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Uses of Data in the Community-Based Reform Initiative

Say Yes Syracuse

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Executive Summary

For the past 10 years, the field of education has been increasingly focused on data-driven decision making (Lachat, 2001; Marsh, Pane, & Hamilton, 2006).¹ Education researchers and practitioners recognize the importance of data for improving classroom instruction and reforming struggling schools (Hamilton et al., 2009; Herman et al., 2008; Lachat, 2001).

During a period of four years, Say Yes to Education (SYTE) developed data resources and tools reflecting a commitment, as part of a community-based reform initiative (Say Yes Syracuse), to identify needs, monitor implementation, certify results, provide transparency, and engage stakeholders. The SYTE experience reflects the nationwide challenges of using district and school data in a way that is increasingly more intelligible and actionable.

This paper elaborates on the context for Say Yes Syracuse data efforts (Part 1), presenting *conditions* that the research suggests should be in place to support productive data use, *challenges* that emerge around data use, and four common *uses* of data in K–12 education that are aligned with the goals of data use in Say Yes Syracuse—frameworks that extend throughout the paper. The paper then describes the development of data resources and tools in the Say Yes Syracuse initiative (Part 2). Finally, it discusses lessons learned and expresses them in terms of the conditions for productive data use (Part 3).

Context for Say Yes Syracuse Data Efforts (Part 1)

Research suggests that four to six supporting *conditions* may be critical to the successful use of data by K–12 educators and researchers who study our education system (Means, B., Padilla, C., Gallagher, L., & SRI International, 2010, pp. 3–5). These include:

- Adequacy of state, district, and school data systems for accountability and data-driven decisionmaking
- Leadership for educational improvement and use of data
- Tools for generating actionable data
- Social structures and supported time for analyzing and interpreting data
- Professional development and technical support for data interpretation
- Tools for acting on data

¹ As a concept, data-driven decision making originated in the business field, with practices such as total quality management, organizational learning, and continuous improvement (Hackman & Wageman, 1995; Marsh et al., 2006).

The literature on data in education also addresses a variety of *challenges* that school districts may face as they develop and use data, including:

- Information systems challenges: challenges related to the people, processes, and technology surrounding data collection and use
- Research challenges: challenges related to conducting analyses that are both meaningful and methodologically sound
- Strategic challenges: challenges related to using data and research to make decisions in areas such as allocating funding, planning programming, and hiring policies aimed at improving schools and increasing student learning (Marsh et al., 2006)

Recent reviews of research on the access to and use of data in schools and school districts have delineated three important *uses* of data, among others (Mandinach & Honey, 2008; Marsh et al., 2006; Nelson, S. R., Leffler, J. C., & Hansen, B. A., 2009), including:

- *Assessing needs* and identifying areas for improvement (e.g., school-wide student literacy levels and districtwide mathematics instructional strategies)
- *Monitoring* (tracking the progress of) *implementation* (e.g., with regard to the curriculum or a school reform strategy)
- *Certifying results* by summarizing the extent to which performance meets a particular standard (e.g., student proficiency standards or teacher evaluation standards)
 - These uses of data then inform data-driven decision making (Lachat, 2001; Marsh et al., 2006) to make strategic decisions about education reforms, which aim to increase student learning. Moreover, throughout the data use process, sharing data may facilitate stakeholder engagement and accountability (Nelson et al., 2009).

Development of Data Resources and Tools in Say Yes Syracuse (Part 2)

Say Yes Syracuse data initiatives included original data collections, secondary data analysis, design of data tools, and reports about Say Yes Syracuse implementation and outcomes at the school, district, and student levels. The following presents the data-related products of Say Yes Syracuse, organized by the four uses of data identified in the research.

