

A McREL Report Prepared for

Stupski Foundation's Learning System

Student Supports





About McREL

Mid-continent Research for Education and Learning (McREL) is a nationally recognized, private, nonprofit organization dedicated to improving education for all students through applied research, product development, and service. Established in 1966, McREL now maintains a staff of around 110 in its Denver, Colorado, office.

This report is part of a larger set of reports prepared by McREL for the Stupski Foundation. The views, findings, conclusions, and recommendations expressed herein are those of the authors and do not necessarily express the viewpoint of the Foundation. Please e-mail any inquiries to Linda Brannan at info@mcrel.org.

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Executive Summary

This document is one of eight reports prepared to support the development of a new learning system, a development effort that is the first step in a major initiative undertaken by the Stupski Foundation. The Foundation endeavors to improve the life options of all students, especially urban youth of color and poverty, whom we refer to as “Our Kids,” by fundamentally redesigning the education system. This report was created collaboratively by researchers from McREL with guidance from officers of the Stupski Foundation. Its purpose is to provide members of a “Design Collaborative” team—consisting of practitioners, parents, students, and researchers—with a review of key findings from existing literature to support their efforts to develop the student supports component of the Stupski Foundation’s Learning System.

Research methodology

McREL researchers, in collaboration with Stupski Foundation staff members, generated the following research questions to guide this review:

1. What student supports currently exist to address barriers to learning from the time Our Kids enter kindergarten to their early high school experiences? If there are current practices that show promise, what are the key issues or weaknesses that impede their implementation?
2. What types of supports for learning were identified as essential to the health and well-being of Our Kids?
3. How best can supports be integrated to leverage resources and funding?

While McREL researchers concentrated on these questions to guide the student supports literature review, they did so always with an eye toward what worked for students of color and poverty. The discussion section addresses specifically how the findings inform decisions about student support systems that show promise for Our Kids.

These questions focused an extensive review of scholarly (i.e., peer-reviewed publications) and “fugitive” literature (i.e., reports self-published by reputable foundations, associations, and other organizations). In all, the research team reviewed 285 articles and summarized 71 of these. Data and conclusions from these reports have been synthesized into several key findings.

Key findings

Findings presented in the report fall into two broad areas: 1) the environment of poverty and its deleterious effects on Our Kids’ school success; and 2) approaches to reducing student barriers to learning that are linked to poverty.

The effects of poverty

The following findings emerged from the research regarding the environment of poverty and its effects on Our Kids:

- Our Kids are exposed to inadequate housing, poor nutrition, neighborhood crime, neglect, and environmental toxins at higher rates than their more affluent counterparts.

- These risk factors create barriers to learning including reduced cognitive function and motor development, increased school absence, and higher rates of mental illness, and delinquent and risky behaviors.
- Despite higher incidences of certain physical and mental illnesses, Our Kids are less likely than more affluent children to receive services for these problems.
- As a result of the lack of support for Our Kids, they drop out of high school at two to four times the rates of White (non-Hispanic) students. They also suffer higher rates of violent and delinquent behavior, oftentimes leading to incarceration.
- Services that do exist for supporting Our Kids are often marginalized and fragmented. Providers approach engagement with children in reactive and remedial ways and fail to provide the same levels of enrichment enjoyed by children from middle class families.

Breaking down barriers to learning

The following findings emerged from the research regarding ways that Our Kids' barriers to learning might be reduced:

- Research shows that addressing the needs of children of color and poverty in the school setting can have positive effects on learning, achievement, and college readiness.
- Parent involvement is fundamental to Our Kids' school success. However, biases and misperceptions about Our Kids' parents hinder effective partnerships between schools, parents, and students.
- Effective programs for social-emotional learning significantly improve students' social-emotional competence, their attitudes about themselves and others, and their ability to interact with others effectively in social situations. As a result, students receiving this type of instruction have fewer conduct problems, lower levels of emotional distress, and higher achievement in mathematics and reading.
- Afterschool program participants reported fewer school absences and less tardiness, increased homework completion, increased school engagement, and increased parent participation. In addition, meta-analyses of these programs found overall positive effects on both reading and mathematics assessment scores.
- School-based support service centers most commonly provide site-based medical, mental health and, occasionally, dental services. Expanded models provide family support services as well, such as child-rearing training, employment, housing, and immigration services, family literacy programs, and other academic and child development efforts. These centers provide access to health care and other services for children and their families that improve health and academic outcomes and leverage public and private investment in these services.

Increased student learning time through an extension of the regular school day is related to increased achievement. This model may be especially useful for children of color and poverty who lack the same outside educational resources of their more affluent peers. In addition, there are undeniable benefits to extending learning time for English-language learners who require additional time to catch up to native English speakers.

Models that incorporate knowledge from all findings listed above are based in comprehensive collaboration between schools, parents, and community organizations. In these programs, public school buildings serve as neighborhood "hubs" open to students, their families, and members of their community before, during, and after school, seven days a week, and year round. These "cradle-to-college" systems are geared toward both academic achievement and positive youth development.

Recommendations

Based on these findings, five options are offered for how the Design Collaborative might proceed with its efforts.

Option 1:

Adopt and/or adapt effective curricula and programs to promote social-emotional learning (SEL)

Under this option, the Design Collaborative would focus on establishing sustainable, high-quality, and carefully implemented programs for social-emotional learning in schools with high percentages of children of color and poverty. Possible benefits include the use of existing resources and expertise (programs in SEL have been well-researched and evaluated) that would bring the interventions to scale quickly. However, to be successful, these programs should be an integral part of existing academic programs rather than being considered an “add-on.” Careful attention must be paid to developing capacity among school staff and program partners to successfully implement SEL interventions, including support for professional development and a means of reducing staff turnover.

Option 2:

Adopt and/or adapt effective out-of-school-time (OST) programs

Another option for the Design Collaborative would be to adopt, adapt, or synthesize one of the many OST programs that address student barriers to learning. In a fashion similar to Option 1, the Design Collaborative could capitalize on the large body of research and models of effective programs in OST to drive their development work. The OST framework allows for flexibility in programming that caters to specific needs of students in varying environments. Possible barriers to implementing OST programs include lack of financial support and the difficulties of enrolling students who are most in need of these services.

Option 3:

Adapt school day extension-of-learning-time (ELT) models

The research team believes the pay-offs of ELT models for Our Kids can be significant both in meeting basic student needs for health, safety, and supervision, and in allowing for additional time to close achievement gaps in core subjects and address the language needs of immigrant students. The Design Collaborative could incorporate valuable parts of Options 1 and 2 with ELT models to create potentially more rigorous and enriched academic experiences for Our Kids. However, costs are high and barriers to buy-in of programs that challenge the American model of education are many. Therefore, this option will take dedicated work in the areas of policy, planning, fund-raising, and public outreach.

Option 4:

Adopt and/or adapt the school-based health or student support center models

Another option the Design Collaborative might consider is development of school-based health or support centers (SBSCs). This option can follow a number of pathways, ranging from small-scale efforts that offer preventive health services to students to comprehensive models that provide family support services, including child-rearing training, employment, housing and immigration services, family literacy programs, and other academic and child development efforts. The major challenge

of this option is financial sustainability. Most existing SBSCs rely on private and government grants and, as these become scarcer in the managed-care environment, centers are finding that working with third-party reimbursement is difficult.

Option 5:

Adapt systemic, family-centered, collaborative, and culturally appropriate approaches to student support services

Finally, the Design Collaborative may choose to develop an expansive approach, such as the model championed by Geoffrey Canada and the Harlem Children's Zone (HCZ), and adapt it to other communities across the country. The HCZ model has significant advantages in the war on poverty and the related learning deficits Our Kids experience from living in poverty. Political momentum in support of this model is high right now. President Obama recently revealed his plan to provide \$10 million for program planning grants, an important first step in creating effective programs. This option requires a considerable investment of time, labor, and money, which is certainly a disadvantage, but the research team believes such a significant change in the American education paradigm is required to close achievement gaps and level playing fields for Our Kids.

Final thoughts

Barriers to learning are widespread and intractable in the lives of Our Kids. They arise from the culture of poverty to which disproportionate numbers are subjected and include higher rates of violent crime, polluted air and water, high-risk pregnancy, low birth weight babies, hunger, abuse, neglect, disability, uninsured families, unemployment, school dropout, and incarceration, among other factors. Studies show that addressing these needs via school-based programs can have a positive effect on learning, achievement, and college readiness.

The practices described in this report serve as the glue that will bond all elements of the Learning System to ensure Our Kids' needs are explored, addressed, and, with hope, eliminated. With access to an information base that allows schools to be both proactive and appropriately reactive in planning for student success, designers of the comprehensive approaches suggested herein will best facilitate healthy, academically prepared, and successful students.

Introduction

Purpose of this document

This document is one of eight reports prepared to support the development of a new learning system, a development effort that is the first step in a major initiative undertaken by the Stupski Foundation. The Foundation endeavors to improve the life options of all students, especially underserved urban youth of color, whom we refer to as “Our Kids,” by fundamentally redesigning the education system.

The report was created collaboratively by researchers from McREL and officers of the Stupski Foundation. Its purpose is to provide members of the Design Collaborative team with a review of key findings from the existing literature regarding critical research questions related to the Student Supports component of the Learning System and to offer recommendations for the development of this component. Together, the reports cover these topics:

- Assessment
- Curriculum
- Pedagogy
- Student Supports
- Systems Diagnostics
- Leadership
- College Readiness
- Our Kids

