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Condition of America's Public School Facilities: 1999

FRSS
Fast Response Survey System

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EXECUTIVE SUMMARY

Background

Over the past decade, the physical condition of America's public schools has received considerable attention (e.g., Kozol 1991; Lewis et al. 1989). For example, a number of lawsuits challenging school funding for facilities have drawn attention to the poor conditions that many students encounter at school [e.g., *Roosevelt Elementary School No. 66 v. Bishop*, 877 P. 2d 806 (Ariz. 1994)]. Newspaper stories and research studies describing poor ventilation, broken plumbing, and overcrowding have raised concerns about the effects of school facilities on teaching and learning. More importantly, some conditions, like sagging roofs or poor air quality, have raised serious questions about student and teacher safety.

The physical condition of schools is described in a series of reports based on a 1994 study conducted by the United States General Accounting Office (GAO). In addition, several studies have reported on school repair and construction costs, each with a somewhat different focus. The 1994 GAO study provided estimates of the cost of repairs, renovations, and modernizations to put schools into good overall condition (U.S. GAO 1995a), while a more recent GAO study reported actual school construction expenditures for fiscal years 1990 through 1997 (U.S. GAO 2000). Another report included actual costs of completed school construction projects in 1998 and projected expenditures for new construction, additions, and renovations for 1999 (Abramson 1999). A report recently released by the National Education Association (NEA) gave a cost estimate of the funds needed for various kinds of school infrastructure (including new construction) and education technology (NEA2000).

This report provides national data about the condition of public schools in 1999 based on a survey conducted by the National Center for Education Statistics (NCES) using its Fast Response Survey System (FRSS). Specifically, this report provides information about the condition of school facilities and the costs to bring them into good condition; school plans for repairs, renovations, and replacements; the age of public schools; and overcrowding and practices used to address overcrowding. The results presented in this report are based on questionnaire data for 903 public elementary and secondary schools in the United States. The responses were weighted to produce national estimates that represent all regular public schools in the United States. Information about the condition of school facilities is based on questionnaire rating scales rather than on physical observation of school conditions by outside observers.

Key Findings

Estimates of Cost to Put Buildings Into Good Condition

A major barrier for schools to improve their facilities is the substantial cost (U.S. GAO 1995a). If schools are unable to obtain the funding they need to perform maintenance or construct new buildings when necessary, facilities problems multiply, which can result not only in health and safety problems, but also in increased costs of repairs (Hansen 1992). Results of the 1999 FRSS survey indicate that:

- Three-quarters of schools reported needing to spend some money on repairs, renovations, and modernizations to put the school's onsite buildings into good overall condition[1] (table

[1] Schools that reported on the questionnaire that the condition of any type of onsite school building (original and temporary buildings, permanent addition) *or any building feature* (e.g., roofs, plumbing, electric power) was less than good (i.e., any type of building or building feature was given a rating of adequate, fair, poor, or replace) provided information about the cost of the needed repairs, renovations, and modernizations. This is somewhat different from the approach used by GAO in 1994, which prevents direct

5). The total amount needed by schools was estimated to be approximately $127 billion (see table 23 in appendix B).

- The average dollar amount per school for schools needing to spend money was about $2.2 million (see table 23 in appendix B). The average cost per student of repairs, renovations, and modernizations to put the school into good overall condition among the schools that reported needing to spend money was $3,800 (table 5).

Types of School Buildings and Overall Facilities Conditions

Observations of school facilities have appeared in headlines, speeches, and reports that focus on the deteriorating environmental and physical conditions of the nation's schools. Results of the 1999 FRSS survey confirm that although most schools are in relatively good condition, many schools are in less than adequate condition:

- One in four schools reported that at least one type of onsite building (i.e., original and temporary buildings, permanent additions) was in less than adequate condition.[2]
- Approximately 11 million students were enrolled in schools reporting at least one type of onsite building in less than adequate condition (table 3). Of these students, about 3.5 million attended schools where at least one type of building was in poor condition or needed to be replaced because it was non-operational or showed significantly substandard performance (see table 23 in appendix B).
- Eighty-one percent of schools reported that their original buildings were in adequate or better condition, 84 percent of those schools with permanent additions reported them to be in adequate or better condition, and 81 percent of schools with temporary buildings reported them to be in adequate or better condition (table 1). This means that approximately one in five schools having a particular type of building reported that these building types were in less than adequate condition. This included 4 to 6 percent reporting buildings in poor condition (defined as consistent substandard performance), and 1 to 2 percent reporting that buildings needed to be replaced due to significantly substandard performance or non-operational condition.
- The condition of original buildings and temporary structures did not vary significantly by school characteristics[3]; however, the condition of permanent additions varied by concentration of poverty: schools with the highest concentration of poverty (defined here as 70 percent or more of the students eligible for free or reduced-price lunch) were more likely to report that their permanent additions were in less than adequate condition than were schools with 20 to 39 percent or schools with less than 20 percent of their students eligible for free or reduced-price lunch (30 percent versus 13 percent and 8 percent, respectively; table 2).

Condition of Building Features

The 1999 FRSS survey on the condition of public school facilities also collected information on the condition of nine different building features: roofs; framing, floors, and foundations; exterior walls, finishes, windows, and doors; interior finishes and trim; plumbing; heating, ventilation and air conditioning; electric power; electrical lighting; and life safety features. The 1999 FRSS survey found that:

comparison of the cost estimates between the FRSS and GAO studies.

[2] This is based on types of onsite buildings, and does not include building features. It is also based on ratings of less than adequate condition, which includes the ratings of fair, poor, and replace.

[3] The school characteristics used as analysis variables in this report are school instructional level, school enrollment size, locale (central city, urban fringe/large town, rural/small town), region, percent minority enrollment, and percent of students in the school eligible for free or reduced-price school lunch (which indicates the concentration of poverty in the school). Throughout this report, differences (particularly those by school characteristics) that may appear large may not be statistically significant. This is due in part to the relatively large standard errors surrounding the estimates (because of the small sample size) and the use of the Bonferroni adjustment to control for multiple comparisons.

- Fifty percent of schools reported that at least one of the nine building features at their school was in less than adequate condition (table 4), and three-quarters of those schools had more than one building feature in less than adequate condition (figure 1). Schools in central cities were more likely than schools in urban fringe areas and large towns to report at least one building feature as less than adequate (56 percent compared with 44 percent; table 4). Schools with the highest concentration of poverty (70 percent or more of the students eligible for free or reduced-price lunch) were more likely to report that at least one building feature was in less than adequate condition than were schools with 20 to 39 percent or schools with less than 20 percent of their students eligible for free or reduced-price lunch (63 percent versus 45 percent each).
- Approximately one-fifth of schools indicated less than adequate conditions for life safety features, roofs, and electric power, and about a quarter of schools reported less than adequate conditions for plumbing, and for exterior walls, finishes, windows, and doors (table 4). Heating, ventilation, and air conditioning systems were reported to be in less than adequate condition at 29 percent of schools.

Environmental Conditions

Environmental conditions, such as heating, ventilation, and air conditioning, are important aspects of the day-to-day environment for students. The 1999 FRSS survey on the condition of public school facilities also collected information on satisfaction with six different environmental conditions: lighting, heating, ventilation, indoor air quality, acoustics or noise control, and physical security of buildings. The results of the 1999 FRSS survey indicate that:

- Forty-three percent of the schools reported that at least one of the six environmental factors was in unsatisfactory condition (table 8), and approximately two-thirds of those schools had more than one environmental condition in unsatisfactory condition (figure 2). Ventilation was the environmental condition most likely to be perceived as unsatisfactory (26 percent of schools; table 8). About a fifth of schools reported they were unsatisfied with heating, indoor air quality, acoustics or noise control, and the physical security of buildings, and 12 percent were unsatisfied with lighting conditions.
- Schools in rural areas and small towns were more likely than schools in urban fringe areas and large towns to report that at least one of their environmental conditions was unsatisfactory (47 percent compared with 37 percent; table 8). Schools with the highest concentration of poverty were more likely to report at least one unsatisfactory environmental condition than were schools with the lowest concentration of poverty (55 percent compared with 38 percent).
- About one-third of schools were unsatisfied with the energy efficiency of the school, and 38 percent were unsatisfied with their flexibility of instructional space (see table 23 in appendix B).

Plans for Repairs, Renovation, or Replacement

The condition of school facilities is continuously changing, and information about schools' future plans for building or installing new structures or additions, as well as plans to make major repairs, renovations, or replacements in the next 2 years, may provide insights into the future condition of these facilities. The 1999 FRSS survey found that:

- About two-thirds of public schools had written long-range facilities plans that guide their planning for facilities improvements (table 12). One-fifth of schools reported plans to build new attached and/or detached permanent additions in the next 2 years, and 1 in 10 reported plans to install new temporary buildings in the next 2 years (table 13).
- About half of the schools planned to make major repairs, renovations, or replacements to at least one building feature in the next 2 years (table 14). Overall, 41 percent of schools indicated plans to make major repairs

or renovations to at least one building feature, and one-quarter planned to replace at least one building feature in the next 2 years.

- Schools in less than adequate condition were more likely to have plans for repairs, renovations, or replacement. While 46 percent of schools in adequate or better overall condition reported plans to repair, renovate, or replace at least one building feature in the next 2 years, 67 percent of schools in less than adequate condition reported such plans (figure 4).

Functional Age of Schools and School Conditions

A number of reports have raised concerns about the age of America's public schools (e.g., U.S. Department of Education 1999b). Because age of the building, by itself, may be somewhat less important than its history of maintenance and renovation, a more accurate indication of a school's age is its functional age. Functional age is defined as the age of the school based on the year of the most recent renovation or the year of construction of the main instructional building(s) if no renovation has occurred. Results of the 1999 FRSS survey indicate that:

- In 1999, the average age of the main instructional building(s) of public schools was 40 years, based on years since original construction (table 17). Among schools that had been renovated since construction, the renovation, on average, occurred 11 years ago.
- The average functional age of schools, based on the year of the most recent renovation or the year of construction if no renovation had occurred, was calculated to be 16 years. In general, average functional age did not vary by school characteristics, although small schools were older than medium or large schools.
- The functional age of schools was found to be related to their condition. Older schools were more likely than newer schools to report less than adequate or unsatisfactory conditions (figure 6).

Overcrowding

Dramatic increases in enrollment due to the "baby-boom echo," immigration, and migration have led many schools to enroll far more students than they were designed to accommodate.[4] Compounding these conditions are initiatives to reduce class size, resulting in the need for even more classrooms. As the public school system copes with such conditions, there is growing concern about the degree of overcrowding that may exist in some schools. This report provides information about the extent to which public schools are overcrowded, at capacity, or underenrolled.[5] Overcrowded schools were defined as having an enrollment that was more than 5 percent above the capacity of the school's permanent instructional buildings and space (i.e., overenrolled). Schools with enrollments within 5 percent of the capacity of their permanent buildings and space were considered to be at capacity, and schools with enrollments more than 5 percent below the capacity of their permanent buildings and space were considered underenrolled. The 1999 FRSS survey indicates that:

- Overall, about half of public schools were underenrolled, about one-quarter were within 5 percent of their capacity, and about a quarter were overcrowded, based on the capacity of their permanent instructional buildings and space (table 19).
- Large schools were more likely than other schools to be seriously overcrowded (more than 25 percent overenrolled), while small schools were more likely than other schools to be severely underenrolled (table 19).

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[4] Migration patterns (e.g., families moving out of particular areas) and decisions families make with regard to their children's schooling (e.g., private school enrollment) may also lead to a *decline* in enrollments among some public schools. These declines may result in schools that are *underenrolled*.

[5] The proportion indicating the degree to which enrollment exceeds or falls below the capacity of the permanent buildings and instructional space was calculated using the following formula:

X = [(total student enrollment) − (capacity of permanent instructional buildings and space)] / (capacity of permanent instructional buildings and space).

Schools with a high minority enrollment (more than 50 percent) were more likely than schools with a low minority enrollment (5 percent or less) to be seriously overcrowded.

- Schools that were classified as overcrowded were more likely than other schools to report that at least one type of onsite building was in less than adequate condition (figure 9). Overcrowded schools were also more likely than other schools to have at least one building feature in less than adequate condition, and to have at least one environmental factor in unsatisfactory condition.
- About a third (36 percent) of schools indicated that they used portable classrooms, and 20 percent reported using temporary instructional space (table 22). Among these schools, most reported using portables and temporary instructional space to alleviate overcrowding.