Use data to assess school and student needs and form the basis for the delivery of services

- Annual school profiles reporting research-derived indicators of academic, socioemotional and health conditions
- District-wide administration of the AIR Conditions of Learning Survey
- District-wide administration of the University of Memphis School Climate Inventory
- Conceptual design for a student monitoring information system

Use data to monitor implementation and inform model development

- Implementation reports for internal review and planning for continuous improvement
- Due diligence reports reflecting community-based organizations' (CBOs') existing program capacity to meet the needs and mission of Say Yes Syracuse

Use data to summarize or certify outcomes

- Investigations that examined student outcomes, future plans, graduation results, college eligibility, college participation and retention

Share data to facilitate the public understanding of – and accountability for – progress and results and engage the community in the initiative

- Dashboard design
- District profile tool design
- Stakeholder groups:
 - Operating committee
 - Community advisory committee
 - Task forces

Conditions and Lessons Learned (Part 3)

Over more than three years, Say Yes Syracuse addressed many information system challenges and designed ways to work around limitations, producing school profiles with detailed and sophisticated tools for principals, teachers, specialists, and district administrators; due diligence reports with potential to improve the implementation of programs; and tools that could have conveyed results and progress to the broader community. From the project's initiation, however, many conditions for productive data use were not in place in Syracuse. Say Yes Syracuse's work to create useful data products, despite these limitations, represent lessons learned for the field.

Adequacy of State, District, and School Data Systems for Accountability and Data-Driven Decision Making

- Three Say Yes Syracuse data efforts—developing an SMS, conducting a school review, and producing outcomes reports—were designed to improve the existing capacity of SCSD data systems and support schools in offering high-quality, data-driven instruction. However, technical limitations of local and state data systems hampered the Say Yes Syracuse data efforts.

Leadership for Educational Improvement and the Use of Data:

- Absent a jointly developed plan for Say Yes Syracuse data activities, and in the face of frequent SCSD leadership changes, Say Yes Syracuse and SCSD operated from year to year in a state of flux, changing the goals for data efforts while they were underway. Neither the leadership nor the audiences for data seemed convinced of the utility or sustainability of Say Yes Syracuse initiatives.

Tools for Generating Actionable Data and Acting on Data

- Say Yes Syracuse sought to develop analytic tools and presentations of data that would be useful to school and district leaders and especially teachers, such as the SMS, the school profile, due diligence reports, outcome studies, and the community dashboard. However, the district did not complete the SMS, community organizations did not use the due diligence reports to address program improvement, and the school profile tools were not fully used as designed by school improvement teams.

Social Structures and Supported Time for Analyzing and Interpreting Data:

- Say Yes Syracuse sought opportunities to collaborate with school and district leaders to analyze and interpret new and extant data and, in doing so, create contexts in which school leaders and community members would use the data to improve teaching and learning. However, these collaborative structures were not institutionalized within SCSD and were not sustained within Say Yes Syracuse. Specifically, in the first three years of Say Yes Syracuse, SCSD provided school teams with some supported time to meet and discuss school profiles. Additionally, SCSD created a task force with Say Yes Syracuse to design professional development for teachers who would implement the SMS. However, when SCSD discontinued or put on hold data initiatives, the social structures were also disbanded.

Professional Development and Technical Support for Data Interpretation:

- Professional development and technical support for data use were seen as important activities during the implementation of Say Yes Syracuse. Beginning in 2009–10, Say Yes Syracuse planned to support the transition of data activities to SCSD and community organizations through professional development and technical support; however, these plans did not come to fruition.

The Say Yes Syracuse data activities unfolded in a context and at a time when many of these supportive conditions were not in existence, and they were not implemented during the initiative. Although the vision for data use proposed and implemented by Say Yes Syracuse was not fully realized, the lessons learned from the effort can serve as a starting point for the development of future data products; and this, in turn, can help district leaders make strategic decisions to meet the needs of districts and schools and to improve student learning.