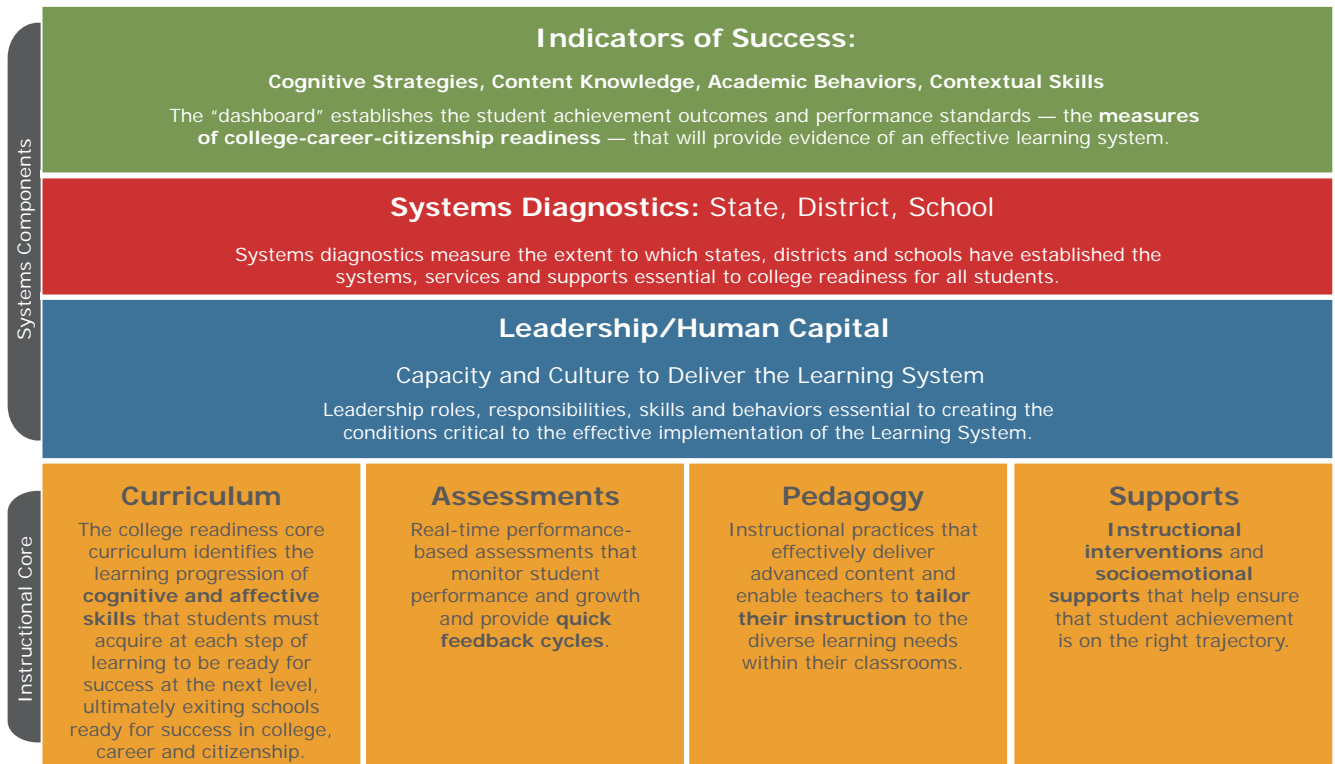
The first section of this report provides salient findings that emerged from the literature review. The second section offers a discussion of the findings along with several recommendations—framed as five key options—for how the Design Collaborative might proceed. A brief concluding discussion follows. Summaries of the studies and literature reviewed for this report were provided as separate documents.

About the Learning System

The Learning System is the product of the Stupski Foundation’s extensive examination of research, best practices, and theories of action for improving education opportunities for all children. It is deeply rooted in the Foundation’s mission to foster innovation in public school systems so that all students graduate ready for college, career, and success—as well as the notion that the United States’ education system, in its current state, is incapable of accomplishing this goal. As stated on the Foundation’s Web site, “The basic components of what public education systems need to teach all students to world-class standards, particularly those students for whom public schools are their only option, do not exist in any coherent, accessible or evidence-based way” (Stupski Foundation, n.d.).

Thus, the Foundation has focused its philanthropic efforts on supporting the “fundamental reinvention” of the American system of public education into one that prepares all children for the challenges of life, career, and citizenship in the 21st century. To accomplish this objective, the Foundation launched a multi-year, cross-sector collaboration among researchers and practitioners from inside and outside education to develop a new and comprehensive learning system. In its June 2008 *Strategy and Program Overview*, the Foundation posited that this system includes seven components, shown in Figure 1 (see p. 6). The indicators of success are dependent on a definition of college readiness, which is addressed in the respective report. Although Our Kids is not an explicit component of the Learning System, it is the basis for the work the Foundation is committed to in the education sector. As such, the populations of students of color and students of poverty warranted a separate report.

Figure 1: The Learning System



About “Our Kids”

The Stupski Foundation is committed to addressing the academic needs of underserved populations, in particular, students who are of color *and* in poverty (which comprises 42% of African American students and 37% of Hispanic students) (Duncan & Magnuson, 2005). Despite a dramatic rise in minorities enrolling in college (a 50% increase from 1995–2005), fewer minorities appear to be graduating. As shown in Figure 2 (see p. 7), in 2006, fewer minorities aged 25–29 reported having obtained an associate degree or higher than their older peers (aged 30 and over) (American Council on Education, 2008). This trend marks an important reversal in advances in educational opportunities for minorities and may mark the first time in history that a generation of students has demonstrated less educational attainment than its predecessors (American Council on Education, 2008).

Overview of methodology

McREL researchers followed a five-step process for translating findings into recommendations.

Step 1: Identification of key hypothesis

After conducting an initial survey of relevant literature, Stupski Foundation staff members identified the following hypothesis to guide the literature review for the Student Supports component:

Student supports either don't exist or are not coordinated in a manner that permits Our Kids to experience continuous success with academic and non-academic issues associated with college readiness.

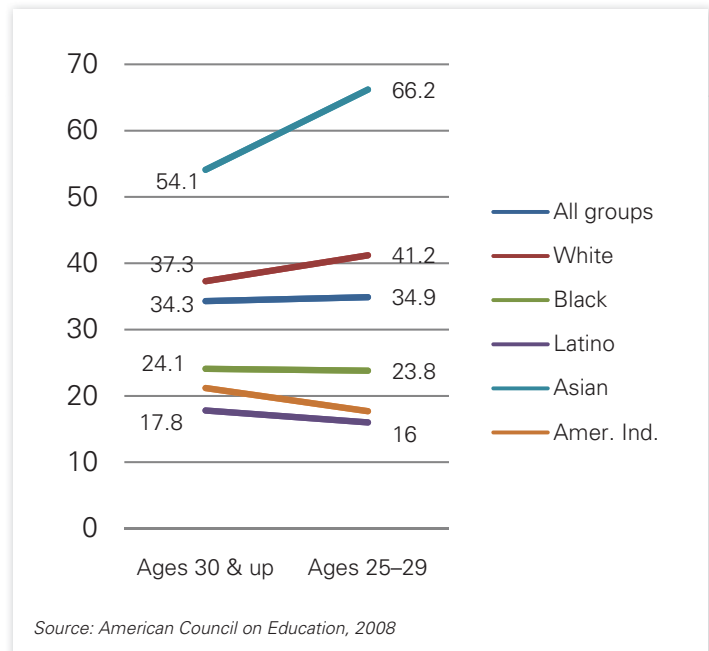
Step 2: Identification of research questions

McREL researchers, in collaboration with Stupski Foundation staff members, generated these questions:

1. What student supports currently exist to address barriers to learning from the time Our Kids enter kindergarten to their early high school experiences? If there are current practices that show promise, what are the key issues or weaknesses that impede their implementation?
2. What types of supports for learning were identified as essential to the health and well-being of Our Kids?
3. How best can supports be integrated to leverage resources and funding?

While McREL researchers concentrated on these three questions to guide the student supports literature review, they did so always with an eye toward what worked for students of color and poverty. The discussion section addresses specifically how the findings inform decisions for this target population.

Figure 2: Percentage of U.S. adults with associates degree or higher, 2006



Step 3: Literature search

The three research questions guided a search for literature in several journal databases (e.g., Academic Search Premier, JSTOR, ERIC, Proquest, Academic Onefile, Educators Reference Complete, PubMed), sites funded by the U.S. Department of Education (e.g., ERIC, What Works Clearinghouse, Doing What Works, National Laboratory Network, and those of national comprehensive centers and national education research centers), and other sources, including Google Scholar and Educational Policy Analysis Archives. Sources were searched by the following keywords:

- Absenteeism
- Achievement / Achievement gap
- Black / African-American students
- After school
- At-risk students

- Bilingual education
- Boys and girls club
- Character education
- Clubs
- Community collaboration
- Community partnership
- Community school
- Community support
- Drop-out
- English-language learners/ELL
- GLBT Urban gay straight alliances
- Hispanic/Latino
- Intervention
- Juvenile justice
- K–12
- Low-income students
- Mental health
- Migrant students
- Minority
- Mobile students/mobility
- Multicultural education
- Non-academic
- Out of school
- Poverty
- Programs
- Resiliency
- School collaboration
- School-community
- School partnerships
- School reform
- Socio-emotional
- Support
- Truancy
- Urban
- Urban schools
- What works
- Youth program

The research team also examined reference lists of articles identified in the first scan to find other applicable studies for all the components of the Learning System. They initially identified 187 articles related to student supports. During the writing and quality assurance phase of this project, a secondary search yielded 98 additional articles of important authors in this field, for a total of 285. All identified articles were retrieved and reviewed with attention to research methods, outcomes, and recommendations for future study. Ultimately, the team summarized 71 articles related to student supports, which are in a separate annotated bibliography.

Step 4: Identification and cataloging of findings

The research team cataloged findings from the summarized articles using the following identifications:

- Counterproductive *orthodoxies* (conventional ways of providing education which may be impeding student success)
- *Unmet needs* (areas where students are not yet well served by the current system of education)

- *Next practices* (a program or practice that needs to be developed, adapted, invented, and tested in response to an unmet need)
- *Promising practices* (practices based on research but not supported by rigorous efficacy data)
- *Current best practices* (practices demonstrated by research to be effective in improving outcomes for students)

Step 5: Generation of recommendations

In the final phase, research team members collectively reviewed key findings from the literature review in light of the following questions:

- What are the critical unmet needs related to this component of the Learning System?
- What is missing in current practices within this component of the Learning System?
- What is working and why?
- What is not working and why?
- What are the biggest misalignments between research and current practice?
- What things should educators do differently in light of the research findings?
- Where is the knowledge base too inconclusive to guide education innovation?
- Where is more research needed to advance practice?

Responses to these questions were synthesized into recommendations, presented here as options for further action. These options include best or promising practices that should be adopted and scaled up or adapted to new settings or areas where there are gaps in practices that require new innovations to be invented.

Overview of the literature base examined

For the purpose of this report, McREL researchers considered student supports as those elements related to factors supporting Our Kids' school successes. The primary focus of papers retrieved was addressing barriers to learning to which Our Kids are disproportionately subjected. They were categorized into risk and protective factors and service models by the following subtopics: physical, mental and dental health and gaps in service, social emotional learning, out-of-school-time, parental involvement, cultural barriers, community partnerships, and the culture of poverty. The outcome for some of these papers was student achievement; others were focused on issues of social equality and ensuring that Our Kids have opportunities to reach their full human potential.

In summary, the literature reviewed, and the findings that follow, are derived from a variety of sources representing an array of research methodologies. In light of the difficulty of conducting experimental research on something as broad and long-term as a K–12 student supports system, the Design Collaborative will need to draw upon these data but also professional wisdom—including a practical understanding of how to develop collaborative, cost-effective, and accessible systems for students and their families, insights into the increasing challenges of poverty in the current economic environment, and cross-disciplinary examinations of promising practices in other fields, including medicine, public health, sociology, and economics—when developing a system of student supports for college readiness for Our Kids.

Findings

The environment of poverty and its effects on school success

This section addresses the first hypothesis generated as a result of the initial literature search: Because Our Kids are poor, they are at higher risk for barriers to learning and have fewer supports to address these barriers. Our findings in this section focus on poverty and its related effects on Our Kids' opportunities for success in school.

Poverty fosters barriers to learning

Over 13 million children live in poverty in the United States (DeNavas-Walt, Proctor, & Smith, 2008). Disproportionately, children of color (33% American Indian¹, 35% African American, 28% Hispanic) live in disorganized neighborhoods from which families that are more affluent have fled (Children's Defense Fund, 2008). Crime and drug-use rates are high, and wages are low. Moreover, few resources for enrichment and outdoor exploration and games such as museums, libraries, parks, playgrounds, and open spaces are located in these impoverished urban settings (Wen, Browning, & Cagney, 2003).