Conclusions

Although the majority of America's public schools are in adequate or better condition, a sizable minority are not. About a quarter of the schools reported that at least one type of onsite building was in less than adequate condition, half reported that at least one building feature was in less than adequate condition, and about 4 out of 10 reported at least one unsatisfactory environmental condition. Data about the functional age of schools suggest that the oldest schools are most in need of attention, but that many of these schools do not have plans for improvement. About three-quarters of public schools do not have problems with overcrowding, but close to 10 percent have enrollments that are more than 25 percent greater than the capacity of their permanent buildings. Collectively, these data provide a complex portrait of the current physical condition and crowding in America's public schools. Although the majority of schools are in adequate condition, functionally young, and not overcrowded, a substantial number of schools are in poor condition, and some of them suffer from age and overcrowding. Past experience suggests that correcting these problems will be costly.

THE E-RATE IN AMERICA: A TALE OF FOUR CITIES

BENTON FOUNDATION
COMMUNICATIONS POLICY AND PRACTICE PROGRAM

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IV. THE E-RATE IN PRACTICE: RESEARCH FINDINGS IN FOUR MIDWESTERN CITIES

To assess the impact of the E-Rate, The Benton Foundation commissioned researchers from the EDC/Center for Children and Technology to visit four large, urban school districts during the fall semester of the 1999-2000 school year: Chicago, Illinois; Cleveland, Ohio; Detroit, Michigan; and Milwaukee, Wisconsin. These four districts serve approximately 800,000 students, most of whom live in poverty.

COMMON THEMES

While each of the districts has pursued its own path through the process of planning, applying for and using E-Rate funding, several common themes emerge from their experiences:

Network infrastructure deployment accelerated, and Internet access improved dramatically.

The E-Rate initiative has made it possible for these districts to create robust, high-quality networks that would never have been put in place without E-Rate funding. The E-Rate has had an especially high impact for several reasons: the funding it provides was not capped at a certain level; it requires intensive planning and implementation; and it encourages leveraging of multiple funding sources. Several district administrators said E-Rate funding enabled them to make a quantum leap in their districts.

E-Rate funding has enabled school districts to leverage existing financial resources.

Resources freed up by E-Rate funding, as well as money from state-level initiatives, are now being used to pay for elements of technology programs that are not covered by the E-Rate. For example: because of E-Rate subsidies, Detroit has been able to combine money from a state-level program with funds saved at the district level to pay for much of its electrical upgrades.

Professional development needs are increasing geometrically.

Schools must provide adequate professional development to help teachers learn how to use these newly accessible tools. Otherwise, the gap between technologically sophisticated and technologically weak schools will grow wider. Even though the need for training will only grow, departments often must support these efforts on insecure or inadequate funding. District leaders must be convinced of the importance of continuing to emphasize sustained, creative professional development for teachers around the use of these new tools.

School districts are highly dependent on E-Rate funding, even though the advances they are making are highly vulnerable to changes in the political environment.

Although the E-Rate is enabling school districts to leverage important resources, it is not generating significant local expenditures for technology infrastructure. On the contrary, district budgets often rely on the E-Rate to ensure that they will be able to sustain their newly established networks. Several district administrators expressed concern that the Schools and Libraries Division is not yet emphasizing to schools and districts the need to plan how they will meet ongoing costs. For example, as schools make the transition to conducting district-wide administrative business online, telecommunications bills will be high; meeting them will require continuing discounts via the E-Rate program.

The E-Rate has led to changes in school district planning practices.

The E-Rate has forced school administrators to acquire new knowledge and to learn new forms of collaboration. The result has been better planning, new lanes of communication and improvements in billing and accounting practices. In some cases, staff members from educational technology departments have gained significant influence in other departments such as information technology or operations departments. Improved coordination—particularly among curriculum and instruction, educational technology and information technology departments—will be crucial to ensuring that the E-Rate leads to long-term improvements in teaching and learning at the classroom level.

The current E-Rate process taxes relationships with vendors.

In every district, the E-Rate has stretched relationships with vendors to their limits. Many factors complicate the bidding, including payment and reimbursement processes required by the Schools and Libraries Division; the SLD's requirement that districts have in hand the full (pre-discount) cost of the services they request; delays in receiving reimbursements from vendors; the strain placed on vendors' inventories and labor supplies by bidding and awarding processes (described as "hurry up and wait" by some); and the time constraints placed on implementation of annual plans. Implementation phases were so intense that in each of the four cities delays were caused when contractors ran out of qualified labor. As an administrator explained, "We were using every electrician in the city of Chicago. They had to bring people in from downstate to get all of the jobs done."

"Building basics" delay the deployment of information technology.

These school districts faced an acute need for at least two important resources that the E-Rate program does not support: electrical upgrades and hardware. In several of the districts, state grant programs were crucial to creating plans for electrical upgrades. But hardware purchasing is largely the responsibility of individual schools in these districts. District administrators should be careful to track whether individual schools increase their investments in hardware in order to take advantage of the networks that have been brought into their classrooms.

High-level school administrators and community stakeholders need to be made aware of the impact of the E-Rate.

In some districts, though not all, high-ranking administrators were initially dubious that the E-Rate was a "real" program that would produce actual funding. Even now, administrators in some districts report that their superiors are not fully aware of the impact of this program. In order to realize the maximum benefit from the E-Rate program, community members and administrative leaders in these districts need to be better informed about this program and about the work that it is supporting at the local level.

CASE STUDIES

In this section, the impact of two full years of E-Rate funding on the four school districts studied is summarized. Each site visit included meetings with district-level administrators, principals, technology coordinators and teachers. Interviews focused on four sets of issues:

1. **The planning process:** Past technology planning efforts; planning for E-Rate funding; plans for the future.
2. **The application process:** The challenges and opportunities afforded by the application process; the complexities of working with vendors within the constraints of the E-Rate process; the impact of the application process on administrative procedures within the district.
3. **Impact of the E-Rate program:** Impact on technology infrastructure; on financial planning for technology; on instructional programs; on professional development programs.
4. **School/district relationships:** How the district offices communicated with individual schools about the E-Rate process; how new infrastructure supports or changes school/district communication; how school-level input is included in the design and deployment of the networking infrastructure.

The four districts are among the 50 largest school districts in the U.S., ranging from Chicago, the third largest, to Cleveland, which ranks 40th. Large urban districts such as these have a particularly great need for the E-Rate, but they also face major hurdles in taking advantage of it.

The most obvious challenge is the scale of investment needed to bring modern technology into their schools. The four districts each operate between 100 and 600 individual school buildings and thousands of classrooms. Undertaking any systematic capital improvement in such districts is especially daunting because funds are rarely available to support intensive investment. State funding arrangements rarely account for the disproportionate size of large districts. One recent state-level funding program is TEACH—Technology for Educational ACHievement—in Wisconsin (http://www.teachwi.state.wi.us). Since 1997, the governor and state legislature have committed up to $100 million per year in order to support investment in educational technology and telecommunications access for schools, libraries and colleges. This program intentionally complements E-Rate funding in some areas and allows some assistance with electrical service upgrades. However, the financial burden on the local school district is still substantial. The district still bears at least 75 percent of the full cost for internal electrical and network infrastructure.

Even if scale were not an issue, large urban schools are more likely than other districts to face large capital challenges. Their school buildings are more likely to be very old (over 100 years old in many cases), as well as to have inadequate electrical wiring and widespread asbestos problems. The most consistent criticism of the E-Rate program in these districts is that the program does not cover the cost of electrical upgrades. However, these districts have been able to re-allocate other funds to meet—partially or entirely—the need for electrical upgrades.

Three of the four school districts studied (as well as many others) have gone through significant transformations in their systems of governance within the past two to five years. These changes include the takeover and reconstitution of the Chicago Board of Education by Mayor Richard M. Daley in 1995, a move followed by similar actions in Cleveland and Detroit in 1998. These shifts have led to substantial changes in the business practices, educational policies and instructional emphases of these districts. But they have placed burdens on administrators, complicating efforts to undertake long-term planning required if schools are to make the most effective use of the E-Rate program. Many administrators also suggest that the challenge of applying for E-Rate funding has led to changes in planning and budgeting processes that otherwise would not have been nearly as high a priority.

Large urban school districts also face persistent challenges in attracting and retaining highly qualified teachers. The E-Rate program may seem far removed from such issues, but administrators say that installing modern information technology has significantly helped them overcome this problem. Technology gives schools an opportunity to transform the day-to-day communication and information-sharing practices of teachers and administrators in the district and beyond. It enables school administrators to reconceptualize how professional development activities are delivered, sustained and extended into the classroom. Technology also helps attract new teachers, often from outside of the district, because it offers them access to up-to-date resources.

CHICAGO

The Chicago Public School District includes about 578 schools and serves approximately 430,000 students, 84 percent of whom receive free or reduced-price lunches. Many school buildings in the district are over 100 years old, but the district has undertaken a major capital improvement program funded by a bond issue of over $1.9 billion. In the past two years, 15 new schools have been built and 12 more are under construction. Almost all schools have received capital improvements over the past two years, focused largely on upgrading their electrical capacities in anticipation of the installation of E-Rate-funded networks. The budget for the Capital Improvement Program includes significant funding for electrical upgrades.

Before receiving E-Rate funding, the district had developed a plan for a wide area network (WAN), but it never secured adequate funding to support full implementation. Individual schools pursued their own networking on an ad-hoc basis. A few schools had sophisticated networks, while others had partial networks or connections to the Internet. But the large majority of schools did not have Internet access or networking within their buildings.

Every school in Chicago has a Local School Council (LSC) that wields significant control over discretionary funds, makes some curricular and instructional decisions and manages the physical plant of the school. These schools were able to apply for E-Rate funds independent of the district-wide application submitted by the district administration. Information reported here reflects the outcomes of the district-level

E-Rate investment, and does not include the work of those individual schools that have applied for or received E-Rate funding.

Impact of E-Rate. In the first year of the E-Rate, Chicago received $27 million. As of November 1999, Chicago had received over $74 million in E-Rate funding, making it the second largest beneficiary of the program. Only New York City received a higher E-Rate subsidy.

Chicago's plan for E-Rate-funded networking included two major components. First, it established a WAN for both administrative and classroom use (an initiative known as the ShortScope program). This network was completed in September 1999, with T1 lines running to administrative drops in every school. Second, during the second year of the E-Rate program the district moved to establish a "Local School Education Network." This $57 million initiative is intended to complement local school investments in internal wiring. The district estimates that approximately 260 of its schools have received some E-Rate funding, including a total of approximately $40 million for individual school local area networks. The Local School Education Network funds will be used to ensure that all schools meet a minimal technology standard, with a goal of networking at least 10 classrooms, as well as libraries and computer labs, in every school.

Coordinating the district's investments with the plans and applications of individual schools to create a single, uniform district-wide infrastructure has been a complex challenge. For Year Three, the Department of Learning Technologies has asked individual schools in the district to identify their needs for further E-Rate funding and to forward them to the district. They will then submit a single E-Rate application for the entire district, which should streamline the coordination process. E-Rate funding has also generated significant savings in other parts of the district budget, and those savings are being funneled into professional development, educational intranet development efforts and electrical upgrades for the schools.

The administrators described the E-Rate program as a "cross-functional project" because it requires an unusual level of collaboration among many departments that are rarely required to coordinate with one another around an individual project...As one interview subject said, "E-Rate gets into everybody's business."

Challenges of pursuing E-Rate funding. The primary challenge administrators faced in pursuing E-Rate funding was designing and coordinating their application so it was integrated with the capital improvement program, the ShortScope wide area network and individual schools' own networking efforts.

The administrators described the E-Rate program as a "cross-functional project" because it requires an unusual level of collaboration among many departments that are rarely required to coordinate with one another around an individual project. Submitting successful applications to the Schools and Libraries Division has required pulling people from many different departments (such as legal, purchasing, information technology and school operations) into the same room. Many of these departments are rarely asked so explicitly to coordinate their work, and the unusual requirements of the E-Rate application process challenged many of the normal business practices of the district. As one interview subject said, "E-Rate gets into everybody's business."

Instructional issues. The primary focus of Chicago's Department of Learning Technologies is supporting the professional development of teachers. This group has been devoting significant resources to developing tools and resources that will be made available to teachers over the intranet network. A district-wide curriculum resource, organized around the state and city standards and the Chicago structured curriculum, already is available and is growing rapidly. The schools are also rolling out a "Curriculum Wizard" designed to support teachers in writing technology-rich and standards-based curricula.

Chicago has had a district technology plan since 1997, as well as standards and guidelines for technology infrastructures within schools since 1994. Schools are not required to follow these specifications but cannot receive technical support from the district if they

do not follow them. The district office also supports 28 former teachers as a "Technology Resource Network" of consultants responsible for helping the schools develop their infrastructure and improve their use of technology.