References

- Hackman, J. R., & Wageman, R. (1995). Total quality management: Empirical, conceptual and practical issues. *Administrative Science Quarterly*, 40, 309–342. Retrieved from http://groupbrain.wjh.harvard.edu/jrh/pub/JRH1995_1.pdf
- Hamilton, L., Halverson, R., Jackson, S. S., Mandinach, E., Supovitz, J. A., Wayman, J. C., et al. (2009). *Using student achievement data to support instructional decision making* (NCEE 2009-4067). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. Retrieved from http://ies.ed.gov/ncee/wwc/pdf/practice_guides/ddd_m_pg_092909.pdf
- Herman, R., Dawson, P., Dee, T., Greene, J., Maynard, R., Redding, S., et al. (2008). *Turning around chronically low-performing schools* (NCEE 2008-4020). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. Retrieved from http://ies.ed.gov/ncee/wwc/pdf/practice_guides/Turnaround_pg_04181.pdf
- Lachat, M. A. (2001). *Data-driven high school reform: The breaking ranks model*. Providence, RI: Brown University, The Education Alliance. Retrieved from http://www.alliance.brown.edu/pubs/hischlrfm/datdrv_hsrfm.pdf
- Mandinach, E., & Honey, M. (Eds.) (2008). *Data-driven school improvement: Linking data and learning*. Washington, DC: Economic Policy Institute and Teachers College.
- Marsh, J. A., Pane, J. F., & Hamilton, L. S. (2006). *Making sense of data-driven decision making in education*. Santa Monica, CA: Rand Education. Retrieved from http://www.rand.org/pubs/occasional_papers/OP170.html
- Means, B., Padilla, C., Gallagher, L., & SRI International. (2010). *Use of education data at the local level: From accountability to instructional improvement*. Washington, DC: U.S. Department of Education. Retrieved from <http://www2.ed.gov/rschstat/eval/tech/use-of-education-data/use-of-education-data.pdf>
- Nelson, S. R., Leffler, J. C., & Hansen, B. A. (2009). *Toward a research agenda for understanding and improving the use of research evidence*. Portland, OR: Northwest Regional Educational Laboratory. Retrieved from http://educationnorthwest.org/webfm_send/311

Introduction

In the history of K–12 education in the United States, keeping track of student, school, district, state, and national progress has been an integral component of education reform (Tyack & Cuban, 1995). These data allow policymakers and practitioners to understand progress toward achieving the desired outcomes of educational programs and reforms. At the national level, reporting data has been and continues to be the cornerstone of policy initiatives, such as No Child Left Behind (NCLB; U.S. Department of Education, 2012b), the 2012 Elementary and Secondary Education Act flexibility changes (U.S. Department of Education, 2012a) and Race to the Top (U.S. Department of Education, 2012c).

For the past 10 years, the field of education has been increasingly focused on data-driven decision making (Lachat, 2001; Marsh, Pane, & Hamilton, 2006).² Education researchers and practitioners recognize the importance of data for improving classroom instruction and reforming struggling schools (Hamilton et al., 2009; Herman et al., 2008; Lachat, 2001). Despite this commitment to improve resources, school districts and schools face numerous challenges that slow progress (Means, Padilla, Gallagher, & SRI International, 2010). The challenges are often related to factors that impinge on the development of useful data, among which are technical and conceptual issues; policy and political concerns; research needs; and the capacity of those who develop, analyze, and use the data (Marsh et al., 2006; Means et al., 2010).

In a policy environment that places high value on quality data, researchers and policymakers at all levels of K–12 education have been exploring the following questions: What data are needed to inform a variety of audiences? How are data transformed into useful information? What investment is needed to provide answers to critical questions of need and reform? In its data-focused work, Say Yes to Education (SYTE) addressed many of these questions. This paper describes these efforts.

Say Yes Syracuse

Since 2008, the Syracuse City School District (SCSD), the Syracuse Teachers Association, Syracuse University (SU), the City of Syracuse, Onondaga County, SYTE, and a diverse group of Syracuse-area corporate, nonprofit, and philanthropic organizations have collaborated to establish a Say Yes Syracuse partnership aimed at enabling every SCSD student to succeed in the K–12 public schools, as well as in their postsecondary education and careers.³

² As a concept, data-driven decision making originated in the business field, with practices such as total quality management, organizational learning, and continuous improvement (Hackman & Wageman, 1995; Marsh et al., 2006).

³ SYTE began working with SCSD in 2008–09 and finished its fourth year of implementation in 2011–12. American Institutes for Research (AIR) has been involved in the process throughout, participating in activities such as: reform development, implementation, formative evaluation, and outcomes research. AIR committed to internally fund this work, with approval of the AIR Board, because of the project's alignment with AIR's mission.