Few health (including mental and dental services) and insurance programs exist to provide care for these students (DeNavas-Walt et al., 2008). In addition, children living in poverty are exposed to inadequate housing, poor nutrition, and/or environmental toxins. For example, recent studies report clear relationships between airborne environmental pollutants and lower IQ levels (Perera et al., 2009), lower average developmental scores, and reduced motor development (Perera et al., 2008) in children of mothers living in polluted inner-city neighborhoods. When environmental risk factors such as these are not ameliorated early

in life, they continue to contribute to a widening of the achievement gap all the way through college. They must, therefore, be considered of primary importance when addressing learning support systems for Our Kids.



Key finding

African Americans' and Hispanics' median per capita income in 2007 was 41–50 percent less than Whites' per capita income (DeNavas-Walt et al., 2008).

Underserved children

Physical and dental health. Children of color suffer higher rates of asthma than white, Non-Hispanic children (McDaniel, Paxson, & Walfogel, 2006). Studies have reported relationships between these illnesses and higher levels of indoor pollutants such as mouse and cockroach dander (Donohue et al., 2008) and second-hand tobacco smoke (Gergen, Fowler, Maurer, Davis, & Overpeck, 1998), two risk-factors common in communities of color and poverty (Pirkle, Bernert, Caudill, Sosnoff, & Pechacek, 2006; U.S. Department of Health and Human Services, 2006; Johns Hopkins Medical Institutions, 2000; Gruchalla et al., 2005). Likewise, children of poverty are more likely to suffer from exposure to lead in paint, soil, and water than their higher income counterparts (Evans, 2004). Lead exposure has been linked to reduced cognitive function (Finkelstein, Markowitz, & Rosen, 1998; Minder, Das-Smaal, Brand, & Orlebeke, 1994; Nevin, 2000), impulsive behavior (Brockel & Cory-Slechta, 1997), and decreased language processing performance (Campbell, Needleman, Riess, & Tobin, 2000) in children and adolescents.

¹Nationally, 33 percent of American Indian children live in poverty. However, in states where there are high concentrations of American Indians living on reservations, childhood poverty rates are as high as 56 percent (Children's Defense Fund, 2008).

Another obstacle facing Our Kids and their families is lack of access to dental care. The 2005 National Health Care Quality Report states that while 58 percent of non-Hispanic white children aged 2–17 years visited a dentist in the previous year, only 37 percent of non-Hispanic black children did so (U.S. Department of Health and Human Services, 2005). Though it stands to reason that improving the dental health of low-income children could positively impact a number of school-related outcomes, no research to date has assessed the effectiveness of school-based dental health promotion projects on absenteeism, student behavior, and achievement measures. However, a 2000 Surgeon General’s report referenced by Lapin and Smith (2008) suggested that over 25 percent of low-SES children do not receive dental care prior to school enrollment, and that poor dental health accounts for a substantial number of student absences each year. School attendance rates are associated with higher achievement and less delinquency, so attempts to limit absences are important to Our Kids (Jacobson, 2008; Hall-Kenyon, Bingham, & Korth, 2009; Sheldon, 2007).

Mental healthcare. The effects of poverty on the physical health and cognitive development of Our Kids put them at a disadvantage for success in school beginning at birth; however, this is only part of the story. Poverty also affects mental health, which builds barriers to learning in similarly deleterious ways.

In their analysis of data from the National Survey of America’s Families, Howell and McFeeters (2008) reported that 7.5 percent of U.S. children ages 6 to 17 have a parent-reported mental health issue. While no significant differences between urban and rural children arose from the analysis, the researchers reported that urban Caucasian children were significantly less likely to have a mental health problem than Hispanic, African American, or Native American urban children. Urban Native American children were most likely to have a mental health problem² (13.8%), followed by African American children (10.5%), Hispanic children (8.4%) and Caucasian children (6.3%). After researchers controlled for a number of covariates, race/ethnicity and family income did not explain the statistically significant variation in the prevalence of mental health problems. Adolescence, male gender, single-parent homes, participation in public insurance programs (which could act as a proxy for income), and parental depression increased the risk of a child experiencing a mental health problem (Howell & McFeeters, 2008). When mental health problems are not addressed in childhood and adolescence, they contribute to increased dropout, suicide, substance abuse, and poor future job performance.

²The authors utilized data from the Child Behavior Checklist to describe childhood emotions and behaviors considered as indicators of children’s mental health. These include: Aggressive Behavior, Anxious/Depressed, Attention Problems, Rule-Breaking Behavior, Social Problems, Somatic Complaints, Thought Problems, and Withdrawn/Depressed.



Key finding

Barriers to accessing support services include the difficulty of the enrollment process or confusion about eligibility, lack of transportation, personal and cultural beliefs, and the presence of competing economic obligations (Hughes & Ng, 2003; Evans, 2004).

Rates of service utilization. Not only do Our Kids suffer disproportionately from medical, mental, and dental health risk factors, but they are also less likely to receive services for these problems. Several studies found that the greatest area of unmet need for children of color and poverty were in mental health care, dental care, and the management of chronic illnesses, such as asthma (Silberberg & Cantor, 2008; Hughes & Ng, 2003; Zimmerman, 2005; Howell & McFeeters, 2008; DeNavas-Walt, et al., 2008).

Numerous studies document disparities in adverse outcomes of illness, enrollment in state health insurance programs, access to care, and use of services. Akinbami, Moorman, Garbe, and Sondik (2009) found that among children with asthma, non-Hispanic black children were more likely to require an emergency room visit and to succumb to the disease than non-Hispanic white children. Likewise, regardless of efforts to eliminate racial disparities, fewer African American and Hispanic children enrolled in SCHIP, the State Children's Health Insurance Program administered by the United States Department of Health and Human Services, than white non-Hispanic children (Shone et al., 2003). Of further concern are Edelstein's (2002) findings that children of poverty suffered from the greatest amount of oral disease, yet they were the least likely to visit a dentist.

In considering differences in mental health access, Howell and McFeeter (2008) noted that Hispanic children were significantly less likely to visit a mental health provider than their Caucasian or African American counterparts, whose behavior did not statistically differ. After controlling for a number of confounding factors, however, both Hispanic and African American urban children were significantly less likely to have made a mental health visit. In addition, family income and geographic location had a significant impact on children's mental health visits. In general, children living in the Midwest and South were less likely to have made a mental health visit than children in other regions of the country.

Howell and McFeeter's research suggests that although children of color living in urban communities are significantly more likely to be exposed to risk factors which increase the incidence of mental health problems, they receive mental health services at rates equal to or less than white children with lower incidence of mental health problems. While some differences arise from differences in access to mental health care, the researchers note that racial/ethnic differences remain even after controlling for income and health insurance coverage.

Risk factors for delinquency and its consequences

Children of color and poverty are born into an environment where they are more likely to suffer illness, cognitive deficits, and neglect. One result of exposure to these factors is a higher incidence of violent and delinquent behavior in later years (Maas, Herrenkohl, & Sousa, 2008). Other factors enter into play to advance delinquency among these children including spending more unsupervised time in high-risk environments.

Unsupervised afterschool time is risky for Our Kids. Between the hours of 2:00 and 6:00 p.m.,



Key finding

Statistics from the FBI show that on school days, serious juvenile crime is the highest between the hours of 3:00 and 7:00 p.m. (Snyder & Sickmund, 1999).

rates of violence, delinquency, sexual activity, and alcohol, tobacco, and other drug usage rise (Gottfredson, Gottfredson, & Weisman, 2001; Snyder & Sickmund, 1999; Snyder, Sickmund, & Poe-Yamagata, 1996). Many parents, especially single working parents, have limited resources for supervising their children during this high-risk time of day. In addition, association with a delinquent peer group, common among unsupervised students, is related to increased rates of delinquency among Our Kids (Lipsey & Derzon, 1998). Also, school problems such as academic struggles, a lack of commitment to school, and low expectations or aspirations during elementary and middle school were associated with a higher risk of delinquency by Herrenkohl and colleagues (2001).

Research suggests that children in the midst of home or neighborhood adversity but who enjoy stable and meaningful relationships with adults other than their parents (e.g., teachers, social workers, guidance counselors, etc.) develop a form of resilience that is protective against the child’s risky environment (Doll & Lyon, 1998). And while some children manage to overcome the risk for delinquency presented at school and home, Our Kids are less likely to enjoy these relationships, termed “social capital,” to which children from more affluent backgrounds have access (Evans, 2004).

One result of the lack of attention to the support of students of color and poverty is that Our Kids drop out of high school at two to four times the rates of White (non-Hispanic) students (U.S. Department of Commerce, 2007) (see table below).

Table 1. 2006 Status³ dropout rates in grades 9–12 by race/ethnicity

Race/ethnicity	Dropout rate
African American	10.7%
Hispanic	22.1%
White, non Hispanic	5.8%

Source: U.S. Department of Commerce (2007), Census Bureau, Current Population Survey (CPS), October 1967 through October 2006.

These rates are especially troubling given that students without high school diplomas are not only excluded from college, but they also have lower incomes and higher rates of unemployment (U.S. Census Bureau, 2003; U.S.

³“Status” dropouts are 16- to 24-year-olds who are not enrolled in school and who have not completed a high school program regardless of when they left school. People who have received GED credentials are counted as high school completers. All data except for 1960 are based on October counts. Data are based on sample surveys of the civilian noninstitutionalized population, which excludes persons in prisons or in the military, and others not living in households.



Key finding

In school year 2000–2001, high school students from low-income families dropped out of school at six times the rate of their peers from higher income families (U.S. Department of Education, 2004).

Department of Education, 2007). In addition, they are more likely to be incarcerated than are students with a high school diploma or its equivalent, such as a General Education Development certificate (Harlow, 2003). If Our Kids do make it to college, they spend more time in remedial coursework and are less likely to graduate than other students (Jacobson & Mokher, 2009).

In purely financial terms, a California study by Belfield & Levin (2007) estimated that if the California high school dropout rate were to decrease by half for one year, state and local governments would save \$3.2 billion in the costs of lost tax revenues from unemployed citizens, health expenditures for the uninsured, and crime and welfare expenditures.

Fragmentation of services

Unfortunately, successful programs for children of color and poverty that are well-funded, integrated with home and community, and accessible to families from all socioeconomic and cultural backgrounds are scarce or lack research-based evidence of effectiveness. School supplemental support services provide most existing non-academic support programs; as a result, they are fragmented (Greenberg et al., 2003), which limits their accessibility and usefulness to needy parents and their children.

Researchers at the UCLA Center for Mental Health in Schools examined guidance around school improvement planning provided by state and local education agencies and found little attention paid to addressing barriers to learning in most school improvement plans (Center

for Mental Health in Schools, 2005). Without proactive planning for student support services, the usual response to gaps in support services for low-income children has been to implement numerous academic, preventive, and social development initiatives. Unfortunately, many of these programs lacked solid research evidence of effectiveness and were implemented without coordinated administrative support, professional development, staff buy-in, or community involvement (Greenberg et al., 2003). They are, as a result, marginalized, which limits their effectiveness.