CLEVELAND

The Cleveland Municipal School District includes approximately 118 schools and serves 77,000 students, 75 percent of whom are eligible for free or reduced-price lunches. Until 1996, little educational technology was available in the Cleveland schools, and what was available was concentrated in specialized magnet schools. The district had no history of investing local funds in instructional technology other than a network for administrative functions.

The Ohio SchoolNet project gave Cleveland's educational technology infrastructure a major push in 1996. This project made $500 million available to network every elementary school classroom in the state. Cleveland did not apply for the program initially because it was run on a cost-reimbursement basis and the district did not have adequate funding available to cover costs up-front. This requirement was later changed, and Cleveland eventually participated in the program. Another initial obstacle was that SchoolNet did not originally supply computers, but this changed as well. As a result, all K-4 classrooms in Cleveland have now been wired, with each possessing four SchoolNet computers.

Anticipating the introduction of the E-Rate program, Paul Karlin, manager of the district's Educational Technology Office, brought together a cross-departmental group of administrators and teachers in 1997 to develop a technology plan for the district. This effort did not stimulate new funding from the district budget, but the school board set aside $20 million for a new administrative network, which was seen as necessary primarily because of Y2K concerns. At the time, the existing administrative network—which ran over 9600-baud dial-up lines—was still the only inter-school network in the district. The instructional technology staff developed plans to coordinate the upgrading of the administrative network with the implementation of an educational network that would reach into classrooms as well.

Impact of E-Rate. Cleveland received $26 million in E-Rate funding in the first year of the program—the third largest commitment in the country, behind New York City and Chicago. These funds were dedicated to supporting the implementation of a wide area network for the district as well as for internal wiring in all schools not already wired under the SchoolNet project. Some $12.5 million in Year 2 E-Rate funding will support various enhancements to the network.

The district is establishing the largest and most robust school-networking system in Ohio. A T1 network runs throughout the district, and multiple T1 lines run from the district data center to the state Internet provider agency. In addition, all classrooms in the Cleveland public schools are now wired for internal communications and Internet access.

Challenges of pursuing E-Rate funding. Applying for E-Rate funds was an intensive and collaborative process, involving administrative staff from many parts of the district. The process required a high level of coordination across the departments. Going forward with the implementation process is becoming increasingly burdensome because the district continues to pay for the administration and management of its Educational Technology Office exclusively through grants. Schools, therefore, can only seek support from the district for parts of their programs that are supported by specific grants.

Limited access to hardware in the district's 23 middle schools and 16 high schools also constrains implementation of E-Rate funding in Cleveland. Additionally, the cost of electrical

upgrades—met partially but not adequately by state and federal programs—is being addressed incrementally. In the meantime, this problem continues to impede full utilization of the networks the E-Rate program has made available.

Instructional issues. Besides coordinating development of the E-Rate-funded technology, the Educational Technology Office is placing a strong focus on supporting professional development opportunities for teachers. The district is participating in several grant-supported professional development initiatives including the Alliance Program, funded by the Joyce Foundation, and the Savvy CyberTeacher Program led by the Stevens Institute of Technology. The district aims to use a U.S. Department of Education Challenge Grant to train every elementary teacher in the program over five years. The technology office, which oversees these programs, is emphasizing the Savvy CyberTeacher training as a mechanism to familiarize teachers with the Web-based resources that are now available to them in their classrooms.

The efforts of Cleveland's Educational Technology Office are not fully coordinated with the programs of its Curriculum and Instruction Department. This disconnect has limited the influence of the instructional technology group on district-level planning for the use of technology. At the same time, technology initiatives originating in other parts of the district have not been coordinated with the networking initiatives of the Educational Technology Office. For example, the district has invested in test preparation and integrated learning systems (mostly free-standing) and is considering increasing their presence throughout the district. These are technological investments that do not leverage or take advantage of the E-Rate-funded networking infrastructure that has been put into place over the past two years.

DETROIT

The Detroit Public School District includes approximately 250 schools and serves about 175,000 students, 84 percent of whom receive free or reduced-price lunches. Previously organized into six regions of 43 schools each, the district has been reorganized into clusters of elementary and middle schools feeding individual high schools. The average age of a Detroit school building is 66 years, and 20 of the district's 250 schools were built in the 1890s. Some schools are still burning coal for heat.

Before 1996, only a handful of schools in Detroit were connected to the Internet. The district was running an administrative network that supported only dial-up connections. Very few classrooms had Internet access. In 1996, the district received $500,000 from the state of Michigan to support school networking, part of a settlement Ameritech was required to pay as a reimbursement for overcharging customers. The district used funds as seed money to begin the process of establishing prototype networking projects in several high schools. Although some schools were beginning to use Title I funds to purchase computers, the vast majority of Detroit schools had little or no technology in place. The central administration had yet to define standards for technology purchases, its resources were extremely limited and there was no coordinated plan in place for the distribution and deployment of technology. While efforts like Net Day were important catalysts for introducing network technology into some schools, Detroit was not ready to contemplate establishing a robust networking infrastructure that could support instructional practices at the classroom level.

Impact of E-Rate. Detroit Public Schools received $18 million in the first year of E-Rate funding. Their initial goal was to wire half of the schools in the district—all the high schools and middle schools, along with a select group of elementary schools—and to

begin establishing a wide area network. In the second year of the E-Rate, Detroit received just under $18 million. This money will support continuation of the wiring program and completion of the wide area network. The schools aim to have every building wired and the wide area network in place by the spring of 2000. During the third year they will focus on getting every classroom wired.

Jim Davis, director of information systems management for the district, described the E-Rate program as "a godsend." Previous efforts to design and implement a systematic networking structure never had adequate funding behind them. Even now, he reported, the district's technology efforts would come to a "complete standstill" if the E-Rate program were canceled. The E-Rate program has also generated at least $6 million in savings for the Detroit Public Schools. Davis anticipates that these savings will be transferred to the instructional technology department and used to support professional development programs.

Challenges of pursuing E-Rate funding. Other than the E-Rate, the major source of funding for infrastructure in Detroit is a portion of a large bond that was approved in 1995. Eventually this will provide as much as $110 million for technology-related resources, but the money is not yet in hand and it is unclear when it will arrive.

Electrical upgrades are a problem in Detroit as in the other districts, but this problem has been effectively addressed through a state-level fund that was established to make up for past underspending on special education. This resource, called the Durant Fund, has provided $12 million for electrical upgrades in the Detroit schools, largely solving the district's electrical upgrade problem.

Instructional issues. Unlike the other districts in this study, where departments responsible for educational technology have managed the E-Rate program, the Detroit E-Rate program has been managed within the Office of Information Systems Management. The district's instructional technology program falls within the curriculum and instruction department and has not been involved in E-Rate planning or implementation.

Parents and community members have brought significant pressure to bring technology into the district's instructional program. In order to meet this need and to make use of the infrastructure now in place, principals are beginning to spend significant portions of Title I funds—most of which are controlled at the school level—to purchase new computers.

Compounding the challenges of providing technology-related professional development in Detroit is the fact that a large portion of the teaching staff is nearing retirement age. Most teachers in the district are either very experienced or brand new, making the task of designing appropriate professional development activities difficult. No new professional development planning has yet taken place in connection with the increased access being made available by the E-Rate.

There is also a strong local emphasis on developing community technology centers and keeping schools open at night for neighborhood use. District contributions and an $8 million dollar grant from the Annenberg/CPB Projects are supporting 15 new community technology centers, five of which are now in place. IBM and Compaq are also providing hardware for these sites.

Jim Davis, director of information systems management for the district, described the E-Rate program as "a godsend." Even now, he reported, the district's technology efforts would come to a "complete standstill" if the E-Rate program were canceled.

MILWAUKEE

The Milwaukee Public School District includes approximately 160 schools serving 113,000 students, 80 percent of whom are eligible for free or reduced-price lunches. Some 70 of the district's schools were built before 1930, and 20 were built in the 19th century. Five new schools were built in 1991.

In 1995, the district had few computers and almost no networking infrastructure. In order to spur investment in educational technology, a group of teachers, principals, university-based collaborators and district administrators came together to develop a district-wide technology plan that articulated an overall vision for using technology to support teaching and learning. The price tag associated with the plan was around $300 million. The school board supported the plan in principle, but provided little funding to help move it forward.

Over the next three years, the district's Department of Technology pursued other funding sources, including grants from private foundations and federal and state programs. The department also worked with individual schools in allocating their individual budgets. By the fall of 1998, some important components of the plan were in place, including the beginnings of a wide area network and internal wiring in some school buildings.

The statewide TEACH program has also been a key point of financial leverage for the district. This project partially pays for electrical upgrades, which are not eligible for E-Rate funding, as well as other kinds of infrastructure investments.

Impact of E-Rate. In the first year of the E-Rate, Milwaukee received $23.4 million, the fourth highest allocation funds, after New York, Chicago and Cleveland. As of October 1999, approximately half of all district classrooms were wired with fiber-optic cable and had a minimum of 12 drops each. As a result of the first two years of the E-Rate, the district expects to complete a fiber-based wide area network. They hope to have all classrooms fully wired by December 2000. The district is installing in-school wiring in high schools first, followed by middle and elementary schools. District administrators report that the technical infrastructure outlined in the original 1996 technology plan is now 80 percent realized; this result is largely because of the E-Rate program. While the vision articulated in that plan continues to guide the district's technology investments, a revised technology plan is now being developed. This plan will reflect the rapid progress the district has made, as well as help guide new phases of development.

Challenges of pursuing E-Rate funding. Leadership for technology development in Milwaukee is strong. The superintendent and the director of technology both have long histories within the district, and they share a commitment to using technology to support teaching and learning.

The administrators in Milwaukee who have managed the E-Rate process have a variety of backgrounds—some are educators and some are primarily business or technical people. They have collaborated intensively on the E-Rate application process, which they described as highly challenging. In particular, administrators cited difficulties in seeking appropriate bids from vendors, coordinating electrical upgrades with wiring efforts and finding adequate funding to guarantee contracts with vendors who sometimes were unwilling to sign agreements unless the district had money in hand. Administrators had trouble finding enough skilled labor, a problem other districts reported having as well. Vendors also faced problems; there were often time lags between when they signed legal contracts and when the district actually secured its E-Rate funding. Only then could the district authorize vendor work to begin.

In spite of these challenges, the process of applying for the E-Rate has led to new types of relationships among district departments, between the district and local businesses and universities, as well as between the district's central office and individual schools.

Instructional Issues. The Milwaukee school district is committed to providing professional development, instructional resources and additional support to ensure the integration of new technology into classroom teaching. For example, the district has developed an intranet site that provides an environment of resources and communication

tools where teachers can collaboratively develop a standards-based curriculum. Bob Nelson, director of the district's Department of Technology, describes his ultimate goal as having students using the technology frequently and taking the lead in helping teachers learn to use the technology. He wants every student to have email and to use these resources frequently. The district also provides teachers with free email but requires them to take a 12-hour training course in order to have their accounts activated. More than 8,000 of the district's approximately 11,000 staff members have taken this course so far.

The growing availability of network resources at the classroom level is raising many new challenges for principals, such as revising curricula to take advantage of the new resources, changing in-school communication practices, setting security and acceptable use policies and providing adequate technical support and professional development for teachers. But one administrator described these challenges as "pleasurable problems" that will require the district to figure out how to maintain and expand the infrastructure—and, more importantly, how to use it on a regular basis to support real progress in day-to-day teaching and learning. ■

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Center on Educational
Governance

June 12, 1997

Mike

Dear ~~Colleague~~:

I am pleased to send you our most recent paper on charter schools entitled, *Creating and Sustaining Learning Communities: Early Lessons from Charter Schools,* which was presented this past spring at AERA. The paper presents findings from an exploratory study of charter schools investigating how learning communities were created and sustained in seventeen charter schools in three cities across the United States. The study was conducted by the University of Southern California's Center on Educational Governance with funding from the Danforth Foundation.

Given the exploratory nature of this study and the limited number of schools involved, we offer our findings mainly to guide further in-depth research with charter schools throughout the United States. However, the findings are also useful for beginning discussions about connections between charter school policy and practice. We have generated some initial policy recommendations.

If you have any comments or questions about the paper, please feel free to call me at (213) 740-3450. Thank you for your interest in this research.

Very truly yours,

Penny

Priscilla Wohlstetter
Associate Professor and
Director, Center on Educational Governance

Mike –
We're also planning to write a CPRE Policy Brief based on our findings. I'll send it along when it becomes available.
PW

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CREATING AND SUSTAINING LEARNING COMMUNITIES: EARLY LESSONS FROM CHARTER SCHOOLS

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Paper presented at the annual meeting of the American Educational Research Association, March 1997, Chicago, IL.

