that you believe contributed to the continuation of education reform after the Initiative?

District Superintendent Interview
Sustaining Complex Education Reform Project, McREL

District: _____

Name: _____

Position: _____ Number of years in position: _____

Interviewer: _____ Date: _____

1. What are the district's major priorities this year? (Probe why each is a priority.) (If there is documentation listing these goals, e.g., a strategic plan, collect it.)
2. What is the district doing to address or accomplish those priorities? How successful have these efforts and changes been?
3. What challenges does the district face in addressing these priorities?
4. Does the state have goals that coincide with the district's priorities? How do state activities help or hinder the district's progress?
5. What is your district is doing to support learning more specifically? (For each, probe what support was received to implement changes, what the process of implementing changes is, how far activities have progressed, and what their effects have been.)

[Probe with the following topics, only if necessary for thoroughness.]

- a. Identifying student learning and development goals.
- b. Professional development opportunities for teachers and administrators (including planning time for teachers and team teaching, for example).
- c. Other capacity building strategies (e.g., changes in staff assignments or responsibilities, fostering of relationships within and across the district).
- d. Assessment of students, evaluation.
- e. Accountability of schools and teachers.
- f. Addressing needs of students not meeting learning goals.
- g. Accrual and use of resources.
- h. Changes in district management policies (e.g., toward site-based management).
- i. Involvement of the community and/or businesses.

- j. Partnerships or contracts with external organizations or agencies.
- k. New programs or instructional practices or changes in existing ones.
- l. Support use of technology in instruction.
- m. Any other changes or initiatives you wish to mention?

6. When you think about the continual improvement that your district is engaged in, what district capacities, resources, policies, or practices do you believe have contributed to accomplishing ongoing continual improvement?

Anything that has hindered the district's path to continual improvement?

7. *[In primarily Native American districts]* How does the district address tribal culture in schools?

[Only ask the following question of Modernization Initiative districts:]

8. What role has the state's Modernization Initiative, in your experience, played in the district's reform process?

- b. Are there capacities and avenues to resources that you think your district developed during the Modernization Initiative that continue to support outcomes-based education today?
- c. How do you see those capacities contributing to continual improvement of the district and its schools?
- d. What support could you use from the state or other sources to help you sustain reform?

District Interview Protocol

Curriculum, Instruction, Assessment, and/or Professional Development Specialists Sustaining Complex Education Reform Project, McREL

District: _____

Name: _____

Position: _____ Number of years in position: _____

Interviewer: _____ Date: _____

Note: If the interviewer feels that the district's priorities have not been completely communicated from the Superintendent interview, ask the following two questions: 1. What are the district's major priorities this year? (Probe why each is a priority.) 2. What is the district doing to address these priorities?

A. District efforts to implement outcomes-based education.

1. For each of the following areas, what is the district doing? (Probe to determine the nature of the activity, how far it has progressed and effects.)
 - a. Developing and adopting a set of expected learning outcomes that should be expected of all students. (Who was involved? How were they agreed upon? For what grade levels do they exist?)
 - b. Curriculum and instructional policies, programs, models, or practices and scaling up of new or modified ones, including use of technology in instruction
 - c. Development of infrastructure (for example, changes in roles, responsibilities, and working relationships of district and school staff and activities to coordinate district and school reform efforts throughout the district) Who is in charge of these systems of support?
 - d. Professional development activities and resources (e.g., partnerships with RELs, IHEs)
 - e. Allocation and leveraging of state/local funds and obtaining grants or other external funds at the district level
 - f. Assessment policies and evaluation to support reforms (e.g., alignment of curriculum and assessment policies, creation of new ones)
 - g. Community support and involvement (e.g., businesses, parents, local foundations, etc.)
 - h. Supporting site-based decision making regarding instructional and resource issues.
 - i. Any changes in other areas. (Specify)

2. **When you think about the continual improvement that your district is engaged in, what district capacities, resources, policies, or practices do you believe have contributed to accomplishing ongoing continual improvement?**

Anything that has hindered the district's path to continual improvement?

B. Effects of Changes.

3. Teachers

- a. How have teachers responded to district changes?
- b. Do you have any evidence of changes in (i) teacher beliefs or (ii) instructional practice? (Obtain statistics if available.)

4. Students

- a. What has been the impact on students of changes in programs, services, or instructional practices? (Any evidence of these changes in test scores, attendance rates, attrition rates, etc.?)
- b. Is the district doing anything to assist students who are not achieving the identified learning outcomes?