Unique cultural challenges

Large numbers of children of color and poverty are newcomers to the United States. According to the Pew Hispanic Center (2009), Mexican immigrants comprise the largest group of all immigrants living in the United States. Mexican immigrant children under age 18 are more than twice as likely (39% vs. 18%) to live in poverty as U.S.-born children. In addition to facing poverty risk factors, these children must cope with additional barriers to student success related to their immigrant status. Many of these students do not speak English and move frequently throughout the year (DeNavas-Walt et al., 2008). Their parents face similar barriers which limit their involvement in school and the promotion of their children's success. These include language, cultural expectations, isolation, and lack of childcare for youngsters at home. Furthermore, they often work long hours or more than one job, which limits the time they can spend at parent teacher conferences or helping their children with homework (Turney & Kao, 2009).

In summary, poverty is the principal risk factor for school failure facing Our Kids (Rothstein, 2008); it generates multiple conditions that impair student achievement such as poor nutrition, inadequate

housing, and/or environmental toxins, lack of transportation, personal and cultural beliefs, crime-ridden neighborhoods, lower levels of social support, high mobility, fewer technological supports, and school buildings in disrepair (Hughes & Ng, 2003; Evans, 2004). However, research findings support the notion that minimizing these risk factors and strengthening those that shield children from the ill effects of poverty have positive effects on learning, achievement, and college readiness (Zins, Weissberg, Wang, & Walber, 2004; Tolan, Gorman-Smith, & Henry, 2004).

Reducing learning barriers linked to poverty

This section addresses the second hypothesis generated: If Our Kids received consistent and targeted services provided by comprehensive student support centers that address barriers to learning, they would have significantly stronger chances to graduate from high school and college and to improve their life options. Our findings include information on the importance of parent involvement at school, evidence about the positive effects of social-emotional learning, and a discussion of programs that extend learning time and provide much-needed health, social, and academic services in efforts to reduce students' barriers to learning.

Addressing nonacademic needs in the school setting

There is solid evidence that children whose nonacademic needs are unmet are less able to perform well academically, more likely to drop out, and less likely to advance to college (Henfield, Owens, & Moore, 2008; Henry, 2000). Studies have shown that addressing these needs via school-based programs has a positive effect on learning, achievement (Tolan, Gorman-Smith, & Henry, 2004), and college readiness (Lotkowski, Robbins, & Noeth, 2004).

The literature is rich with approaches to addressing needs in the school setting, ranging from stand-alone strategies to increase parent involvement and teach students important skills for coping with adversity to comprehensive, system-wide programs that ameliorate the effects of poverty, violence, substance abuse, teen pregnancy, mental and physical illness, and neglect.

Parent involvement at school. Research findings make it clear that parent involvement is fundamental to Our Kids' school success (Jeynes, 2005; Marzano, 2000, 2003). Student characteristics (e.g., their home environments) accounted for 80 percent of the variance in student achievement compared to the 20 percent attributed to school and teacher characteristics in Marzano's research (2000, 2003). Likewise, parent involvement and expectations were among the strongest predictors for every indicator of school success, including dropout, retention, and achievement scores (Entwisle, Alexander, & Olson, 2000).



Key finding

Parents of children of color and poverty are untapped sources of knowledge and information about how best to support their children (Orozco, 2008).



Key finding

There is a “positive and convincing relationship between family involvement and benefits for students, including improved academic achievement. This relationship holds across families of all economic, racial/ethnic, and educational backgrounds” (Henderson & Mapp, 2002, p. 24).

Achieving the levels of parent involvement required to make a difference for Our Kids requires confronting biases and misperceptions about parents. Because many educators have socio-economic and cultural backgrounds that differ from those of Our Kids, they often do not understand how economic realities, cultural issues, and practical experience can hinder the involvement of parents and families in schools (Wainer, 2004). As a result, educators often conclude, erroneously, that parents and families of Our Kids are not interested in or supportive of education (Orozco, 2008). Research suggests otherwise; parents and families of Our Kids *are* interested in being more involved in their children’s education (Bridgeland, DiIulio, Streeter, & Mason, 2008), but often do not attend school events because of their own poor experiences with schools, scheduling complications stemming from work and transportation issues, and not feeling welcome or comfortable in school environments where staff members tend to hold advanced degrees and communicate in ways that either intimidate or are unfamiliar to them (Wainer, 2004; Bridgeland et al., 2008).

Fortunately, research and data does show that the parents and guardians of Our Kids are interested in their academic advancement and are willing to do their part to facilitate their successful school experience (Bridgeland et al., 2008). However, to create higher levels of involvement, educators must shift their paradigm for parent involvement, adopting non-traditional, divergent, and, sometimes, even radical approaches to parent and community involvement in their schools. Instead of adopting what might be called a “field of dreams” approach (i.e., “if you build it, they will come”), education practitioners must first, view parent and family involvement as non-negotiable, and second, find ways to more effectively

reach out to the families and bring them into schools. Third, administrators and educators need to recognize that parent involvement is not simply a school-level activity—teachers serve as the primary connection to Our Kids and their families and, thus, need to be better supported and educated about how to involve families in their children’s education.

Jeynes’ meta-analysis of the effects of parent involvement on student achievement found that having high expectations of educational progress is the most significant contributor to a child’s academic achievement. In addition, parental reading to children and the extent to which a parent demonstrated a supportive, helpful style of parenting were highly predictive of higher student achievement (Jeynes, 2003).

Huang and Mason (2008) studied motivations for African-American parental involvement in a large, urban, Midwestern city that serves a predominance of African-American children living near or below poverty levels. After interviewing parents of children enrolled in Head Start and Project LEAPS (Literacy Enrichment and Achievement for Preschool Success), they found that levels of parental involvement increased when parents received an invitation to participate in a voluntary family literacy program. This invitation provided a gateway into the school and facilitated relationship building with teachers and other parents. Thus, providing appropriate knowledge and resources to African-American parents encourages their involvement.



Key finding

Well-planned and well-implemented programming for social-emotional learning can positively affect a broad range of student social, health, behavioral, and academic outcomes (Greenburg et al., 2003; Zins et al., 2004).

Approaches to involving parents of immigrant children work best when culturally and linguistically appropriate. In one example, Orozco (2008) found that Latino parents who are concerned about their children's academic success and health follow recommendations they hear on radio shows conducted in Spanish. Specifically, parents who listened to *La Placita Bilingüe* reported testing their children for Attention Deficit Hyperactivity Disorder and enrolling their children in health insurance programs after listening to broadcasts about the topics.

Rathbun and Hausken (2001) found that a correlation exists between school demographics, the number and type of transition activities that occur, and parental involvement in the schools. The data suggests that elementary schools with high percentages of children of color and poverty and, specifically, English language learners, use more transition activities (e.g., phoning and sending kindergarten literature home, having teachers visit student's homes at the beginning of the school year, and inviting parents and students to visit the classroom before kindergarten begins) because doing so increases parental involvement throughout the student's education.

Wainer (2004) notes that, "Typically, there is a lack of a coherent strategy on how to engage immigrant parents" (p. 22). He suggests several innovative strategies for creating environments conducive to engaging immigrant parents while introducing them to school cultures in the United States. These include creating flexible schedules with evening hours for parents to meet with teachers; providing childcare services during parent-teacher conference times; offering bilingual PTA meetings school orientation sessions, and informal "coffee shop" discussion groups; addressing parent literacy in conjunction with student literacy; establishing procedures and programs that help acclimate parents to school culture; and establishing and utilizing partnerships with community organizations and parent liaisons.

Curricula for social-emotional learning (SEL). There is a large body of scientific research showing that effective programs for social and emotional learning significantly improve students' social-emotional competence, their attitudes about themselves and others, and their ability to interact with others effectively in social situations. Meta-analyses of SEL innovations, which include interventions addressing bullying, violence reduction, self-esteem, and emotional control, report the programs are effective across grades K–8 in both classroom and after-school settings for racially and ethnically diverse students from urban, suburban, and rural locales (Payton et al., 2008; Wilson, Gottfredson, & Najaka, 2001; Centers for Disease Control and Prevention, 2007).

In addition to the positive effects of these programs, students in effective SEL programs suffered from fewer conduct problems, exhibited lower levels of emotional distress, and achieved higher academic performance (Payton et

al., 2008) than students without SEL programs in their schools. Similarly, Wilson et al. (2001) found that SEL programs improved student outcomes related to dropout and school attendance in their meta-analysis of 165 studies.

In their report on preventing violence through education, the Centers for Disease Control and Prevention (2007) describe universal school-based programs as those that teach topics related to preventing violence to *all* students in a school, not just those who exhibit violent or aggressive behavior. Typical topics include emotional self-awareness, emotional control, self-esteem, positive social skills, social problem solving, and team work. In compiling their synthesis, the authors identified 53 studies with samples of greater than 20 students, and compared students exposed to the prevention programs to students who did not receive the instruction. Overall, there was a median effect of a 15 percent reduction in violence in schools with the prevention programs across all settings and socio-demographics. Reducing school and neighborhood violence is an important component of breaking down Our Kids' barriers to learning.

All intervention schools reviewed in the study reported reduced rates of drug abuse, inappropriate sexual behavior, delinquency, and property crimes and increases in rates of school attendance and achievement. Furthermore, in addition to measuring social and emotional assets of the program, one school conducted a cost-benefit analysis and found that, per participant,

more than \$3 were saved in juvenile crime and justice system costs for every \$1 invested in violence prevention activities (Centers for Disease Control and Prevention, 2007).

One example, the Providing Alternative Thinking Strategies (PATHS) program, utilized in neighborhoods with higher-than-average crime rates, has been researched extensively. Using well-matched control groups, one study of the PATHS program indicated that it increased the protective factors necessary for healthy adjustment and success at school (e.g., self-control) and decreased the behavioral risk factors (e.g., aggression) that create barriers to learning (Conduct Problems Prevention Research Group, 1999). In light of the extensive research findings about the benefits of social-emotional learning on successful outcomes in school, implementing well-designed, high-quality programs must be a priority for educating Our Kids.

Out-of-school-time (OST) programs. There is a rich body of research on the effects of OST (both afterschool and summer) programs in reducing delinquency and increasing academic achievement. For example, Kane (2004) reported that afterschool program participants, compared to non-participants, had fewer school absences and less tardiness, increased homework completion, increased school engagement (using indirect measures), and increased participation by parents. Similarly, in their meta-analysis of K–12 OST studies, Lauer et al. (2006) reported that OST programs have an overall positive effect on both reading and mathematics assessment scores.

Key benefits among middle school youth were their self-reported improved work habits and reduced misbehavior. These benefits were present among students who attended the program for one year, but the strongest benefits appeared for students who were enrolled in the selected programs two years. In addition, benefits to



Key finding

Grossman and colleagues (2001) reported that children of color and poverty are underrepresented in afterschool programs.

children increased as they spent longer periods in the program in terms of both numbers of days each week and numbers of hours per day (Vandell, Reisner, & Pierce, 2007).