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Abstract

There has been a rapid increase over the past five years in both the number of charter schools in the United States and the enthusiasm for the concept among legislators, educators, and the general public. Although high quality teaching and learning have always been key goals of those who have designed and supported charter schools, most research about charter schools has not addressed how charter schools create and sustain high quality learning communities. For this article, the authors investigated how learning communities were created and sustained in seventeen charter schools focusing on: a) how school missions were developed and translated into classroom practice; b) how charter schools learned from what they were doing; and c) what factors seemed to produce high quality teaching and learning. The authors identified four critical building blocks that charter schools tackled -- with varying success -- to create and sustain learning communities, including: the school mission, the school instructional program, the accountability system and school leadership. With each building block, charter schools displayed both strengths that supported their development as learning communities and traits that seemed to impede their progress. The authors also identified three enabling conditions that helped to explain variations in the success rates of the charter schools they studied. The enabling conditions included school power/autonomy, the presence of supportive networks/organizations, and the presence of supportive parents. The authors conclude with some tentative implications for both charter school founders and sponsors, including a need for more detailed, concrete information from schools during the charter application process, and clarification of the roles and responsibilities of charter schools within the state public education system, particularly with respect to accountability and technical assistance.

CREATING AND SUSTAINING LEARNING COMMUNITIES: EARLY LESSONS FROM CHARTER SCHOOLS

There has been a rapid revolution. In the past five years since Minnesota passed the first charter school law, more than half of the states have passed some form of charter school legislation in the short period since 1991. There are now 475 charter schools in operation in 26 states and the District of Columbia.

There also is evidence of strong bipartisan support for charter schools. At the federal level, successive administrations, Republican and Democratic alike, have stepped up their commitments to charter schools. In 1991, the Bush administration recommended funding for thousands of break-the-mold schools and since then, the Clinton administration has endorsed charter schools. In 1995, Congress allocated $6 million to charter schools. This amount tripled to $18 million in 1996 and to $51 million in 1997. For fiscal year 1998, President Clinton proposed a two-fold increase in charter school funding from $51 million to more than $100 million to support planning and start-up costs for up to 1,100 schools (Hoff, 1997). Indeed, early in 1997 U.S. Department of Education Secretary Riley announced that the Administration's goal was to stimulate the creation of 3,000 charter schools over the next five years (Statement by Richard W. Riley, 1997).

The extent of autonomy given to charter schools varies considerably across state charter school laws, prompting some observers to distinguish between "faux" or quasi-charter schools and "the genuine article" (Vanourek, Manno, & Finn, 1997, p. 60). Some state legislation grants charter schools full power over budget, organizational structure, personnel and curriculum, while in other states the control over such issues resides either partially or fully outside of the schools (Bierlein & Mulholland, 1995; Buechler, 1996; Education Commission of the States, 1995; Wohlstetter, Wenning, & Briggs, 1995). Although the optimal level of charter school autonomy is subject to debate, there is general agreement that an important purpose of charter schools is to improve student performance. This exploratory study of charter schools investigated how learning communities were created and sustained in seventeen charter schools, located in three cities across

the United States -- Boston, Massachusetts, Los Angeles, California and Minneapolis/St. Paul, Minnesota. We were interested in: a) how school missions were developed and translated into classroom practice; b) how charter schools learned from what they were doing; and c) what factors seemed to produce high quality teaching and learning in charter schools. The design of the study did not allow us to specify direct connections between the nature and extent of learning communities and student achievement, but there is increasing evidence and general agreement that strong learning communities enhance school performance (Louis, Marks, & Kruse 1996; Odden & Wohlstetter, 1995; Wohlstetter, Mohrman, & Robertson, in press). This paper raises issues about the building blocks charter schools used to create themselves and then suggests a set of enabling conditions that may help explain why some charter schools were more effective than others in creating and sustaining their learning communities. To set the stage, we first discuss the charter school concept and its assumed connection to improved school performance.

Charter Schools as Learning Communities: The Theory of Action

Charter schools are publicly funded schools that may be developed by individuals or a group of individuals including teachers, administrators or other school staff, parents, or other members of the local community in which the charter school is located. Developers of charter schools are given the flexibility to decide their own educational objectives and how to organize and manage the school. The charter school concept is intended to free schools from most of the administrative constraints that other public schools face in exchange for accountability for results: charter schools must have their charters renewed, typically every five years.

In addition to offering a new governance structure within the public education system, charter school advocates argue that the innovation has the potential to improve student performance through the development of high quality learning communities. As autonomous entities, charter schools not only serve the function of increasing consumer choice in public education, but also aim to implement effective teaching and learning practices in classrooms. Specifically, advocates posit that the increased autonomy granted to charter schools will both draw those with cutting-

edge, innovative educational ideas into starting charter schools and allow such innovators to fully and effectively implement their ideas (Nathan, 1996). The intended result is an expanded variety of educational communities within the public school system with one common characteristic: high quality teaching and learning. The freedom of parents and students -- the education consumers -- to choose is thought to further buttress the quality of charter schools, as high quality schools will be in demand and flourish, while poorly functioning schools will be rejected by consumers and fail.

Research on charter schools has focused predominantly on fiscal, legal and bureaucratic issues in the charter school development and approval process. Although such issues are emphasized in state charter school laws, the legislation also addresses to varying degrees issues of teaching and learning (Wohlstetter et al., 1995). The Massachusetts charter school law establishes charter schools in order to: a) "stimulate the development of innovative programs in public education"; b) "provide opportunities for innovative learning and assessments"; and c) "provide teachers with a vehicle for establishing schools with alternative, innovative methods of educational instruction and school structure and management" (Massachusetts Ann. Laws Chapter 71, Section 89). The state goals for charter schools in Minnesota are to: a) "improve pupil learning"; b) "increase learning opportunities for pupils"; c) "encourage the use of different and innovative teaching methods"; and d) "create new professional opportunities for teachers, including the opportunity to be responsible for the learning program at the school site" (Minnesota Statutes Ann. Section 120.064). The goals and purposes of charter schools in California are similar to the other two states; the law also includes an emphasis on "expanding learning experiences for pupils who are identified as academically low achieving" (California Education Code Section 47600). In a recent survey Nathan and Powers (1996) found that state legislators who supported the charter school process issues of improved teaching and learning were among the most frequent reasons given for introducing charter school legislation. The development of innovative approaches to teaching and learning is clearly one of the perceived benefits to states permitting charter schools,

with the assumption that such innovations will produce identifiable improvements in student achievement.

The importance of teaching and learning in the development of charter schools is also evident in the attitudes of charter school founders. In a 1995 survey by the Education Commission of the States, the top three reasons listed for starting a charter school included: 1) "Better teaching and learning for all kids"; 2) "Run a school according to certain principles and/or philosophy"; and 3) "Innovation" (Education Commission of the States, 1995, p.15). Founders of charter schools appear to view their schools primarily as opportunities for building high performing learning communities, with the assumption that this will result in higher student achievement in addition to other positive student outcomes (e.g., positive attitudes towards learning) (Nathan, 1996).

The present study is distinguished by its focus on the education part of charter schools - - how schools go about creating and sustaining their learning communities for adults and students. As Sara Kass, founder of City on a Hill, one of the first charter schools in Boston observed:

> "One thing that struck me as a great irony is that the product of school is learning, and yet we [schools] are not learning organizations...Schools tend to keep doing what they have always done --regardless of the results. What is innovative about charter schools is that we are constantly learning from what we are doing: revising, redefining, and making it better". (Sommerfeld, 1996, p.13-14).

However, this can be a complex and challenging process balancing various curricular, financial, organizational and public relations issues (Nathan, 1996). What we learned from our research is what those working in charter schools already know: it is very hard work to design and operate a school that keeps its focus on teaching and learning. In this paper, we discuss four building blocks of learning communities and highlight a set of enabling conditions that appeared to support their development. Our aim is to offer some strategic advice to teachers and administrators in charter schools, identify some recommendations for state and district policymakers, and raise some issues and questions for further consideration.

Study Methods

To begin to understand the strategies for creating and sustaining learning communities in charter schools, we held three focus groups with a combination of charter school founders, administrators and teachers - - one each in Boston, Los Angeles and Minneapolis/St. Paul. Focus groups were particularly suited to this exploratory study of charter schools because the approach allowed us to generate descriptive information and ideas against the day-to-day experiences of people involved in charter schools (Vaughn, Schumm, & Sinagub, 1996). We viewed this study as an opportunity to investigate areas where relatively little was known, as a first step preceding more ambitious efforts.

A total of 17 charter schools were represented in our study and they were spread fairly evenly across the three cities (six schools, each, in Boston and Los Angeles; and five schools in Minneapolis/St. Paul). We invited only schools that had been open for at least a year (and were within driving distance of each city), so that participants had been through some building and learning experiences. Nearly all of the invited schools attended and most had been open for at least two years. The schools were a mix of conversion sites (schools that had previously been managed by school districts) and new start-ups (newly created schools). In California, nearly all the participating schools were three years old and had converted to charter status from district-run site-based managed schools. The charter schools from Minnesota were a mix of conversions and new start-ups. The charter school that had been opened the longest -- five years -- was from Minnesota, the first state to enact charter school legislation. Likewise, the participating schools in the Boston area tended to be the youngest and all but one were new start-ups.

The focus groups lasted between two and two-and-a-half hours. Each session was taped and was led by a professional facilitator. A member of the research team also was present at each focus group meeting to serve as an observer/recorder.[1] Discussions were structured by a topic guide focused on the charter schools' experiences with teaching and learning -- how does the

[1] In addition to the authors, members of the research team included Charles Abelmann and Richard Elmore of Harvard University and Allan Odden of the University of Wisconsin-Madison. The professional facilitator, Janice Ballou, is director of the Eagleton Institute's Center on Public Interest Polling at Rutgers University.

school's mission guide classroom practice? how does the school learn about and adopt new instructional approaches? how does the school learn which approaches are working and which ones need to be refined or discontinued? what kinds of problem-solving approaches does the school use? Discussion of these topics centered around two specific curricular areas: mathematics and language arts/English. Consistent with the belief that teachers' learning is central to the enactment and success of new policies designed to improve students' learning (Corcoran & Goertz, 1995; Goertz, Floden, & O'Day, 1996; Darling-Hammond, 1996; Louis et al., 1996), we also probed the area of professional development, asking participants about the nature and extent of training available to support classroom teaching. In addition to information from the focus groups, archival documents, including charter school proposals, school demographic data and school assessments/evaluations, were also obtained from most participating schools. After the three focus groups occurred, the research team and the focus group facilitator were brought together for a debriefing session to analyze, across the three cities, the nature of learning communities in charter schools and the features within the schools that, according to other research, were likely to affect teaching and learning (Elmore, Peterson, & McCarthy, 1996; Odden & Wohlstetter, 1995; Robertson, Wohlstetter, & Mohrman, 1995).

Charter schools participating in this study spanned different levels of schooling and reflected a broad spectrum of sizes and student body compositions. The majority of charter schools in the United States are elementary schools (Buechler, 1996) and this was reflected in the high percentage of participants from elementary schools in our focus groups. Seven of the seventeen schools were elementary schools, three were middle schools, and one was a high school serving students in grades nine through twelve. The remaining charter schools combined levels of schooling: two were K-12, two served grades K-8, and two combined the middle and secondary school levels. In terms of size, elementary schools tended to be the largest with student populations over 1000; at the other extreme, many of the new start-ups were smaller than traditional schools and had 200 or fewer students.

Most participating charter schools had ethnically diverse student populations; however, some schools in Massachusetts and Minnesota served predominantly white student populations. State-wide reports of charter schools in Massachusetts (Pioneer Institute, 1996) and Minnesota (Center for Applied Research and Educational Improvement, 1996) reflected a similar pattern. California's charter school law requires that schools in their applications explain their methods for achieving an ethnic distribution of students that reflects the larger district in which each school resides (California Education Code Section 47600). The high number of minority enrollments in most of the charter schools that participated in our study was consistent with what is happening across the United States. The Hudson Institute's Education Excellence Network found that, nation-wide, 63 percent of students who attended charter schools were minority group members. In our three states, the state-wide percentages for minority enrollments were similar: 78 percent, 65 percent and 51 percent for California, Massachusetts and Minnesota, respectively (Finn, Manno, & Bierlein, 1996).

Student populations also were varied in terms of their educational backgrounds. Some charter schools focused on students who had not been successful in traditional schools -- for example, a prep school for drop-outs -- while some others catered to parents and students looking for more rigorous academic programs -- for example, an elementary school that offered "a classically-based, challenging curriculum for motivated students." The Minnesota charter schools that participated in our focus group tended to serve "high risk" students more than charter schools from the other two cities, which served more varied student populations.