5. Try to characterize the amount of progress the district has made in implementing an outcomes-based education system, on a scale of one to five, in each of the following areas:

- | | |
|-----------|--|
| 1 2 3 4 5 | a. A majority of teachers understand what outcomes-based reform is and the instructional implications. |
| 1 2 3 4 5 | b. A majority of teachers have aligned student outcomes with curriculum and assessment. |
| 1 2 3 4 5 | c. Alignment of professional development to support implementation of outcomes-based education. |
| 1 2 3 4 5 | d. A majority of teachers have begun to change instructional practices to reflect identified student outcomes. |
| 1 2 3 4 5 | e. A majority of teachers are using student performance data to make instructional decisions. |

[Only ask the following question of Modernization Initiative districts:]

6. What role has the state's Modernization Initiative, in your experience, played in the district's reform process?
 1. Are there capacities and avenues to resources that you think your district developed during the Modernization Initiative that continue to support outcomes-based education today?
 2. How do you see those capacities contributing to continual improvement of the district and its schools?
 3. What support could you use from the state or other sources to help you sustain reform?
7. Lastly, are there any recent accomplishments or changes that your district is particularly proud of that you could share with me?

School Principal Interview
Sustaining Complex Education Reform Project, McREL

District: _____

Name: _____

Position: _____ Number of years in position: _____

Interviewer: _____ Date: _____

Vision

1. What are your district's major priorities this year? (For each, probe why.)
2. What are your school's major priorities this year? (For each, probe why.)
3. What progress have you made towards these priorities?
4. Do your school goals coincide with the district's? With the state's? Why or why not?

School Capacity

5. Do you evaluate the capacity or ability of people in your school to carry out instruction that will lead to improved student learning and achievement?

Where do you see the major needs?

What is being done by the state and district to meet these needs? Who is providing the support? Are these activities adequate?

6. What kinds of capacity building activities does your school staff participate in -- these can include teacher planning time and study groups as well as organized professional development activities? How widespread is involvement? Why have some (teachers, schools) participated but others have not? What would it take to get additional people to participate?
7. Are there any particular changes underway in the design and delivery of instruction for students who are not achieving expected learning outcomes? Describe.
8. Are there ways in which the community, local businesses, or other partners are involved in the school's work? What have the effects of that involvement been? How has involvement been sustained over time?

School-level management

9. How much discretion do schools have in making decisions regarding the following areas?
 - a.. Curriculum development, coverage, and pacing
 - b. Selection and use of instructional materials
 - c. Use of resources
 - d. Staffing (e.g., numbers of kinds of staff)
 - e. Professional development activities
 - f. School schedule
 - g. Other decisions regarding school structure and instruction

10. Please describe the process that would lead to changes affecting instruction, such as a change in scheduling? (Probe for whether and how teachers are involved in this process.)

11. To what extent are decisions made at the school level based on research or available data? (On a scale of 1 to 5, where 1 is never, and 5 is always.)

12. When you think about the continual improvement that your school is engaged in, what district and school capacities, resources, policies, or practices do you believe have contributed to accomplishing ongoing continual improvement?

13. Lastly, are there any recent changes or accomplishments that the school is particularly proud of that you would like to share with us?

Teacher Group Interview Protocol
Sustaining Complex Education Reform Project, McREL

Have teachers introduce themselves, with their classroom grade level. Ask teachers to each address all of the questions.

1. School Culture.

Can you please tell us how you feel about being a teacher in this school? For example, to what extent do you feel supported by your coworkers, that there are realistic or unrealistic demands made of you, that the community is concerned about student learning, and so forth?

2. Instructional issues.

We would like to get an understanding of what are current issues you face in educating your students. Could you please tell us what are current instructional issues for you, and what you, the school, and the district are doing to address these issues? What effects are these changes having and is it enough? (If necessary use probes such as: assessment, linguistic and cultural diversity, low performing children, state testing, etc.)

Please tell us a little about how you are using technology in instruction, if at all.

3. Professional Development.

We would like to find out what kinds of professional development activities you are engaged in, and what you see as the effects of those professional development endeavors. Professional development can mean technical assistance by external or district staff, or activities such as shared planning time for teachers or teacher study groups. (If necessary, probe for what help teachers are getting related to students achieving learning goals.)

(For ongoing professional development, inquire about how long it has been in place and what the teachers believe has sustained the activity.)

4. Teachers as Leaders.

We would like to get a sense of how involved teachers are in making decisions that affect curriculum and instruction in this school and district. Would you please tell us about your involvement specifically, and the involvement of teachers in general in making decisions and policies that affect instruction, and if teachers are involved, can you talk a little more about how decisions are made? Examples of activities that teachers might participate in include (1) constructing standards documents, (2) constructing curriculum frameworks and aligning them with standards, (3) identifying professional development needs, (4) school decision-making teams. (Probe for what support is needed to get teachers more involved if this is an issue.)

5. Community and Business Involvement in Education.

What are you, the school, and the district doing to involve the community and nearby businesses in education? (In Shannon and Todd, how are the tribal communities involved in the education system?) (Probe for involvement in decision making, if necessary.)



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