Unfortunately, attendance in afterschool programs is sporadic, especially for middle school and high school students (Weiss, Little, & Bouffard, 2005). There are gaps in knowledge about how best to attract, engage, and retain these students so they may benefit from the advantages a well-designed and managed afterschool program can provide.

Furthermore, current practices in summer programs, especially for Our Kids, typically use reactive, remedial approaches in instructing lower-achievement students (Borman, 2001; Borman, & Dowling, 2006). These approaches limit success of afterschool and summer programs in getting students ahead academically because they are designed to help students catch up once students have already fallen behind (Borman & Dowling, 2006).

Grossman, Walker, and Raley (2001) collected data from 60 afterschool programs in 17 cities and identified three recurrent challenges that impeded afterschool programs from maximizing their effectiveness. Though schools seem to have sufficient space to house afterschool programs, funding to support the extra use of that space is often not available. Faced with limited funds, administrators are reluctant to allow students to use labs and recreational supplies because the increased use requires more rapid replacement. Additional costs may also keep schools from providing transportation to afterschool students, which creates a barrier to participation (Grossman et al., 2001).

Although OST programs have been difficult to evaluate, due primarily to experimental design parameters (Schwarz & Stolow, 2006), their benefits are difficult to ignore. They provide a safe haven for students who may be unsupervised during the high-risk hours between 3:00 and 6:00 p.m. They provide time for social-emotional learning to occur, as well as programs in the arts and physical education. They are a common and effective gateway to mentoring and tutoring relationships with adult role models. Moreover, programs have been shown to increase mathematics and reading scores (Lauer et al., 2006), homework completion rates, school engagement, and parent participation (Ordonez-Jasis & Jasis, 2004). Finally, a reduction in absences, tardiness, and violent and risky behaviors are demonstrated by students who attend OST programs (Woodland, 2008).

School-based health centers. School-based health centers (SBHCs) gained political and practical support during the 1990s as a means to increase access to health care services for children, improve health outcomes, and leverage public and private investment in services (Lear, 2007). The number of

SBHCs more than tripled between 1994 and 2005 from 600 to 1,709 (Lear, 2007).

One of the most common ailments seen by staff in SBHCs is asthma, a condition from which Our Kids suffer disproportionately, as discussed earlier. Several studies reported that students treated for asthma at a SBHC were less likely to be hospitalized for the condition, thus reducing the amount of lost learning time (Guo et al., 2005; Webber, Carpiniello, Oruwariye, Lo, Burton, & Appel, 2003). Furthermore, schoolchildren with asthma who attended a school without an SBHC missed more school days than those at schools with a center (Webber et al., 2003). In contrast to children at a comparison school, parents of those at a school with an SBHC reported greater access to services for illness, injury, immunizations and physical exams (Kaplan et al., 1999). Kaplan concluded that “underserved minority children with SBHC access have better health care access and use than children without SBHC access, signifying that SBHCs can be an effective component of health delivery systems for these children” (p. 41).

Other research has attempted to find a direct relationship between access to SBHCs and student achievement. However, most studies had methodological or other limitations that reduced their value in drawing such conclusions (Geierstanger, Amaral, Mansour, & Walters, 2004). Two studies without these limitations reported positive outcomes related to school completion. For example, in one study, high school dropout rates were twice as high among students who

didn’t use an SBHC than students who did (Bureau of Primary Health Care, 1994), and users were significantly more likely to stay in school or graduate than non-users in another (McCord, Klein, Foy, & Fothergill, 1993).

School-based support centers provide access to comprehensive physical, psychiatric, dental, and social-emotional health services. They reduce absenteeism, tardiness, truancy, and dropout rates for students who would otherwise not have access to such services (Flaherty & Weist, 1999). The next step on the service-provision continuum concerns more comprehensive system-wide approaches to meeting the needs of children of color and poverty and their families.

Systemic approaches to student support services

Increasing instructional time

In 2006, after several years of planning, the Massachusetts legislature gave schools the opportunity (both financial and practical) to extend the school day by 30 percent or more. This investment in learning time was pilot-tested in 10 schools located in five urban areas with high percentages of students of color and poverty. Each was also a low-performing school and most were failing to meet Annual Yearly Progress in reading and mathematics. The schools that opted to extend their school day from one-and-one-half to three hours per day achieved significant gains in student achievement on Massachusetts state tests from spring 2006 to spring 2007 (Carpenter-Bernier, 2008).

A key component driving the successful implementation at one school was its partnership with Citizen Schools, an organization that manages hands-on apprenticeships for middle school students where they can connect with adult volunteers who help them develop academic and leadership skills. While this school enjoyed



Key finding

Students in the United States spend only 20 percent of their waking time in school each day (Carpenter-Bernier, 2008).

positive outcomes, research conveys a complex relationship between longer school days or years and student achievement (Silva, 2007; Cotton, 1989; Aronson, Zimmerman, & Carlos, 1998). Although increased student learning time is related to increased achievement, many extended learning initiatives lengthen the school day without improving the quality of instruction during that day (Smith, 1998). Moreover, the costs associated with extending the day and the impact these changes have on American cultural norms such as summer vacations and after-school employment have made the proposition difficult to swallow for legislatures, teachers, parents, and students (Silva, 2007).

There is, however, evidence that the benefits of extending the learning day in high-poverty and high-minority schools outweigh the weaknesses. According to Silva (2007), "...extended time may matter more for some students than others. Poor and minority students are less likely than their more affluent peers to have educational resources outside of school and therefore may benefit more from increased school time" (p. 5). Cooper and colleagues (1996) reported that students lose about one month of learning during summer break and noted that this loss was particularly detrimental for Our Kids, who lack the resources of more affluent children to make up for the loss via informal summer learning opportunities (e.g., trips to the museum, summer camps, library programs, family vacations, etc.).

Another important consideration relative to increasing instructional time is its potential benefits for English-language learners (ELLs). The five million-plus ELLs in grades preK–12 (Ballantyne, Sanderman, & Levy, 2008) are predominantly children of poverty (de Cohen & Clewell, 2007). These children require time to catch up to their English-speaking peers and are exposed to less content-related instructional time due to pull-out language instruction programs (Lazarin, 2008). There is only limited research describing the effects of extending learning time for ELLs, but initiatives are currently underway in high-immigrant areas in the Southeast and Midwest.

Typical summer or afterschool programs targeting Our Kids suffer from limited advanced planning, low expectations of students, teachers/staff, and parents, teacher fatigue, discontinuity between the regular school curriculum and the extended program, a lack of emphasis on core academic skills, and low attendance among older students (Borman, 2001). Consequently, experts suggest that schools and districts plan carefully and actively engage parents, service providers, and other community stakeholders to become invested in student's education to bolster the possibility that the reforms will be successful. In doing so, approaches that ameliorate program weaknesses can be both preventive and proactive and build on strengths existing in the entire school community, rather than relying on already overburdened school staff.



Key finding

Effective partnership models are those that provide direct service versus consultative services, enjoy effective interagency collaboration, are supported by visionary leaders, and utilize creative funding strategies (Walter & Petr, 2007).

School day extension strategies are most effective when supported by comprehensive school, parent, and community partnerships as outlined in the next section.

School, parent, & community partnerships

There are numerous models to consider when designing school-based programs that include collaboration between the school, students, parents and community organizations. Anderson-Butcher and Ashton (2004) examined the various roles that intraorganization, interagency, interprofessional, family-centered, and community collaborations can play and found each to be valid in facilitating relationships essential to effective provision of student support services. Sanders (2003) argues that the community can (and should) provide the additional resources required to meet the needs of impoverished students.

The most popular of these may be the Full-Service Community School model wherein a public school building serves as a neighborhood hub that is “open to students, families, and the community before, during and after school, seven days a week, all year long” (Dryfoos & Maguire, 2002, p. 4). Activities are geared towards both academic achievement and positive youth development, including interpersonal and career success. Family support services (child-rearing, employment, housing, immigration) as well as medical, mental health, and dental services are available on-site.⁴

As with data on afterschool programs, research on community schools has been limited, but a recent publication of research shows the effectiveness of these schools in improving school readiness and academic performance, increasing attendance, increasing parent involvement, providing greater health care access, extending learning opportunities, and enhancing community support (Quinn & Dryfoos, 2009). In addition, Dryfoos

(2002) gathered reports from 49 community school programs, few of which were published in the literature. She found that the majority (78%) of programs reported academic gains in reading and mathematics, most significantly for students enrolled in case management, mental health services, or afterschool programs. Other positive effects noted were increased attendance among students and teachers, and decreased rates of dropouts, suspensions, neighborhood violence, and high-risk behaviors such as alcohol use. Moreover, parent involvement and access to health care services improved. Though definitive evidence is not yet available for positive outcomes related to the community school model, Dryfoos believes the movement is trending in the right direction and recommends bringing the model to scale nationwide.

The work of Geoffrey Canada in the Harlem Children’s Zone (HCZ) in New York City exemplifies what can happen when systems and resources are aligned on a grand scale (Tough, 2008). In his attempts to alter the life possibilities of children born in Harlem through the creation of a comprehensive education “conveyor belt” system that offers academic, health, and social support to families, Canada established “a rich concentration of alternative learning, career exploration, afterschool programming, and college counseling to children and youth from a 60-square-block portion of central Harlem” (Dodson, Guillory, Lipsitz, Raper, & Rausch, 2008, p. 24). School-based community centers, called the New York City Beacons, are integral to the success of HCZ. The Beacons are supervised

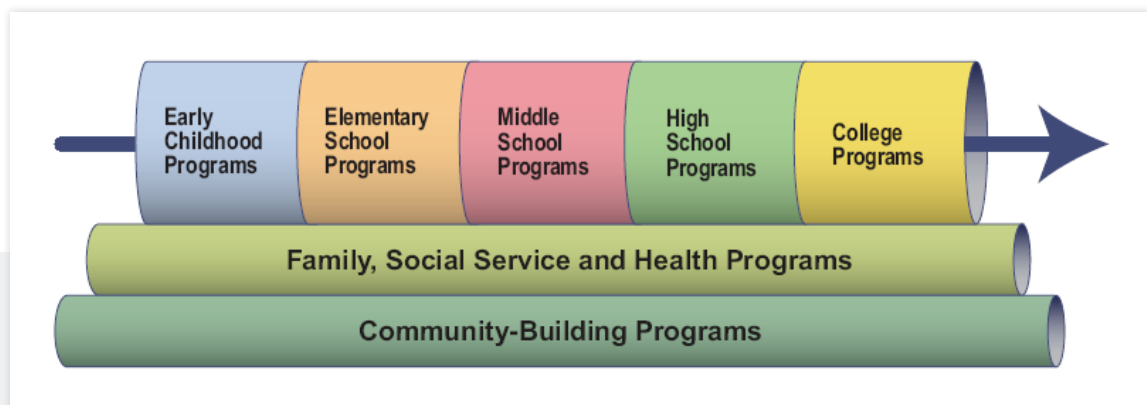
⁴see Coalition for Community Schools at www.communityschools.org

centers, open 9:00 a.m. to 9:00 p.m. six days a week, and provide structured academic, social, and cultural support activities to children, their parents, and their families.