Building Blocks for Creating and Sustaining Learning Communities in Charter Schools

In our analysis, we identified four building blocks that charter schools used to create and sustain themselves as learning communities. These are critical components of the charter school process and were tackled with varying degrees of success by the schools in our sample. The four

building blocks are: 1) school mission; 2) instructional program; 3) accountability system; and 4) school leadership.

Findings on Building Blocks

1. *The **school mission** is a touchstone for participants' passion and commitment to the school and when the mission is clear and specific, the school is better able to translate the mission into practice.*

Nearly all participants in our sample viewed the mission as the foundation from which all other aspects of the school were derived. In this section we discuss how the school charter and mission were developed, similarities across school missions, and the roles of missions in charter schools.

Developing the school charter and mission. Among the schools in our focus groups, proposals for charter schools were developed by individuals or groups with varying levels of professional experience. Some proposals were drafted by a small number of committed individuals who had no prior experience in running a school. For example, one middle school charter was written by a group of parents "around a coffee table" who made the decision to start a charter school because they were dissatisfied with their local public schools. Another group of schools had missions developed through relationships with national reform efforts including the Edison Project, the Accelerated Schools Network, and the Coalition of Essential Schools (5 of the 17 schools in our study had such relationships). In each case, the school mission was specifically tied to the educational philosophy of the educational reform network.

The prior experience of those involved in drafting the charter appeared to affect the start-up process and particularly the transition from the dream for a school to an actual flesh-and-blood school. Charter schools developed by individuals with some experience in running a school (both on the instructional and managerial levels) had smoother, more well-prepared transitions. This prior experience was more likely to be found in two types of schools: conversion sites and schools that were part of national reform efforts. The principal of an elementary school that converted from a site-based managed (SBM) school described how the charter was drafted "in a second" because the school had already implemented many of the changes they wanted to make,

had plans for other changes, and were aware of many of the challenges of self-governance. Another school began as an alternative high school for drop-outs that featured individualized learning plans, high student-teacher interactions and an applied real-world focus. Thus, when the school applied for charter status, much of the foundation for the school mission was already in place. By comparison, a new start-up school designed by a committed -- but inexperienced -- parent group had a much rougher start. The parents were surprised when the charter was approved and were ill-prepared and unsure about how to proceed. They eventually contracted with a for-profit consulting firm to manage the business aspects of the school, which in turn hired the principal who in turn hired staff. The staff had only eight days together to prepare for the opening. Across many of the charter schools in our focus groups, the missions were often developed without soliciting input or feedback from key stakeholders - - teachers, parents and students. As a consequence, conflicts emerged later on, as stakeholders who had not been involved in drafting the mission disagreed with or misunderstood the school's instructional philosophy. For example, in some schools parents complained about the fact that schools did not use textbooks or standardized tests. At other schools, it was reported that teachers were not "getting on board" with the schools' instructional approaches - - either they continued to use their old materials or they selectively chose among the new approaches developed from the mission. The California charter schools generally included more stakeholders in the development process than schools in the other two states largely because teacher involvement is mandated by law. The California charter school law requires teacher approval for all charter schools: for a conversion school, at least 50 percent of the teachers at that school must approve; for new start-ups, 10 percent of the teachers in the district must approve the charter school application California education Code Section 47600).[2] This requirement, moreover, ensures at least some degree of teacher involvement in the drafting process, since teachers must sign-off on the charter application in order for approval to be granted. A teacher from a California elementary school described how the parents were the driving force

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[2] Minnesota's charter school law also has a teacher support provision, but the provision applies only to conversion schools -- not new-starts -- and the vast majority of charter schools in Minnesota are new start-ups.

behind the charter application while, at the same time, the teachers were somewhat complacent. The parents, however, still had to solicit teacher feedback and garner buy-in to the process, as 50 percent of the teachers had to approve the application.

Similarities across school missions. Although schools in our study varied in terms of student populations, levels of schooling, and whether they were start-ups or conversions, the school missions were remarkably similar. The concept of preparing students for a changing society in the "21st century" was referenced in the majority of school mission statements. In California all schools applying for charter status must detail in the application "what it means to be an educated person in the 21st century" (California Education Code Section 47600). However, the concept appeared frequently in school missions in the other two states as well -- for example, "meeting the challenges of a changing global society."

Technology-preparedness was another theme found in many mission statements. Many of the schools integrated into their missions the goal of providing students with new skills to understand and utilize computer technology. One K-5 school had a two year "technology goal" to bring computers into all classrooms. An administrator from another elementary school described how "adding computers and technology training" was a central part of how the school linked their math curriculum to the school mission.

A third similarity shared by all participating schools was consideration of students' emotional needs and growth, in addition to intellectual achievement. This concern was conveyed through a broad spectrum of personal characteristics, including self-esteem, creativity, moral development, emotion management and self-awareness. Charter schools generally were oriented toward knowing and caring for the "whole student" -- academic, emotional and social. This focus, moreover, is consistent with the "structures of caring" that Darling-Hammond (1996) identified as key to helping teachers know students well and to providing students with personalized support.

Many mission statements were also similar in terms of their lack of specificity. The missions were often organized around broad themes or goals - - as one administrator offered,

"The mission is a wide open door." Other examples of broad and complicated mission statements included:

- "....the skills and understanding to participate and work productively in a multicultural, globally oriented environment, use technology to its full potential, and communicate fluently in English and one other language."
- "....prepare (students) for the 21st century through an emphasis on holistic learning, higher order and critical thinking skills, and practical application and integration of curriculum areas."
- ".....fostering an environment in which a strong academic program is emphasized, and where both creativity and self-esteem can develop in each student."

The reliance on such general concepts presented some problems for schools as they attempted to translate school missions into specific curricular practices. While a broadly defined, generalized mission may have been useful for garnering political support in the charter school approval process, it did not provide specific direction in terms of teaching and learning, and thus was open to multiple interpretations. For example, at one new start-up middle school with a charter described by the administrator as "generic", multiple -- and sometimes inconsistent -- approaches to math instruction were being used by different teachers. At another school, we were told that teachers interpreted the broad mission as being able to "pick and choose whatever they wanted, although as a school we were committed to adopting a common math curriculum."

Roles of missions in charter schools. In many of the schools we studied, the missions grew out of strong, passionate feelings about schools and education and, as the schools evolved, the missions helped to sustain that passion and commitment within the school community. Comments such as "the mission is a living presence at our school," "the mission guides everything we do" and "everything comes back to (the mission)" were common. Focus group participants tended to view their missions as guiding forces, both in terms of philosophical goals and day-to-day operations. There was some evidence of this commitment among parents as well. For example, one teacher described how the school's parent booster club raised all of the funds the school needed to implement the technology goals outlined in its mission statement. Indeed, all of

the charter schools in our study made a concerted effort to highlight and provide on-going reminders of their missions to the local school community: reviewing the mission with parents and teachers at assemblies; having parents sign-off on the mission every year; posting the mission in classrooms and hallways; and printing the mission on mugs and T-shirts.

Across the charter schools we studied, the mission served an important role in staff recruitment and hiring, and in attracting students and parents. Charter schools often used the mission statement as a screen to communicate to job candidates the school's beliefs and expectations about teaching and learning. At one elementary charter school, prospective teachers and staff were given copies of the charter at the interview and were told explicitly that classroom practices must be consistent with the school's mission: "If you don't want to teach our way, there is no need to apply to teach (here)." Another school sent the mission out to job candidates and asked them to respond by explaining how they would implement the mission. The control charter schools have over personnel matters, of course, enabled them to selectively hire; this was evident even in California where state law mandates that charter schools hire only credentialed teachers.

We also heard evidence that the mission was used as a student recruitment tool to help accrue support for the school and, thus, insure its initial popularity. The broad, inclusive nature of many of the school missions sometimes led to confusion. At one new start-up school, for example, the charter was very long (85 pages) and the current administrator described it as being "like the Bible" -- different people interpreted it in numerous ways. In the beginning, the founder used the charter to help garner excitement and interest among parents and students; the founder would emphasize different aspects of the charter based on the interests of each group spoken to.

Although this approach may have generated initial interest among diverse groups, it left the school with a global mission that provided little specific direction for teaching and learning. Thus, school staff were left to work through the process of defining the school's curricular/instructional foci at the same time they were in classrooms trying to teach . Thus, although a few schools appeared to gain some benefit, at least initially, from a broader, more general mission, such a

mission in the longer term presented some roadblocks to the development of a clear, consistent instructional program.

Conclusions. The school mission served as a touchstone in sustaining energy and involvement among members of the charter school community. At the same time, many of the missions were very broad which sometimes interfered with the ability of implementers to translate the mission into specific curricular, pedagogical and assessment decisions. A specifically defined mission seemed to assist charter schools in developing focused, consistent learning communities.

2. *A high quality* ***instructional program*** *includes both clear curricula and pedagogy, and details how teachers will get all students to achieve at high levels. It derives directly from the school mission and is the blueprint for helping schools achieve their missions.*

Similar to district-operated schools, charter schools in our study found it difficult to develop coherent instructional programs. Other research (Gusky & Peterson, 1996; Slavin et al., 1996) has highlighted the challenges of developing instructional programs. With these charter schools, the difficulty was exacerbated by rather vague school missions and the press to create something quickly within a short time frame. In this section, we review the content of the instructional programs adopted by the charter schools; how the programs were developed; and the professional culture at the schools as it related to decisions about teaching and learning.

Developing an instructional program. As charter schools went about developing their instructional programs, educators were often faced with the challenge of developing curriculum and instructional strategies within a short time frame. This was a particular problem for new start-up schools, as the conversion sites often already had many instructional components in place prior to attaining charter status. The search for a "quick fix" sometimes led to tension between those who wanted to create their own instructional program and those who advocated buying an instructional package that could be put in place quickly. The "make versus buy" dilemma, although not endemic only to charter schools, was frequently present in the schools we sampled, and particularly in the start-up schools. Charter school participants in our three focus groups tended to have a "pioneer" ethos and this feeling often led to a strong desire to create their own

instructional program -- a time consuming task that flew in the face of getting the charter school up and running quickly.

What we observed were instructional programs that often featured curricula developed by educators outside the school. Some charter schools adopted whole design packages and connected the school with experts and resources to help them implement their designs. Within our sample of charter schools, slightly less than one-third of the schools (5/17) were connected with national reform efforts and had instructional programs, or at least guides, that were developed outside the school by education reformers (half of the charter schools participating in the Boston focus group fell into this category). Two of the participating schools were members of the Coalition of Essential Schools. Another school was run by Edison; another was part of the Accelerated Schools Network; and another followed E. D. Hirsch's core classical education curriculum.

Other charter schools developed their instructional programs by putting together pieces from different sources -- some bought and some made. The California schools tended to fall into this category. They assembled different pieces of their instructional programs from published curricula (e.g., at one school "Writing to Read [an early literacy program], a program for bilingual education, and several math packages ["Math Land" and "Math Their Way"]) and also designed their own unique approach to, for example, integrating technology across the curriculum.

In the many cases where at least some part of the instructional program was bought, educators faced the challenge of how to integrate their unique educational missions and ideas about education -- the pioneer spirit -- with already-existing materials. For example, one middle school, whose mission emphasized an integrated, holistic curriculum and real world applicability, adopted "University of Chicago Math" and "Montana Math" early on when the school felt the pressure to have a program in place, in spite of the fact that the curricula collided with the school's philosophy not to teach math formally as a separate subject.

A third group of charter schools created their instructional programs from scratch, often "doing it as we go, " which another participant likened to "building a plane while we're flying it."

This approach was most characteristic of the charter schools in Minnesota, where the schools tended to be smaller and served student populations the public schools have traditionally not been successful in educating -- at-risk students and students who have dropped-out.

Content similarities across instructional programs. Just as charter schools shared similarities in missions, we also observed commonalities in their approaches to instruction. Regardless of the educational level or the size of the charter school (our sample ranged from 80 students to 1300 students), instruction generally was characterized by low student-faculty ratios, small class size and personalized learning. For example, in the three largest charter schools that we studied with student populations over 1000, the student-staff ratios allowed for class sizes of between 10 and 20 students. Among the smaller charter schools with fewer than 100 students, class sizes were often held to ten students or fewer.

There also was a major push in many of our sample charter schools to emphasize personalized learning. Several of the schools featured individualized learning plans for students. As an administrator from a secondary school described: "Each teacher is responsible for creating an individual learning environment. Teachers seek to bring out the best in each kid...Kids are measured against themselves and against their goal."

Finally, instructional programs within charter schools tended to be interdisciplinary and focused on integrating the school with the community, often through applied, "real world" projects. Curricular requirements in one K-12 school included math and science "action projects" that involved students in developing and implementing projects that solved real world practical problems. At one middle school, the entire afternoon was devoted to research projects in all curricular areas. Other schools had students use their math skills to plan field trips, design family vacations, and manage household finances.