SYTE sought to expand its more focused efforts (e.g., scholarships for students in individual schools) to improve student postsecondary outcomes in other locations by initiating a citywide effort based on its belief that a large-scale implementation could drive the economic fortunes of a city where home values, business activities, and school outcomes had been declining in the latter part of the 20th century (Maeroff, 2010). SYTE identified Syracuse as a good location for its first communitywide effort for a variety of reasons. The SCSD high school graduation rate was considerably below 50 percent, for example, and state reports documented students' poor academic performance on state tests (Maeroff, 2010).

At the foundation of the Say Yes Syracuse initiative was a theory of action that said academic readiness (i.e., in key school attributes, including a rigorous curriculum, high-quality instruction, and supportive conditions such as afterschool, health, and family supports) and personal readiness (i.e., the range of supports to help students plan for and apply to college and to fund a college education) would lead to student success (Maeroff, 2010).

Among the Say Yes Syracuse-facilitated supports and engagement activities occurring during this time period were school-embedded socioemotional supports, afterschool and summer programs, health and legal clinics, community engagement and fundraising activities, a postsecondary consortium, a guaranteed incentive of four years of college tuition, and the development of data resources.

Data Goals and Activities in Say Yes Syracuse

The use of data has been an important component of SYTE since plans for the initiative's development were first conceptualized. Say Yes Syracuse began preparing for the data initiatives in 2008 and committed to documenting the implementation of the initiative and reporting on its outcomes. In documents that established the foundation for Say Yes Syracuse, the following three goals were clear:⁴

1. Data about school and student needs are the basis for the delivery of services.
2. Data about the implementation of the initiative and its outcomes inform model development and implementation and address questions about whether the initiative works.
3. Access to data facilitates the public sharing of—and accountability for—progress and results.

Mapping these three broad goals to four types or categories of data use commonly mentioned in the literature, the following summarizes the data work conducted:

1. **Use data to assess school and student needs and form the basis for the delivery of services.** Say Yes Syracuse developed indicators of academic, socioemotional, and health conditions in SCSD, drawing on extant and new data, including school data from eSchool (an SCSD database of school and student characteristics and performance), a teacher survey

⁴ Say Yes Syracuse strategic plan: A citywide turnaround model for college and career success is presented in a model found at this website. The model highlights the Nonnegotiables, or "core principles":

<http://sayyessyracuse.org/sites/default/files/basic-page/SayYesTheoryofchangeFlowChart.pdf>

and a student survey, and detailed descriptions of programs and supports provided by each school and district and by community organizations. The resulting school profiles were provided to school leadership teams in facilitated sessions designed to help the teams use the data for school improvement. In addition, at the student level, Say Yes Syracuse conceptualized the development of a student monitoring system (SMS), which was intended to contain data from teachers and other sources about each student and serve as a resource to tailor any supports to an individual student's academic, socioemotional, and health needs.

2. **Use data to monitor implementation and inform model development.** Say Yes Syracuse produced annual reports on the implementation of the Say Yes initiative for internal SYTE review. Nonnegotiables, or “core principles,” which were a set of conditions established by SYTE with the school district, were the foundation of these investigations. Hundreds of interviews with stakeholders and participants in the school reviews, as well as additional interviews with community members and data gathered from the surveys and existing resources (e.g., agendas and minutes from task forces and community meetings) were used to evaluate progress and make recommendations for improving the model and its implementation. Say Yes Syracuse also produced due diligence reports that documented the programmatic capacity of community-based organizations (CBOs) wishing to partner with Say Yes Syracuse.
3. **Use data to summarize or certify outcomes.** Say Yes Syracuse committed to a multiyear evaluation of outcomes, including the effect of access to college programs on college attendance and completion and the academic, social, and health outcomes for students who participated in the K–12 support programs. Say Yes Syracuse planned to document comparisons of the results of Say Yes Syracuse with the status and conditions of students in educational programs in similar urban school districts in New York state and to compare the results for students within the school district who received supports with the outcomes for students who had yet to receive them (the K–12 supports were rolled out by school district quadrants). The outcomes study consisted of a collection of investigations that examined student outcomes, such as future plans and graduation results, improvement in academic and socioemotional outcomes since the implementation of Say Yes, college eligibility, and college participation and retention.
4. **Share data to facilitate the public understanding of—and accountability for—progress and results and engage the community in the initiative.** Say Yes Syracuse established several convening bodies and conducted outreach activities that were designed to engage the community in the reform initiative. Say Yes Syracuse also shared data in these contexts as it sought to fulfill a commitment to transparency of its activities and results. Specifically, Say Yes Syracuse designed (1) a community Web-based dashboard of school, economic, and health indicators; and (2) analytic templates, such as the district profile tool, for district consideration. Although these initiatives differed in their specific purposes, they shared a common goal of facilitating the sharing of data to focus improvements in education and community supports where they could most benefit the students. These initiatives were shared through a variety of venues, such as meetings between SYTE and CBOs, community advisory group meetings, and ad hoc public events.