The HCZ Pipeline is the organization’s model for student support (see Figure 3). It provides uninterrupted support for the healthy development of Our Kids, focusing on children’s needs at every point in their lives from conception to graduation from college. The HCZ is set apart from other initiatives in its unwavering determination to reengineer the physical and social environment in which Our Kids reside to one where movement through the pipeline is supported by family, social service, health, and community-building programs (Tough, 2008). What follows is a description of how students move through the Early Childhood Programs section of the “conveyor belt” system that is supported by the pipeline.

The early childhood interventions are anchored by Baby College, which consists of a nine-week course geared towards parents who have children aged three and younger, including expecting parents. Staff gear the sessions to topics that increase the cognitive abilities of the children and assist the parents with creating bonds with their children that encourage their intellectual development.

Figure 3. The Harlem Children’s Zone pipeline



After determining that Baby College graduates were ready for more rigor, Canada and the HCZ implemented the Three-Year-Old Journey, where a director models how parents can use teachable moments to enhance their children's development. The instruction is concrete and hands-on; the director observes parents interacting with their children and provides direct feedback that emphasizes how parents can speak to their children in ways that increase the children's cognitive development.

The Harlem Gems, a pre-kindergarten component of the Pipeline, is a pre-K program that exceeds New York's requirements by lasting 11 months instead of 10, and operates under an extended schedule of 8:00 a.m. to 5:45 p.m. The student to teacher ratio of 4:1 is far better than the

state average of 9:1. Concurrent with the "regular" kindergarten activities (e.g., building blocks, creative play, recess, snacks, naps), the development of what E.D. Hirsch Jr. referred to as "cultural vocabulary; the kind of core knowledge of the world and how it works that makes it easier for a child to go on and read independently" (Tough, 2008, p. 207).

A very recent evaluation of HCZ's programs found the elementary and middle school programs successful in increasing achievement in math and English language acquisition in elementary school and in math in middle school (Dobbie & Fryer, Jr., 2009). Further work is underway which will provide a more complete picture of the strengths and weaknesses of this approach.

Discussion & Recommendations

The options described here are derived from the findings reported in the previous section. In addition, they were shaped by the research team’s understanding of current trends and developments in this component of the system and, in some cases, insights from other literature and knowledge within and outside the field. In addition to the questions described in Step 5 of the Overview of Methodology (see p. 7), these questions were used:

- What current practices have a strong enough evidence base that they should be *adopted* and scaled up?
- What current practices show enough promise in certain contexts that they might be *adapted* for use in settings for Our Kids?
- Where are there sufficient unmet needs and lack of promising practices to warrant the *invention* of new practices?

These options for further action are not necessarily mutually exclusive. The Design Collaborative might ultimately choose a path that integrates several of them and, in fact, the research refers to this option in several ways. Nonetheless, pursuit of any particular option presents opportunity costs. To help the Design Collaborative weigh these costs, advantages and disadvantages for each option are presented.

Option 1: Adopt and/or adapt effective curricula and programs to promote social-emotional learning (SEL)

Classroom-based curricula are one means of addressing school children’s mental health needs. These programs help students “acquire the knowledge, attitudes, and skills to 1) recognize

and manage their emotions; 2) set and achieve positive goals; 3) demonstrate caring and concern for others; 4) establish and maintain positive relationships; 5) make responsible decisions; and 6) handle interpersonal situations effectively” (Payton et al., 2008, p. 4). Interventions can be targeted at the general student body or toward students displaying early signs of behavioral or emotional problems during the regular school day or in afterschool programs.

Under this option, the Design Collaborative would focus on establishing sustainable, high-quality, and carefully implemented programs in schools with high percentages of children of color and poverty. These programs should be an integral part of any academic program in place or under design rather than being considered an “add-on” program. Careful attention must be paid to developing capacity among school staff and program partners to successfully implement SEL interventions, including support for professional development and a means of reducing staff turnover.

Potential benefits of this option

Utilizing existing resources and expertise. The Collaborative for Academic, Social, and Emotional Learning, or CASEL,⁵ works to synthesize current knowledge regarding effective SEL programming that results from the scholarship of its interdisciplinary group of scientists, practitioners, and policy makers. They provide evidence-based guides for implementing new or additional SEL programs in schools and districts and could act as advisors in adapting current resources to meet the needs of Our Kids. In this way, the Design Collaborative would preserve valuable time and resources by not having to “recreate the wheel.”

⁵see www.CASEL.org

Creating an intervention that could quickly go to scale. There are numerous programs that implement SEL content and target various risk factors which could be used by the Design Collaborative as models for this component of the Learning System. Many of these have been evaluated for effectiveness and have published information about benefits and pitfalls of implementation strategies. Some examples are the Responsive Classroom (Rimm-Kaufman, Fan, Chiu, & You, 2006); the Steps to Respect violence prevention curricula (Frey et al., 2005); PATHS (Promoting Alternative Thinking Strategies), providing student behavioral, social, and emotional supports (Greenberg, Kusche, Cook, & Quamma, 1995); and Lions Quest (Eise, Zellman, Massett, & Murray, 2002), targeting alcohol, tobacco, and other drug prevention activities. Adopting or adapting any of these models would reduce the time needed to bring the option to fruition.

Potential challenges or drawbacks of this option

Encouraging buy-in from key stakeholders. Adopting a curriculum or changing a pedagogy can face many obstacles from administration and teachers and, thus, the addition of SEL programs are most successful when included in an overall school improvement plan. Leadership (at both the school and district level) support is a critical factor in high-quality implementation of these programs.

Finding the time to plan for and implement the program. There is limited time during the regular school day to add SEL programs, so they are often marginalized. Without adequate planning and resources to train teachers to deliver the curriculum as planned, to assure programs are consistent theoretically and pedagogically with other school programs, and to conduct formative evaluation of the program so they may be adapted “on-the-fly” to meet the particular circumstances of the student population, SEL programs can yield disappointing results.

Option 2: Adopt and/or adapt effective out-of-school-time (OST) programs

Another option for the Design Collaborative would be to adopt or adapt one of the many OST programs that address student barriers to learning. Program content varies widely, which is one reason they’ve been difficult to evaluate, but they generally fall into one of two categories: academic or academic plus social. In either case, nine core elements of successful OST programs are recommended by Woodland (2008):

- Adult-child relationship (mentoring)
- Flexibility
- Staff training and education

- Safe space
- Cultural component
- Family involvement
- Enriching curricula
- One-on-one academic assistance
- Rigorous and empirical evaluation

In ways similar to Option 1, the Design Collaborative might adopt or adapt existing OST models emphasizing the components found most effective as outlined by Woodland.

Potential benefits of this option

Creating an intervention that could quickly go to scale. The Design Collaborative could capitalize on the large body of research and models of effective programs in OST to drive their development work. Meta-analyses of program effects and a multitude of program descriptions describe positive outcomes and pitfalls encountered in the design and implementation of effective and sustainable programs.

Flexibility in programming. Depending on the unique needs of a given student body, OST programs might be adopted directly or adapted. For example, one school may require more programming in violence and bullying prevention, while another may need a greater focus on teaching English as a second language. Offerings might change from year to year, or even semester to semester depending on school needs.

Potential challenges and drawbacks of this option

Reaching students most in need. Because enrollment in OST programs is not automatic, children of color and poverty enroll at lower rates. Furthermore, attendance is sporadic, especially for middle and high school students. Because higher achievement is correlated with more frequent and longer duration of attendance, this can water down positive effects for some students.

Funding and other resources required. In numerous districts, especially those already spread thin financially, the funding to support the extra use of school facilities is not in place and expensive transportation costs may discourage schools from providing transportation to students. In addition, although mentoring programs show great promise for aiding the achievement of students of color, there is a lack of trained and qualified mentors in this community.

Option 3: Adapt school day extension-of-learning-time (ELT) models

Adapting the ELT model used successfully in Massachusetts (see pp. 21–22) and applying it to other environments will take dedicated work in the areas of policy, planning, fund-raising, and public outreach, but the research team believes the pay-offs for Our Kids can be significant both in meeting basic student needs for health, safety, and supervision, and in allowing for additional time to close achievement gaps in core subjects and address the language needs of immigrant students. Extending the school day increases the amount of instructional time available to teachers seeking to cover curriculum in depth. In addition, while a regular school day in 21st century schools has little time for anything but mathematics and reading, the ELT model allows for programs in art, music, and physical education, and for teaching social-emotional skills that are essential for student success. In implementing this option, the Design Collaborative could, therefore, incorporate valuable parts of Options 1 and 2.

Potential benefits of this option

Creating a potentially more rigorous and enriched academic experience. As reported in the findings section, Our Kids are less likely to attend voluntary enrichment activities, more likely to be unsupervised before and afterschool, and

lose more learning gained during the academic year over summer break. By adopting the ELT model, the Design Collaborative could fill a significant need for quality programming in safe, supervised environments that are equally available to all children.

Utilizing existing resources and expertise. Options 1 and 2 recommend including planning and implementing programs for effective SEL and OST. Extending the school day and requiring mandatory attendance works hand in hand with these earlier options. It allows time for deployment of SEL curricula and removes barriers to attendance that Our Kids face relative to OST programs. It provides time to bring parents and families to school to enhance their involvement in their children's education. Schools with afterschool programs and/or relationships with community providers might capitalize on these existing conditions to facilitate the system-wide extension of an expanded learning time model.

Potential challenges and drawbacks of this option

Encouraging buy-in from all key stakeholders. Effective partnerships with community organizations and businesses are required for the success of Option 3 and it requires the buy-in of parents, teachers, school boards, collective bargaining units, and the community. This takes time and will limit the speed with which the option can be brought to scale by the Design Collaborative.

Costs of implementation. The ELT movement has been slow to gain popularity because of its expense in terms of administration and program personnel, facilities, transportation, and professional development for adjunct staff. Creative financing is required, as well as a strong campaign to garner local and state support for the initiative. Moreover, finding the talent to staff the extended day can be a challenge.

Challenging the status quo. The typical school schedule of approximately 6 hours a day and 182 days a year is a part of the traditional American way of life. There is typically resistance to changing this format due to the perception that it alters family vacation time and after-school work opportunities, among other factors. After-school work commitments or the necessity of going home to care for younger siblings makes this option especially difficult to implement at the high school level.

Option 4: Adopt and/or adapt the school-based health or student support center models

School-based support centers (SBSCs) and their related school-based health centers can address a multitude of barriers to learning that Our Kids face and they eliminate access barriers families may have in traveling to services

that are located outside of their immediate communities. The benefits of on-site health care in reducing student illness, absence, tardiness, and dropout and in increasing access to services for children of color and poverty make the option particularly attractive in seeking solutions to the needs of this underserved population.

However, full-scale implementation is costly, and requires careful planning and establishment of relationships in the community to support the center. If the magnitude of opening centers throughout a district proves insurmountable, one option which the Design Collaborative might consider is establishing “phased-in” support services in a district which serves several feeder schools.