Across our sample of charter schools, there was a strong push to integrate teaching and learning with the school's surrounding community. Many secondary schools created partnerships with community businesses and educational institutions, and students participated in internships and training activities focused on preparing them for college or careers. In addition, some of the

charter high schools had community service requirements for graduation. Other links with the community brought community members into the instructional program at the school. An elementary school, for example, implemented a tutoring program for at-risk students that brought parents and other community members (mostly retirees) into the school to tutor students.

Decision-making structure around curriculum. There were different levels of involvement of stakeholders in curricular decisions reported among the charter schools in our focus groups. However, across most schools there was a push for broader involvement in the decision-making process, and there appeared to be tension between various factions of the school community when this did not occur. In one K-12 charter school that started about two years ago, curricular decisions were made by the six core staff who founded the school. Parents and other teachers often complained about curricular issues at various staff and board meetings, but there was no formal structure for their involvement in or feedback about the curricular decisions made by the core group.

Decision-making structures in many other schools tended to be more decentralized with committees, families, task forces or teams usually organized by subject areas or grade levels taking on decision-making responsibility related to the curriculum. What was surprising was that several schools opened their doors with no formal decision-making structure in place, in spite of the research findings suggesting the importance of formal structure (Elmore, 1995; David, 1996; Wohlstetter et al., in press). As an administrator at one new elementary school explained:

> We limped through the first year in our approach to math -- we had no textbook, no formal curriculum and no one in charge of making those decisions. In the second year, we set up a formal math task force that included teachers, parents and board members to address the issue of a math curriculum for the school. This group looked around and identified several different math approaches and this year we're piloting several of them.

Clearly, this is not the most efficient approach to developing and sustaining a coherent high quality learning community.

Within our sample of charter schools, the California schools were far more likely at the outset to have created formal structures in place for involving various groups in decisions related to teaching and learning. The schools' experience with school-based management (SBM) -- all California schools converted from SBM to charter -- may help explain why the California schools in our study created formal decision-making structures, while many new start-up charter schools did not. As noted earlier, the literature, particularly research in site-based managed schools, has emphasized the importance of a network of decision-making structures organized around the business of schooling -- curriculum and assessment, in addition to budgeting and personnel (David, 1996; Newmann & Wehlage, 1995; Wohlstetter et al., in press). Thus, the prevalence of formal decision-making structures among our California charter schools may reflect their history as SBM schools.

A noteworthy distinction between district-run SBM schools and charter schools was the involvement of parents in decisions about teaching and learning. Charter schools in our sample tended to include parents formally in such decisions; by contrast, district-run SBM schools typically leave such decisions to professional educators, involving parents in more oversight or advisory roles with respect to curriculum and instruction decisions (Newmann & Wehlage, 1995: Wohlstetter et al., in press).

Teachers' professional culture. The culture for educators across the charter schools we studied was an eclectic mix, often characterized by high levels of professionalization and commitment while, at the same time, we found many instances where teachers seemed to ignore existing professional knowledge and expertise.

Across the charter schools, teachers were described by focus group participants as feeling a strong sense of collective responsibility for their schools. This was true regardless of the size of the school faculty. An administrator at an elementary charter school with 1300 students remarked about the collective responsibility among all 60 faculty members: "There is a sense of teamwork...you are all on the line. A student can't come to your classroom and not make any

progress." A founder at a smaller secondary school offered a similar comment: "Each person is totally responsible for making the school successful. When evaluators visited our school, they commented that all the students were inclusive with each other -- few cliques, and a feeling of collaboration and community. The teachers try hard to model for the students. The teachers also are inclusive and interdependent in their relationships with each other."

However, we were surprised to hear about only a few formal structures that allowed teachers to work collaboratively on issues of teaching and learning. There were, however, some reports of informal collaboration at the charter schools in our study, typically when one teacher visited the classroom next door to "dialogue about why something worked in her room and didn't work in mine." Of course, the problem with this practice was that it was not systematic, but rather highly dependent on the individual initiative of one teacher to take the time to visit with another.

Another attribute of school culture we observed, also associated with high levels of professionalism, was the teachers' orientation toward continuous improvement and reflection on what they were doing with students in classrooms. Focus group participants, including both teachers and administrators, generally recognized the need for an assessment system to provide feedback on what was working and what was not. One of the elementary charter schools initially implemented a process-oriented, "real-world" approach to math, consistent with the school mission. When student math scores declined, the faculty experimented with more traditional approaches to math instruction, and now the school incorporates a blend of both traditional and non-traditional approaches. There also was evidence that problem-solving was an open, ongoing, collective process. For example, in one school, problems were identified and posted on the wall in the main office to solicit suggestions and ideas from the whole school community; in another school, teachers had daily "communication group" meetings for sharing problems and ideas.

Aside from these attributes commonly associated with professionalism, professional development - - the process by which teachers acquire new knowledge and skills -- was not described as being present at levels typically observed in high performing schools (Louis et al., 1996; Newmann & Wehlage, 1995). Several focus group participants described how their

schools seemed to assume that teachers had the expertise to implement the instructional program and made decisions on "faith." At a middle school during the initial start-up, teachers picked out several math curricula packages. However, there was little training and on-going planning time for teachers to gain the knowledge and skills for using these approaches. Similarly, at another middle school, after math manipulatives and math games were chosen, it was assumed that teachers would know what was expected of them without organized, on-going training. A K-8 school adopted a multi-age group approach to reading. However, the change was not accompanied by organized professional development; instead the change evolved slowly without formal teacher preparation or follow-up. The elementary school that purchased Hirsch's core classical curriculum rejected the training that was recommended with it. Underlying these decisions is the assumption of expertise: teachers have the expertise; all they need is a good curriculum.

The counterpoint to these examples were reported for some of the charter schools that had converted from existing schools. The conversion schools, particularly the ones that had been SBM schools, were described by participants as making more attempts to consider or integrate the professional knowledge base into their curriculum decisions. One elementary school created a specific curriculum committee that researches and investigates curricular changes. At another elementary school, a "standards consultant" was hired to keep teachers informed of national and district-level standards so that professional standards/expertise could be used to develop their own curriculum. Indeed, the only school among our sample of charter schools described as having a formalized school-wide professional development program was a school that converted from a SBM school. This elementary school had a highly structured, focused professional development program. All staff members were required to attend professional development retreats each semester that were organized around specific curricular changes scheduled for implementation. The professional development program also featured follow-up evaluations with teachers to determine the extent to which changes were implemented in classrooms. The school's fiscal and decision-making autonomy, in concert with the educators' prior experience seemed to facilitate the adoption of this program - - there was control over how much money would be spent on

professional development, and what professional development requirements would be implemented at the school, as well as an understanding of what was needed to effectively implement a professional development program.

At many other schools where collective time was set-aside for professional development, the time appeared to be used more for planning and school culture-building than for helping teachers master new skills related to curriculum and instruction. Consequently, we heard about forums that facilitated on-going dialogue among teachers but surprisingly little formal, topic-focused professional development. Another characteristic common across several of the charter schools' professional development was a reported emphasis on personal mastery rather than whole-school learning. Such an approach tended to surface in schools that used an individualized/personalized approach to teaching and learning. As the administrator of a charter high school argued: "Teachers in our school are responsible for creating an 'individual learning environment' for each student and so professional development is individualized/personalized as well." Therefore, in this school as well as in others with similar instructional approaches, there was no professional development curriculum or standards common across the whole school.

Conclusions. Few of the schools described a well-articulated and integrated instructional program, and even fewer reported any sort of consistent, content-based professional development system. Although many of the schools were struggling with the decision to make-versus-buy their instructional programs, simply buying or adopting an instructional system alone did not appear to be the most effective approach. There needed to be on-going school-wide professional development around curricular issues and opportunities for teachers to interact around the curriculum. Other researchers have noted the importance of formal and informal structures that support teacher collaboration (Darling-Hammond, 1996). In the charter schools studied, there was more informal sharing reported, perhaps in part related to the small size of some schools, many with faculties under 40. For an instructional program to be adopted school-wide, school leaders need to manage the school around that purpose, providing the time and formal structures for staff development and collaboration.

3. *The **accountability system** includes performance standards, assessment strategies and consequences based on performance. One of the basic premises of charter schools is that schools should have more control over budget, personnel and curriculum issues in exchange for being held accountable for results.*

In policy talk about charter schools, an integral part of the conversation is about high-stakes accountability that entails significant consequences for charter schools -- renewing charters or school closings. But, as the reform is being implemented, we found that accountability requirements from sponsoring agencies, including the state, district, university or other groups, tended to be weak, and charter schools in all three states generally were charged with creating their own accountability systems. We found, moreover, that the myth of greater accountability for charter schools far exceeded the reality.

Defining and assessing accountability. Consistent with the research on accountability (Elmore, Abelmann, & Kenyon, 1997; Kirst, 1990; Newmann, King, & Rigdon, 1997; Wohlstetter, Smyer, & Mohrman, 1994), we defined accountability as the process by which sponsors of charter schools and other stakeholders, such as parents and students, ensure that charter schools meet their goals. Accordingly, accountability systems for charter schools require:

1. Performance standards for judging whether or not charter schools are meeting their goals.
2. Assessment information for evaluating student performance at charter schools.
3. Rewards/sanctions for the success or failure of charter schools in meeting their goals.

In general, we found that granting agencies required assessment information on performance from charter schools (sometimes via standardized tests and sometimes via internally-generated assessments), but often failed to specify any clear performance standards or consequences. Typically, state charter school laws prescribe three general criteria:

1. Reasonable progress on meeting each school's own goals for its students
2. Standards of fiscal management concerning the proper use of funds
3. General probity and avoidance of scandal (Finn et al., 1996, p. 64).

Judging from limited implementation experience, the initial focus of sponsoring agencies has been on the second criteria and, to a lesser extent, the third. Consequently, there have been school closures due to fiscal, administrative or ethical violations, however, no school to date has been sanctioned for not meeting academic/educational goals.

In analyses of charter school legislation, Massachusetts has been deemed one of the strongest states in terms of accountability requirements (Finn et al., 1996). In Massachusetts charters are granted for five years and charter schools are accountable to the state. The state, according to the legislation, monitors student enrollment and demographics. In addition, the state evaluates charter schools by asking three questions: 1) Is the academic program a success? 2) Is the school a viable organization? and 3) Is the school faithful to the terms of its charter? These questions are addressed in the charter school's annual report. Schools in Massachusetts also are subject to a one-day site visit by a team of evaluators. However, for the effort put forth by Massachusetts to clarify issues around accountability, there still is little real clarity. At the end of five years, it is not evident what level of school performance is good enough for renewal, or whether the state can in fact close a school for not performing as specified. Indeed, nationally only three charter schools have been closed because of financial/ethical violations, or administrative problems ("More on Charters", 1997). The question of whether any charter school will be closed because of poor student performance remains unanswered and the nature of standards these schools are held to remains vague.

Given the unique missions of charter schools, it is not surprising that legislatures invested the schools, themselves, with the authority to set their own performance goals. State charter school laws generally require that schools discuss goals, performance standards and assessment measures in their charter school applications but offer little guidance to schools. Many focus group participants reported feeling that the external accountability system was weak in that the state did not provide solid performance standards or goals for the schools to work toward. What has emerged is a continuing dispute over standards for student performance -- should the performance of charter schools be judged by the relative improvement of their students based on the unique

goals and mission of the school, or by state performance standards, like other public schools? Current practice in charter schools tended to be a combination of both. If states had state-wide assessments, then charter school students typically were expected to take those tests.[3] This requirement sometimes led to out right hostility and derision, partly related to schools feeling that standardized tests were inappropriate for their special student populations and their unique missions: "We buck the accountability plan. I simply say I don't know state regulations."

However, charter schools also were encouraged by sponsors to develop their own evaluation measures to document progress in their own terms. A high school preparing students who formerly had been drop-outs for college or a career adopted "testing out of college entrance exams" as one of their outcome measures. The "make versus buy" dilemma, discussed earlier with respect to instructional programs, also surfaced with assessment. Many schools that we studied elected to buy standardized testing materials mainly because staff members did not have the experience, the expertise or the time to develop their own performance-based assessment systems. At the same time, participants expressed strong concern about the accuracy of the results, since the "bought" assessments were not tailored to the school's instructional program -- "Can the tests adequately measure changes in student achievement stemming from our instructional focus on the real world?" -- nor were the assessments integrated into the school's curriculum. But, for the reasons listed above -- lack of experience, expertise and time -- standardized tests continued to be used in many of the schools.

Some state charter school laws allow schools to submit applications that leave open the specific standards and measures schools plan to use, deferring to some future time when the school would actually develop or decide on what they would use. The charter school application of one K-8 school promised that the school would "implement a plan to evaluate students after the 8th grade to determine the effectiveness of [the]... School." However, at the time of the focus group

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[3] Among the three states in our sample -- California, Massachusetts and Minnesota -- none had state-wide assessments in place, although the three state laws required charter school students to take the tests that other public school students take.

(two years after the school had opened), the administrator reported a continued lack of clear, specific assessment methods and indicators, even though he felt this was a critical task for the school to accomplish. The administrator further posited that the absence of an accountability plan was largely due to weak organizational capacity, as Newmann et al. (1997) argued: "Everyone is a bit afraid of evaluation. No one is really sure how to go about it, and teachers just don't have time to commit to making decisions about which tests are suitable for our students and the performance levels they should achieve."

Although none of the schools participating in this study were described as having a strong internal accountability system in place, many of the schools appreciated the need for such a system and were working towards developing one. However, a major problem facing the schools was the scope of student outcomes, beyond strictly academic, content-based ones. Many of the charter schools in our sample, as noted earlier, emphasized in their applications a focus on outcomes related to students' social and emotional development: "the ability to function as a citizen," "to demonstrate the appropriate control and release of emotions," "identify and implement ways to develop better self," and "having an ethic of giving." Such learning processes, moreover, were often difficult to define and measure, even by those with specific expertise in the area.[4] Beyond the application itself, many focus group participants personally defined success based on vague, social/emotional criteria, such as "not letting kids fall through the cracks" or "making a place where kids feel they belong." In sum, with the charter schools in our sample, performance standards -- both in terms of academic achievement and emotional development - - were unclear and there also was a general lack of understanding about how to assess results -- "we know there is change, we just don't know how to show it."

Among the higher capacity schools (where participants described stronger and more cohesive organizational and teaching/learning structures), teachers and administrators were focused

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[4] Just as charter school participants appeared to reject the knowledge base about curriculum and instruction, the schools also typically did not draw on expert knowledge in their attempts to create an assessment plan. So, for instance, schools proposed that they would design measures for assessing student self-esteem or moral development, rather than using or fine-tuning existing measures.

on establishing comparison groups for their students, as one administrator reported, "It took us three years to get our act together and we still don't have a system of how to compare our students to other students in the state. We're working on this now." Another administrator agreed, "One of our goals is to develop an assessment tool for comparing students. We chose one [assessment instrument] the first year but that didn't work out. We eventually abandoned that and developed our own portfolio system. Now we're in the process of trying to develop a more comparison-based assessment instrument."

Although difficulties regarding outcome accountability were prominent in each of our three focus groups, we also heard about the importance of professional accountability at these schools -- that is, feelings of collective responsibility among administrators and teachers for school performance. A complex of charter schools, which form a feeder system, set aside time every Friday for cross-campus dialogue and coordination.[5] As one of the principals reported, "There is a feeling of teacher-to-teacher accountability in all our schools and across the complex. We all know that the kids from one teacher at one school will eventually end up in another teacher's class at one of the other schools in the complex, and that teacher will know who was responsible for the child's prior instruction."

Market/client accountability. Across all charter schools in our study, the strongest feeling of accountability was to the local school community, especially to parents and students. "We know we are being watched and evaluated by the parents on an on-going basis, and there is the pressure to live up to the standards and goals of the parents." An elementary charter school created a three-page contract that parents must sign, requiring them to volunteer thirty hours at the school each year. Called the "Home-School Contract," one page of the document outlines the school's responsibilities to each child and another details what is expected of parents. The school will provide a safe environment, monthly reports to parents regarding a child's performance, translators for parent-teacher conferences; and parents are bound to return all necessary forms and

[5] Through time-banking, where teachers have longer school days on some days and bank the extra time, the schools in the complex coordinated their pupil-free time, so that they would be able to meet and plan together.

documents to the school on time, obtain a library card for their children, and ensure that homework is done daily and reviewed. On a more basic level, the clearest measure of accountability for some participants was student enrollment; if the school did not attract enough parent and student "customers", it would close.

There also were strong feelings of accountability to students reported by teachers, administrators and founders. One of the high schools in our study held daily discussion groups with students to get feedback about students' experiences and evaluations of the school. Another school that served grades K-8 summed it up this way, "Our decisions are based on what kids need." A number of the schools we studied had parents and upper grade students read and sign-off on the school charter, and also conducted annual satisfaction surveys of parents and students.

In sum, self-generated accountability systems in the charter schools we studied tended to emphasize internal accountability to the local school community -- both parents and students. The systems also tended to rely more on informal reports of progress, rather than formal documentation through standardized test scores.

Performance rewards. Consistent with recent studies of restructuring schools (Newmann et al., 1997; Wohlstetter et. al, 1994), we found that neither the charter schools nor their teachers received significant monetary rewards based on the performance of their students. Thus, although most charter schools, through their control over budgets, had the autonomy to create an incentive system, almost none of the schools did. The one exception was an elementary school that designed a performance-based reward system, based on best ideas from research in schools and private sector organizations (Kelley, 1997; Kelley & Odden, 1995). Pioneered by strong leadership from the principal (who learned about the ideas from one of her professional network connections), the charter school rewarded all teachers with bonuses if test scores across the school were raised to a pre-set level. Additional bonuses were given to individual teachers if they set and met performance standards for their own classrooms that used standardized test scores.

Some focus group participants also mentioned "soft" extrinsic rewards, including

parent-sponsored faculty appreciation luncheons, recognition in school newsletters, thank-you assemblies, staff appreciation days, and showcase displays on campus. More often, however, administrators and teachers talked about the rewards of working at the charter school -- collaboration among professionals, advanced technology resources, additional staff development and control over what went on in the school, from hiring colleagues to shaping classroom practices. Thus, educators in charter schools viewed their working conditions as high quality and professional, and such conditions clearly offered powerful rewards to the people working in the schools (for similar findings, see Newmann et al., 1997; Wohlstetter et al., 1994).

Conclusions. Although there are strong feelings of informal accountability to parents, students and among teachers, formal accountability systems and standards were lacking at the charter schools we studied. In the absence of clear direction from the state, charter schools typically were left to draw on their own organizational capacities to generate accountability plans and few schools had a strong enough capacity to do so (see Newmann et al., 1997). Charter schools in this situation frequently went out and bought assessment materials, even though educators often had doubts about whether the tests accurately measured what they were trying to teach.

4. ***School leadership** provides the compass for development and sustenance of the charter school as a learning community; a key component of this leadership is negotiating many role demands.*

Strong school leadership plays a critical role in fostering effective teaching and learning (Lindle, 1996; Murphy & Beck, 1995; Robertson et al., 1995). The charter schools in our study varied in their approaches to leadership and management. We also heard from many schools about their struggles to design an organizational structure that distributed leadership responsibilities in ways that worked best for the individual school community. The varying levels of experience of the staff in leadership positions further complicated this process.

Characteristics of school leadership Although the experience of the leaders in our sample of charter schools varied, several common traits emerged. Many charter school leaders exhibited an "outlaw mentality". They usually came from outside of the public school system or had worked

within that system but had a history of challenging the "status quo". These "outlaws" saw themselves as fighting what they perceived as wrong with American public education by starting a charter school. One high school administrator at a charter school for student drop-outs had worked in prison education. She commented that before charter schools, she had shunned the public school system because "I could not do the things I wanted to do without getting into a lot of trouble." Another leader who founded a K-12 charter school described how the school was started by teachers with a common bond - - a dissatisfaction with public school education. The outlaw mentality appeared to play an important role in generating and maintaining commitment to the charter school, since through their involvement, leaders were able to address what they saw as serious flaws in the public education system.

A second common characteristic among many charter school leaders was a sense of entrepreneurship. Such leaders worked to establish linkages with resources often outside of the district, including professional networks and service providers, to bring new ideas about teaching and learning into the schools. The fiscal autonomy granted to charter schools provided teachers the freedom to seek out and utilize alternative resources and various types of support.

School leaders also worked with municipalities to secure school buildings, teacher training opportunities, support for curriculum development, and social and health services for students. One elementary conversion school offered the school site for various community meetings and continuing education courses. The principal, moreover, bargained with service providers, so that her faculty and staff could attend these activities at free or reduced rates. Another charter school rented space from the city -- a recreation center -- at the low-cost community nonprofit rate. The charter schools in our sample with a strong school-to-career focus worked to develop relationships with local businesses and colleges to provide hands-on training and internships for students. One charter school developed an on-going relationship with a business collaborative for this purpose. Several charter schools also served as teacher training sites for local colleges or universities. Participants at the focus groups pointed out that such partnerships contributed resources (e.g., use of student teachers) and new ideas about teaching and learning as well.

Finally, members of the focus groups characterized school leadership in charter schools by a sense of collaboration between administrators and teachers. Sometimes collaboration occurred through formal structures (teacher committees or "families" working with the principal); often times collaboration was more informal - - discussion groups, posting problems in the main office for teachers to write in solutions. Regardless of the forum, participants at the three focus groups talked frequently about teams of people working toward a common goal. An administrator from one of the elementary charter schools summed it up this way: "We're all here for a purpose...we're all here together because we chose to be."

Tensions between centralized and decentralized management. An ongoing tension mentioned by many of the charter schools in our study was, on the one hand, a desire for total inclusiveness among staff in decision-making and, on the other, a concern for more efficiency, which often led to demands for a centralized organizational structure. In general, we found that individuals involved in the initial design and development of charter schools tended to reject hierarchical structures typical of the public school system and to value a more even distribution of power within the school community. Such an approach sought equal contributions from all participants in school decision-making, with the goal of building consensus. However, once charter schools opened and continued to add faculty and staff, participants began to feel the press for a more centralized system of decision-making that could help lessen the time teachers spent on issues not related to teaching and learning. In addition, focus group participants reported that radically decentralized decision-making made it difficult for decisions and follow-up actions to be made in a timely manner. As one participant noted, "When push comes to shove, someone has to make a decision." Thus, at many charter schools, designing an organizational structure was an evolving, dynamic process that focused on balancing a desire for inclusiveness with the more practical needs for some centralized structures. However, the ability of charter school leaders to create an effective balance oftentimes appeared to be hampered by their lack of professional knowledge and experience in the management area. Few school leaders had a strong professional

understanding of participative management or high-involvement organizations, further complicating attempts to establish a decentralized system that also was efficient.

The experience described at one elementary charter school illustrates the changing nature of school organization. When the school first converted to charter status, the school's leadership attempted to involve all teachers and staff, and to some extent parents, in every important decision. After three years of total inclusiveness, the participants wanted "to rethink this process." They felt that the process was slowing down decision-making and implementation. They argued, furthermore, that some top-down structures were needed for the school to function more effectively -- everyone cannot manage every aspect of the school. A new start-up secondary school, likewise, experienced dramatic changes in its organizational structure during the first years of operation. When the school first opened, the staff attempted to make all decisions by full consensus, but "in effect, we made no decisions." In the school's second year, the faculty made a shift towards wanting a school leader and more centralized decision-making structures. The process of balancing pulls for centralized and decentralized management appeared to be an endemic issue for nearly all charter schools. The evidence that we heard also suggested that a balance was more easily reached earlier in the life of a school, before structures became routinized or unwieldy. Furthermore, the autonomy over school governance, granted by the three state charter school laws, both created the need to address the issue of how to self-govern and helped the schools address and successfully work through the process.

Types of leadership: Managerial and instructional. Regardless of how charter schools were organized, two distinct areas of leadership were evident - - managerial leadership and instructional leadership. Further, we found that charter schools that had greater autonomy from their districts also were more consumed by managerial decisions. These day-to-day issues of running charter schools included the budget, relevant district, state and federal policies, insurance, meals, security, custodians, substitutes, psychological services, and bus companies. As one school administrator commented: "The logistics can kill you. The smallest part of my time goes to

teaching and learning issues." This is consistent with other research on self-managed schools (e.g., Caldwell, 1996; Levacic, 1995; Odden & Odden, 1996).

The demands on school managers were often compounded by weak management experience: Although a few charter school administrators had experience in running schools as principals in private, public or alternative schools, many charter school leaders had teaching experience only. Across the three focus groups, a number of teachers specifically noted that training in managerial and fiscal issues was a major deficit at their schools. However, even for administrators with prior management experience, charter schools presented difficult, new demands. As one administrator who had previously run an alternative school commented, "We are building a ship that is heading out to sea and winter is approaching and we're in the north Atlantic."

The division of responsibility across the two types of leadership varied among charter schools in our study. In some schools, managerial and instructional leadership were integrated in that the same individual or groups of individuals held responsibilities in both leadership areas. However, when this occurred, school leaders were often overwhelmed with demands. As an administrator from a K-12 charter school described the situation: "The old principal left because of the overwhelming responsibilities of running the school. It was a crushing weight for the guy to carry."