For example, services meeting a student’s most basic developmental needs such as nutrition, safety, and self-care (hygiene) would be provided at all schools in a district. The following “Phase I” programs can be established and maintained at a lower cost per student than other services:

- On-site breakfast and lunch (a service already provided at most schools with high percentages of impoverished students)
- A “backpack program” wherein students receive bags containing nutritious food to consume while they are home over the weekend
- Showers and laundry facilities for older students and their families
- General health education, drug and alcohol education, child abuse education
- Enrichment and recreation
- Conflict resolution
- Parent involvement activities

Phase II programs are more costly. Clustering these services in every 5–10 schools in a district would help alleviate some of the district’s financial burden while keeping services convenient for students and their families. Phase II services might include the following:

- Physical health screenings and care (including dental and eye exams) and immunizations
- Mental health screening and short-term therapy
- Prenatal care and sexually transmitted disease and pregnancy prevention
- Housing arrangements
- Foster and group home placement

Finally, Phase III programs, which require the greatest financial investment, might be district-based in a centrally located school or district office. Services provided in Phase III programs are those that treat severe or chronic problems and result in higher costs per student. They might include the following:

- Long-term mental health counseling
- Juvenile justice interventions
- Emergency/crisis treatment
- Long-term treatment for disabilities

Potential benefits of this option

Resource flexibility. Depending on student and family needs and a community’s ability to provide services in partnership with a school district, the Design Collaborative can develop SBSCs on a smaller scale at first and facilitate expansion as experience grows. Positive outcomes demonstrated in “phased-in” centers can be used to secure additional financing for expansion.

Utilizing existing resources and expertise. As of 2005, there were over 1,700 school-based support centers (SBSCs) in operation across the country. These centers are made possible via robust relationships among hosting schools, districts, and community service providers. The Design Collaborative might capitalize on these existing relationships to expand the model to schools or districts that lack these services. Excellent resources are provided by the National Assembly on School Based Health Care (nasbhc.org), including program models, technical assistance, and information about funding and resourcing SBSCs.

Potential challenges or drawbacks of this option

Encouraging buy-in from all key stakeholders. Like the challenge of garnering support for extended-learning-time models, effective partnerships with community organizations and businesses are required for the success of SBSCs. It is not easy to establish and maintain the complex partnerships required to launch and sustain these efforts. In a related fashion, enabling parent participation is required for program success.

Sustainability. One of the most challenging problems facing SBHCs is how to sustain operations in increasingly difficult economic times. The private and government grants relied upon are becoming scarce. And, turning to third party reimbursement has been made difficult by the managed care environment under which much of our health care systems operate.

Option 5: Adapt systemic, family-centered, collaborative, and culturally appropriate approaches to student support services

A more expansive approach than the one indicated in Option 4 is to adapt the model championed by Geoffrey Canada and the Harlem Children's Zone to other inner-city communities across the country. Canada's model, which aims to address barriers to learning before children are even born, carries significant advantages in the war on poverty and the learning deficits it produces for Our Kids. The structure of the model's New York City Beacons community centers makes possible the other support services Our Kids need. They provide safe haven for students before and after school and during summer when students aren't in school. Cultural and recreational enrichment programs are coupled with preventive services targeting physical, mental, and emotional health. Parent and family needs are addressed as well through programs that foster parent literacy in addition to student literacy, programs and procedures that help parents acclimate to the "culture of education," and partnerships with community health, mental health, immigration, substance abuse prevention, and social services providers.

Potential benefits of this option

Political support. Now more than ever, it can be argued, political support exists for addressing the deleterious effects of poverty on children and their schools exists. One need only scan for media reports of the Obama administration's mention of childhood poverty, the Harlem Children's Zone, or Promise Neighborhood planning grants to feel a sense of hope that big changes in urban education and outcomes for Our Kids are possible.

President Obama announced earlier this month that he “seeks to replicate Canada’s model in 20 cities in a program called Promise Neighborhoods and has set aside \$10 million in the 2010 budget for planning” (Shulman, 2009) these programs. The momentum is right for moving ahead with this option.

Offering a fertile ground for experimentation and adaptation. By experimenting with the HCZ model in areas that differ from Harlem, important data can be collected that will help drive thoughtful designs for broad dissemination. For example, imagine a similar program on the Pine Ridge Indian Reservation in South Dakota. The area couldn’t be more different than Harlem physically, but it is home to the country’s most impoverished students with the highest rates of school failure. The Design Collaborative could adapt the offerings to this new environment and others and, thus, make significant contributions to both the literature on effective approaches and to an underserved community.

Potential challenges and drawbacks of this option

Encouraging buy-in from all key stakeholders.

Like other options, this one requires full buy-in at all levels, including administration, teachers, parents, and the community, to be successful. This is challenging work for the Design Collaborative, but with the excellent model that has the support outlined above, this barrier can be overcome.

Costs of implementation. Systemic approaches like the Harlem Children’s Zone are expensive. Canada estimates the cost to educate a child in the HCZ is about \$5,000 per child, and he raises much of his \$70 million annual budget privately. This work has been difficult lately in light of the economic downturn and, as a result, Canada was forced to lay off 10 percent of his staff recently.

Lengthy development cycle. Should the Design Collaborative decide to experiment with and adapt the model to other environments, the undertaking will be time- and labor-intensive.

Final Thoughts

Barriers to learning are widespread and intractable in the lives of Our Kids. They arise from the culture of poverty to which disproportionate numbers are subjected and include higher rates of violent crime, polluted air and water, high-risk pregnancy, low birth weight babies, hunger, abuse, neglect, disability, no health or dental insurance, unemployment, high school dropouts, and incarceration, among other factors. Studies show that addressing these needs via school-based programs can have a positive effect on learning, achievement, and college readiness.

Multiple research studies inform us that effective teachers are one factor that has great impact on student achievement. Given that the vast majority of teachers teaching Our Kids do not have deep, direct experience teaching Our Kids, providing them with the cultural knowledge bases that can inform a sound pedagogy is vital to their success as educators. Learning research-based instructional strategies and implementing them without the appropriate cultural context of the student can, and has often, rendered those strategies ineffective. The use of community organizations in meeting the out-of-school-time needs of students can link teachers to adults from Our Kids' communities who are also concerned about Our Kids' well-being. If educators do not have the skills to engage in effective dialogue with members from Our Kids' communities, then efforts to design a Learning System to support college readiness will be in vain.

The best designed programs, complete with culturally relevant pedagogies and heavy technological emphases, are of little use to students who cannot fully benefit from their school experience because the most critical needs

are under-addressed. Designers must attend to a continuum of services to meet students' support needs, particularly those that concern systems to promote students' healthy development, in order for any reform effort to be successful. The prevalence of emotional and mental health risk factors that contribute to behavior and attendance issues plaguing our schools are barriers to learning for all students, but especially for Our Kids.

Given the lack of success generations of Our Kids have had with schools in urban areas, as evidenced by the crisis of low matriculation and staggeringly low graduation rates, clearly, something different has to happen to create real opportunities for Our Kids. We can neither continue to repeat nor simply tweak what has not worked in the past. A comprehensive overhaul of school operations as we have known them in urban areas holds significant promise for addressing the root causes of the failure of our schools so that communities can transform schools into highly reliable organizations that serve the common good.

The practices described in this report serve as the glue that will bond all elements of the Learning System to ensure of Our Kids' needs are explored, addressed, and, with hope, eliminated. With access to an information base that allows schools to be both proactive and appropriately reactive in planning for student success, designers of the comprehensive approaches suggested herein will best facilitate healthy, academically prepared, and successful students.

The research team has advanced an argument that partnerships among the community, schools, and families hold special promise for meeting the needs of Our Kids. Philanthropic organizations,

such as the Kellogg Foundation, and philanthropic individuals, such as Stanley Druckenmiller of the Harlem Children's Zone, are particularly well poised to positively shape the future of urban education. The financial influence of philanthropists can have a ripple effect of positivity directed towards reform efforts. Such support of urban school reforms efforts, if managed properly, can shift the public will to become one where tax payers view urban education as a good and necessary investment.

Further, the increased media attention stemming from projects with private financial support can allow the federal government to deepen its commitment to education, as evidenced by the Obama administration's public praise of the efforts of the Harlem Children's Zone. Thus, the confluence of private and public funding and interest can increase the level of accountability. Low achievement becomes an issue that is the community's problem to solve, as opposed to the school's problem to solve, as is currently the norm.

Before designing support programs, districts must take stock of all of the resources available to them. In order to garner the support of community members, key stakeholders should be involved in discussions in which they plan how to leverage the resources they will need to put a supports system in place to facilitate student, family, and community success. Before involving community stakeholders, district leaders should take an honest look at the relationship that community organizations have had with schools and school leadership. Inviting community involvement inside school walls means accepting the gifts, talents, and opinions community members bring. Aligning the mission of those within a single bureaucracy is difficult enough; undoubtedly, establishing relationships with other organizations will require adaptability on the part of schools. Sharing the responsibility of meeting the needs of Our Kids might mean redefining what school leadership looks like.

Along with taking stock of available resources, district and school leaders must be prepared to consider the historical context that has created systemic barriers to learning that have discouraged Our Kids from graduating from college. That is, districts should prepare to acknowledge and examine the impact that generations of nation- and state-sanctioned discriminatory practices and policies have had in creating a bleak future for Our Kids. The research team suggests, and reiterates, that the successful creation of comprehensive, school-based support systems that prevent some problems and address others as they appear will require the intentional, sustained effort of all stakeholders.

Understandably, many districts desiring to implement full-scale school improvement plans complete with comprehensive student support centers will face resource challenges. Thus, they will have to consider which programs they can bundle to increase the efficacy of their entire school improvement plan. Clearly, schools serving Our Kids have different needs across the United States; therefore, it behooves designers to create systems that allow districts and schools to determine the individual needs schools have. That way, the reform efforts can be specifically tailored to meet unique situations.

The practices detailed in this report might encourage stakeholders to call into question or re-examine existing orthodoxies concerning student

supports in education. Ensuring the success of Our Kids in the Learning System will require the reconfiguration of many ways of being that have become institutionalized in our school cultures. Challenging and addressing existing norms will require practitioners to be willing to be introspective about themselves and their role, both as individuals and collectively, in perpetuating the current state of urban education—both the good and the bad.

The responsibility for the existence of inadequate education systems for Our Kids falls on the shoulders of many; it will require the efforts of many to tear down the barriers to learning that limit the life options of a great number of American citizens.

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Appendix

Literature review method

In June 2008, the Stupski Foundation created a conceptual framework for the reinvention of American education. The framework identified seven essential components and focused on delivering 21st century college readiness for all students, but especially for “Our Kids,” children of color and poverty. The Foundation explained that “graduating all students from high school with the knowledge and skills that qualify them as ‘college ready’ is the most meaningful and measurable way to increase life choices and options for all children, but most especially children of color and poverty” (About the Foundation, para. 3).

The Learning System includes four core teaching and learning components: Curriculum, Assessments, Pedagogy, and Supports. Surrounding these components, are three organizational components necessary to support the core: Leadership/Human Capital, Systems Diagnostics, and a Dashboard of College Readiness Indicators (College Readiness Learning System, n.d.).

The Foundation envisions convening a Design Collaborative, a cross-sector group of researchers, practitioners, and designers from inside and outside education, to “define, develop and continually improve” (Design Collaborative, n.d.) all of the components. To orient Design Collaborative members to the accumulated and maturing knowledge base related to each of the components and to children of color and poverty, the Foundation contracted with Mid-continent Research for Education and Learning (McREL). McREL conducted eight literature reviews—one on each of the components plus one on Our Kids—to identify and integrate theories and philosophical perspectives, issues, scientifically based research practices, unmet needs, and innovations relevant to designing one or more of the system components to accelerate learning for Our Kids.

This Appendix contains a description of the review method, including a general explanation of McREL’s approach and descriptions of the particular procedures used for each phase of the review: identification of key hypotheses and research questions, literature search, identification and cataloguing of finds, and generating and communicating recommendations.

McREL’s overall approach

Since the primary users of the reviews are the members of the Design Collaborative, the qualitative, iterative approach taken for the literature reviews sought to achieve the multiple goals of identifying emerging ideas, counterproductive orthodoxies, and promising practices relevant to the reinvention of the Learning System. Thus, eight research teams were assembled, each with one or more researchers familiar with the respective topic areas.

Qualitative approach. A *qualitative approach* shares several practices with those of *systematic reviews*, including comprehensive searches and transparency to reduce bias, but it differs with respect to inclusion/exclusion criteria. Systematic reviews emphasize explicit and a priori inclusion/exclusion criteria and criteria for evaluating the methodological quality of individual studies, carefully limiting the sources of evidence to support inferences about cause and effect relationships (Cooper, Hedges, & Valentine, 2009). The qualitative approach emphasizes diverse sources and types of evidence and knowledge to support a broader base of inferences (Pope, Mays, & Popay, 2007; Suri & Clarke, 2009).

The qualitative approach is particularly well-suited to the review’s purpose and audience because the Design Collaborative needs both empirical studies and other literature to identify possible innovations for the current education system. An assumption underlying the Foundation’s work to fundamentally reinvent American education is that the current system fails to deliver college readiness for all students, especially Our Kids. This assumption is supported by research indicating that students of color and in poverty have low high school and college graduation rates, and research from the last two years shows that college graduation rates for minority and poor students have further declined (American Council on Education, 2008). Therefore, a priority for the Foundation’s work is to identify innovations that have not yet been studied, with the intent to evaluate their effectiveness. Literature specific to innovations is found outside the traditional scientific or academic journals.

Inclusive approach. McREL researchers adopted an inclusive approach, searching for and including phenomenological reports describing the experiences of Our Kids in and out of school and documenting the challenges and successes of their teachers and educational leaders. The researchers included literature on innovative, emerging models and untested ideas, as well as reports on mature, well-specified models with experimental evidence of effectiveness. Relevant quantitative research literature included correlational and experimental studies and meta-analytic reviews. Narrative reviews of research were included, as were policy briefs and position papers produced by opinion leaders and professional organizations. Literature sources included the World Wide Web, peer-reviewed journals, and practitioner magazines. Each document was identified by type of literature and evaluated in terms of the quality of the supporting evidence. Care was taken to draw only those inferences appropriate to the quality of the evidence.

McREL researchers judged the quality of the evidence in the context of the type of literature or study design and in relation to its relevance to answering particular questions. Guidance from Pope, Mays, and Popay (2007) on conducting reviews in the field of health research supports this approach:

Table 1: Phases of a literature review

Phase	Cooper, Hedges & Valentine (2009, p. 8)	Suri & Clarke (2009, p. 414)	McREL’s approach
1	Problem formulation	Drawing from pertinent philosophical and theoretical discussions	Identification of key hypotheses
2		Identifying an appropriate purpose	Identification of research questions
3	Data collection	Searching for relevant evidence	Literature search
4	Data evaluation	Evaluating, interpreting, and distilling evidence	Identification and cataloguing of findings
5	Analysis and interpretation	Constructing connected understanding	Generating and communicating recommendations
6	Public presentation	Communicating with an audience	

The inclusion of diverse sources of evidence in a review does not mean abandoning the rigor of a systematic review, but it does mean judging the quality of evidence in context and defining the relevance of evidence to answering specific questions, rather than defining some forms of evidence as intrinsically, and universally, of lower quality than others. (p. 1)

Each research team followed the five or six phases of any review process relevant to a quality knowledge synthesis (Cooper, Hedges & Valentine, 2009; Suri & Clarke, 2009). Table 1 (see p. 56) provides a side-by-side comparison of the phases of a systematic review of research (Cooper, Hedges & Valentine, 2009), a qualitative review (Suri & Clarke, 2009), and McREL's approach to this review.

Each team began by drawing from pertinent philosophical and theoretical literature and preliminary discussions with the Foundation to formulate hypotheses and research questions. Each team conducted extensive searches to find as much relevant literature as possible in order to include literature from the scientific and academic journals as well as literature from harder-to-find, cutting edge innovators. Additionally, teams revisited databases and alternative sources to purposefully search for additional literature written by authors identified by one or more stakeholders or to fill conceptual gaps that became apparent during the identification and cataloguing of findings and generating and communicating recommendations phases.

The phased process was iterative (Cooper, 2009) reflecting new understanding and insights as the search, analysis, interpretation, and discussions between component teams and between the Foundation and McREL progressed toward conceptual clarity and the exhaustion of new search hits. The number of documents included in each team's review was extensive, and the types of literature varied representing the experiential knowledge of a diverse group of stakeholders, including researchers, teachers, administrators, program developers, and leaders and scholars at the local and national levels.

Team approach. Teams were composed of researchers and practitioners with different areas of expertise. Teams met weekly, and team leaders from across teams met biweekly. Meetings were used to update other individuals and teams and share resources, pose and address questions, challenge assumptions, provide guidance on interpretation of evidence, open up new areas of consideration, clarify boundaries and overlap between system components, consider alternative perspectives, and develop connected understanding.

Identification of key hypotheses and research questions

McREL teams began by clarifying terms, relationships, and the conceptual scope of each review. Teams read and discussed a document produced during the Foundation's strategy definition process, *Research Guide for CRLS: Outline of Research Questions for Each Component of the CRLS* (n.d.). Included in this Guide were preliminary questions for each literature review. Teams previewed relevant literature, confirmed that the questions could be answered by the extant knowledge base, and posed additional questions when important issues related to accelerating learning for students of color and poverty were identified in the literature but missing in the Guide. The revised set of questions for each system component and Our Kids was reviewed and refined during ongoing dialogue between the Foundation and McREL.

Literature search

Multiple searches were conducted in a phased approach to identify as much literature as possible related to each system component and Our Kids. Teams conducted searches using multiple bibliographic databases: Academic Onefile, Academic Search Premier, Educators Reference Complete, ERIC, JSTOR, Proquest, and PsychInfo. Teams also conducted manual searches of journal and book tables of contents and reference lists of articles. Additional searches were conducted specifically to identify recent experimental and other research and reviews on the efficacy of interventions for accelerating learning of students of color and poverty. These searches were conducted by visiting the U.S. Department of Education What Works Clearinghouse Web site (<http://ies.ed.gov/ncee/wwc/reports/>) and the Campbell Collaboration Library of Systematic Reviews Web site (<http://www.campbellcollaboration.org/library.php>). Relevant documents were identified on state education agency (SEA) Web sites, and SEA officials were interviewed or named as seminal authors or sources of models that had been developed and implemented to monitor and accelerate learning of Our Kids.

Each team identified and used key terms and synonyms relevant to the topic for searching. Searches were conducted for literature published in the most recent 10 years (1998–2008); however, works by seminal authors and other recommended literature were included from outside these years. The search landscape varied for each team based on the topic and relevant sources; for example, while What Works Clearinghouse was a relevant source for the Pedagogy team, it was not a relevant source for the Leadership/Human Capital team. Internal review of search records and results led to additional leads on sources. Searching continued until all recommendations had been implemented and/or few new hits were identified.

Identification and cataloguing of findings

A coding protocol was developed and implemented to categorize the literature. Each team used the same protocol, adding categories and decision rules, as needed to organize the particular literature relevant to their topic. Each team leader and one or more members of each team were trained on the decision rules in the coding protocol and provided follow-up support to resolve uncertainties in its application. Team leaders periodically conducted quality assurance reviews of completed coding sheets and updated the protocol as needed during weekly team leader meetings or discussions with the Foundation. The coding protocol included identifying the following information:

The coding protocol included identifying the following information:

- Full APA reference citation
- Category of literature (i.e., primary and secondary relevance)
- Type of literature (e.g., quantitative study, policy brief, program description)
- Locale
- Outcome
- Grade level
- Program or innovation name and description
- Main findings or points
- A recommendation for or against summarizing and including the selection in an annotated bibliography

In addition, component teams added to the protocol by categorizing relevance to particular parts of their conceptual model or concept map.

Guidelines were developed and used by teams to identify counterproductive orthodoxies, unmet needs, next practices, promising practices, and best practices based on type of literature and quality of evidence. These were defined in the following ways:

- *Counterproductive orthodoxies*: Conventional ways of providing education which may be impeding success of Our Kids
- *Unmet needs*: Areas where Our Kids are not yet well served by the current system of education
- *Next practices*: A program or practice that needs to be developed, adapted, invented, and tested in response to an unmet need related to accelerating learning for Our Kids
- *Promising practices*: Practices based on research but not supported by rigorous efficacy data from randomized controlled trials
- *Best practices*: Practices demonstrated by one or more randomized controlled trials to be effective in improving outcomes for Our Kids

The research team reviewing the college readiness component of the Learning System employed a slightly different process. Rather than using the categories above, this team reviewed literature on college readiness and categorized findings into four essential areas as defined by the Foundation and Conley (2007): cognitive strategies, content knowledge, academic behaviors, and contextual skills.

Component teams met weekly to discuss and categorize findings and to develop a conceptual map of the insights gained from the literature summaries and review. Teams used different conceptual mapping tools (e.g., SmartArt) to organize the insights (findings) and presented and discussed their respective maps at cross-team meetings. Features common across teams' concept maps were identified and a standard framework developed. Teams arranged findings onto the concept maps, identifying conceptual gaps and conflicting or discrepant findings, and returned to searching and reviewing to fill in the gaps and resolve or explain discrepant findings. The conceptual maps served as an organizing framework for report construction.

Generating and communicating recommendations

Working collaboratively, component teams drew conclusions from the insights (findings) derived from the review and identified potential options and recommendations for each component of the system. Teams used an iterative process of identification, reviewing for validity against the knowledge base, and further refinement until they determined they had identified the most promising options and that each was informed by the existing knowledge base.

Team leaders used the outcomes of team discussions and cross-team discussions, literature summaries, and the researcher's own review and integration of the literature to write a draft report of the findings. Draft reports were reviewed by knowledgeable internal experts and revisions in search strategies, interpretations of findings, and/or conclusions were made. Revised reports were reviewed by the Foundation and other outside reviewers prior to final revisions and production.

Although the wide-ranging literature searches produced reports on extensive baseline information related to Our Kids and each system component, the reports are living documents. As living documents, they bridge the creative and scientific enterprises of the past and present, and we envision the need to return to some of them for updating, extending, and drilling-down in the future.

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