In other charter schools, managerial and instructional leadership responsibilities were divided so that there was a clear distinction between those involved in each type of activity. "I do 'out-house', remarked one elementary school principal, "and my staff does 'in-house'. I'm responsible for management and money issues and my staff is responsible for day-to-day instructional issues." In several other charter schools, management responsibilities were contracted out to experts, so that staff were not distracted from instructional concerns. Finance consultants were often used to handle fiscal matters.

In our focus groups we did not probe whether dividing leadership responsibilities produced communication difficulties. However, in studies of leadership in SBM schools (see, for example.

Louis & Kruse, 1995; Murphy & Louis, 1994; Wohlstetter & Briggs, 1994) some principals have been accused of being too preoccupied with "out-house" responsibilities. It is thus possible that, consistent with the research on SBM schools, even leaders with an "out-house" focus need to have in place mechanisms for staying in touch with the "in-house" needs of the school.

Conclusions. The charter schools in our study clearly benefited from the passionate, committed attitudes of their school leaders. However, the leaders were faced with negotiating some difficult tensions between centralized and decentralized decision-making and between management and instructional responsibilities. School leaders with more experience in site-based managed schools were described as being better able to negotiate these tensions. Furthermore, we heard that while the autonomy given to charter schools helped facilitate the schools' abilities to address these issues, the autonomy, at the same time, created new, more complex governance concerns for school leaders.

Enabling Conditions for Creating and Sustaining Learning Communities in Charter Schools

From our preceding discussion of the "building blocks" for developing charter schools as learning communities, it is evident that the schools we studied varied in their abilities to put these building blocks into place. Some schools had successfully managed the process by the time their doors opened, while other schools continue to struggle. Three enabling conditions helped to explain variations in the success rates of charter schools we studied. We offer these as key issues for further exploration in charter schools nation-wide.

1. School Power/Autonomy

Charter schools are, to varying degrees, empowered with control over the budget, personnel, school governance, and curriculum; and the schools with more power were better able to create and sustain a learning community. For example, schools with extensive control over the budget used money in new ways specifically tailored to the needs of the school -- school facilities, curricular materials, professional development or monetary incentives for teachers. Similarly,

power over school governance allowed charter schools to experiment with decision-making structures, length of the school year, and the weekly school schedule.

Charter schools also were more easily able to avail themselves of community resources and opportunities without the constraint of the district office. The schools we studied tended to make decisions about professional development, for instance, based on staff interests and needs, not what the district office offered at a convenient time. Schools with a high degree of autonomy, moreover, had the ability to respond quickly to resolve problems, rather than contending with an approval process that sometimes takes months. Charter schools also were able to recruit, train, and socialize their staffs, which proved critical for sustaining passion and commitment to the school mission. Finally, the autonomy of charter schools offered opportunities for implementing "cutting edge" innovations in teaching and learning, although as noted earlier, many charter schools did not capitalize on this power.

The way in which school power enabled charter schools was keenly demonstrated in California through an informal comparison of charter schools with full fiscal autonomy and those that remained fiscally dependent on the district. The charter schools with high levels of autonomy described how they were able to research, select and adopt new curricular programs with relative ease. One elementary school sent teachers to visit other schools to observe classroom practices; the teachers, working through the curriculum committee, brought a recommendation to the school council; and the council voted and the curriculum was ordered immediately: "I got on the phone that day, placed the order, and we had the curriculum and all the instructional materials in a week."

It should be noted that the schools described as making the best use of this autonomy/power were those with some degree of organizational capacity to support teaching and learning. Schools with weak organizational structures appeared to have more difficulty capitalizing on the autonomy they were given to develop and foster a high quality learning community. The seemingly paradoxical relationship between charter school performance and the strength of charter school legislation is an area for future exploration. Policy researchers have argued elsewhere (Bierlein & Mulholland, 1995; Buechler, 1996) that expansive charter school laws are those that

grant the greatest degree of autonomy with few regulations or restrictions; make it easy for a variety of individuals and groups (public and private) to obtain charter status; and allow large or unlimited numbers of charter schools in the state. Expansive laws, in theory, are supposed to be more lenient -- charter school sponsors are expected to be more risk-taking, approving more innovative schools than in states with less expansive laws. Charter school proponents argue that expansive laws are good public policy. Results from our focus groups, although admittedly limited, raised the issue of whether there were potential benefits for charter schools from a mix of freedom and standards for operators: the schools described as using their autonomy to their greatest advantage were in California, the state with the most restrictive provisions of the three we studied (Buechler, 1996).

2. *Presence of Supportive Networks/Organizations*

In 1989, when England created its version of charter schools -- grant-maintained schools -- the central government at the same time established an organization -- the Grant-Maintained Schools Foundation -- to assist schools moving to charter status and to provide technical assistance once schools opened (Wohlstetter & Anderson, 1994). In the United States, although governments at both the federal and state levels, are becoming increasingly more supportive financially of charter schools, neither has established a technical assistance organization parallel to England's Grant-Maintained Schools Foundation. Instead, states with charter school laws typically have added a "charter school unit" to their state departments of education. The chief purpose of the unit is to administer the charter school law, which often includes overseeing the application process, developing an accountability system and evaluating implementation of the law. There has been continued tension and controversy regarding whether such units should provide technical assistance to schools. Consequently, there are few governmental units providing support to charter schools in the United States.

Instead, a cottage industry of organizations has developed across many states to assist charter schools. In the three states we studied, one group usually was informally anointed to provide such services and the group was led by a charter school expert, typically someone

identified as a charter school advocate -- Eric Premack, director of the Charter Schools Project at California State University's Institute for Education Reform; and Joe Nathan, director of the Center for School Change at the Hubert H. Humphrey Institute of Public Affairs, University of Minnesota. The services provided by the groups (usually on a pay-for-service basis) take a variety of forms, from workshops for groups of charter schools to on-site visits to individual charter schools. Supported in part by a grant from the Massachusetts Department of Education, the Charter School Resource Center at the Pioneer Institute in Boston is the most comprehensive of the three in terms of the services it provides. The Center assists charter schools by hosting Charter School Roundtable sessions (bi-monthly) in which approved charter schools come together to share problems and best practices. Center staff also visit charter schools individually (at least twice a year) to assess organizational strengths and weaknesses, and to provide timely feedback to school leaders. The Center also helps charter schools and potential charter school founders with foundation and business outreach to stimulate support for charter schools; legal research; and policy education to keep state legislators informed about charter school laws and current implementation issues.

Across the states, most participants in the three focus groups had sought assistance from the group in their state on educational matters related to their missions, accountability issues and ways of coping with special education requirements. Charter schools in our study had received advice on business matters as well from the groups.

We also heard about the support some of our schools received from the national education reform networks to which they were affiliated. Help from these groups related mostly to curriculum and instructional issues and frequently, the assistance was provided through staff development workshops attended by various members of the network, some charter schools but mostly district-controlled schools. Also noteworthy was the one charter school principal who affiliated with a policy research group -- the Consortium for Policy Research in Education -- and used the link as a way to bring best practices about performance rewards into her school.

3. Presence of Supportive Parents

Throughout this paper, we have presented several examples of how a supportive base of parents facilitated the creation of a charter school and nurtured its on-going development. At inception, parental interest can be a driving force in creating the passion and commitment needed to establish a school - - an interested group of consumers is necessary for a school to have students to teach. Many of our focus group participants reported that receptive parents also provided a great deal of encouragement and assistance in the start-up of charter schools. This often resulted in a "honeymoon period" for the schools when they could count on a great deal of unconditional support from parents. As one administrator commented, "Parents signed-up when we were selling air."

However, not all charter schools with high initial parental interest experienced a "honeymoon period"; for a few schools, parental interest escalated into parental meddling. For example, when one school implemented a global, thematic approach to math that excluded textbooks, the parent protest was strong enough and loud enough that the school eventually adopted textbooks for some classrooms.

Beyond start-up, longer term support from parents can contribute in significant ways to the level of resources the school enjoys, from the school facilities to curriculum and instructional materials. Focus group participants mentioned many types of on-going support from parents. As one teacher remarked, "We are cared for by the parents." Like SBM schools, parents sometimes participated in training sessions, in discussion groups that focused on instructional issues and in various decision-making structures. Parents also were active in more conventional ways: volunteering for special school tutoring programs, bringing food to staff meetings, and donating time to beautify schools. Parents also provided concrete financial support, through booster clubs, that was used for school equipment, supplies and teacher training. Furthermore, when such support was lacking, schools experienced noticeable difficulties, as one administrator commented. "Our school is about self-realization - - we need more parent involvement to make this school happen."

Conclusions and Policy Recommendations

We began by asking how charter schools created and sustained learning communities. How were school missions developed and translated into classroom practice? How did charter schools learn from what they were doing? What factors seemed to produce high quality teaching and learning? In the charter schools we studied, we identified four critical building blocks for the development of high quality learning communities: the school mission, the school instructional program, the accountability system and school leadership. We found characteristics of the charter schools' approaches to these building blocks that both supported and hindered their development as learning communities. For example, the schools appeared to benefit from the committed attitudes and "outlaw mentality" of the stakeholders (founders, teachers, parents), but the lack of clarity around school mission, instruction, professional development and governance interfered with school progress. Accountability appeared to be an issue of particular difficulty for charter schools. While charter school participants expressed strong feelings of informal accountability to their colleagues, parents and students, strong formal internal and external accountability systems were lacking.

We also identified three enabling conditions that helped to distinguish schools in their abilities to establish the critical building blocks. Schools that had greater levels of autonomy, that were linked to supportive networks/organizations, and that had high levels of support from parents tended to be more successful in creating learning communities.

Given the exploratory nature of this study and the limited number of schools involved, we offer these findings mainly to guide further in-depth research with charter schools throughout the United States. However, the findings also are useful for beginning discussions about connections between charter school policy and practice. Based on the experience of the charter schools we studied in California, Massachusetts and Minnesota, we have generated some initial policy recommendations.

The first recommendation concerns the chartering process. Sponsoring agencies could improve the charter school application and approval process by requiring more concrete, detailed information from applicants. Charters that are approved should be specific about:

- The school mission: Does the charter school have a specific and clear mission statement, focused on student achievement in the core curricular areas?
- The school instructional plan: What are the specific instructional practices and curricular materials the charter school will use to teach students?
- Professional development: How will the charter school provide professional development, both prior to its opening and on an on-going basis?
- Accountability plan: What are the specific performance standards and assessment strategies the charter school will use to evaluate its success?

Based on what we learned from this study, tighter policies to hone the specificity of charter school applications (as suggested above) may effect more stable learning communities in charter schools.

The second recommendation is directed at policymakers who design charter school laws and educators working in charter schools as well. Based on findings that suggested the importance of resources and networks to charter schools, charter schools need to cultivate and effectively manage alternative resources in order to create and sustain successful learning communities. Such resources, moreover, frequently will be located outside the local school community and will likely include linkages with:

- National education reform networks
- Expert consultants for management and fiscal issues
- Businesses, social services and universities
- Assessment/standards consultants

- State department administrators for help with specialized legal requirements (e.g., special education)

Thus, charter school laws need to be written to allow participants the flexibility to contract out for services easily and in a timely fashion. District and state education departments also could play an important role as an information clearinghouse to help put charter schools in touch with professional networks and various organizations that could provide various resources and services. Finally, charter school participants, at least those in leadership positions, need to take on the roles of not only managing people and resources, but also of building connections with the environment to create linkages between the charter school and businesses, communities, universities and other organizations to both increase resources for the school and generate opportunities for faculty and students.

Like all organizations successfully managed around teaching and learning, charter schools need to be oriented towards constantly evolving and adapting to changing demands and new information. Thus, charter schools should be in the practice of continually re-examining and evolving their practices and methods, and making informed changes along the way consistent with professional knowledge. Charter schools, like other learning organizations focused on continuous improvement, would benefit from a "consumer guide" containing systematic information about different curricular models - - what works and what does not - - to help educators make more informed teaching and learning choices. As envisioned, the consumer guide would describe highly effective and replicable methods/materials that could be organized under different subject areas and could include the following information: professional development requirements; appropriateness for culturally diverse students; evaluation and assessment evidence; consumer reviews; and costs. Such an activity would complement the U.S. Department of Education's interest both in the diffusion of educational innovations and in charter schools.

In theory, charter schools accept increased accountability in exchange for decreased regulation and independence. Findings from this exploratory study suggest that individual charter schools are operating in environments that afford various mixes of autonomy, assistance and

accountability and that the mix likely is a strong influence on charter schools' abilities to create and sustain themselves as learning communities. The challenge for future research is to enhance our understanding about connections between charter school policies in states and districts and existing practices in charter schools.

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