Part 1 of this paper summarizes the conditions related to using data productively; presents challenges that may emerge from this process; and identifies four common uses for data in K–12 education as context for Say Yes Syracuse data efforts.

Part 2 overviews the data activities and products developed for use in Say Yes Syracuse, organized in terms of the uses of data: needs assessment, implementation monitoring, certifying results, and sharing data. It then describes the data use challenges in each area. In addition, Part 2 presents a focused look at the school review—the most mature of the data use activities.

Finally, Part 3 of this paper discusses the lessons learned about using data in Say Yes Syracuse as a strategic element of the reform initiative. Summarizing the challenges experienced, it compares the achievements in Syracuse to a set of necessary conditions for effective data development and use that have been identified in the literature.

This paper drew on materials produced during the Say Yes Syracuse initiative, including memos, meeting notes, draft and final documents, and email transmissions about the challenges encountered. During the 2012-13 year a number of changes in Say Yes Syracuse were occurring. The paper does not attempt to follow and report on all of these changes, but provides updates where possible.

PART 1: Conditions, Challenges, and Types of Data Use in School Districts and Schools

Part 1 introduces current information about data systems and data use in school districts. As context for Say Yes Syracuse data efforts, it presents the conditions that the research suggests should be in place to support data systems and data use and describes challenges that may emerge. Part 1 then identifies four common uses of data in K–12 education as a framework that is aligned with the goals of data use in Say Yes Syracuse.

We take the district perspective in this discussion because, although the community-based reform initiative in Syracuse encompassed all aspects of the community—including SCSD, postsecondary institutions, and community and county organizations—Say Yes Syracuse was focused on the implementation of programs, supports, and policies that affected K–12 students. Consequently, the data work revolved primarily around SCSD data. In 2008, data policy in SCSD, as in other districts across the country, was generally driven by accountability and reporting needs relative to both state and federal levels. Data-driven decision making was not systematically employed across SCSD; however, by the 2011–12 school year, the implications of a state-won Race to the Top award were being felt. Data analysis and use was increasingly becoming a priority, which had repercussions for SCSD’s information systems.

Conditions for Data Development and Use

Districts around the country are experiencing the demand for data system development and data use for decision making that is being fostered by national advocacy organizations (e.g., the Data Quality Campaign, the Council of Chief State School Officers, and the Broad Foundation) and federal policy initiatives to support school districts’ and states’ capacity to use data through data standards development, direct training, and analytics (Marsh et al., 2006). A recent survey and case study report highlights the supporting conditions for this generation of data development and use (Means et al., 2010).

The following supporting conditions may be critical to the successful use of data by K–12 educators and researchers who study our education system (Means et al., 2010, pp. 3–5):

1. *Adequacy of state, district, and school data systems for accountability and data-driven decision making*—where state data and district systems include student scores on state-mandated tests, student contact and demographic information, scores on district tests, attendance, grades, disciplinary infractions, and course enrollment and the structure of these systems supports linkages for analysis (Means et al., 2010).
2. *Leadership for educational improvement and use of data*—where district and school leaders call for using data to bring about educational improvement, playing a major role in identifying goals, setting expectations for staff participation, and making resources available to support the enterprise (Means et al., 2010).
3. *Tools for generating actionable data*—where tools, such as online formative assessments or sophisticated educational information systems, allow teachers to access up-to-date

information on their current students, ideally with detail about individual strengths and weaknesses (Means et al., 2010).

4. *Social structures and supported time for analyzing and interpreting data*—where administrators provide time for teachers to examine data and use it to guide instructional improvement, and where administrators set strong expectations that the educators will use the allocated time for those purposes. Case studies suggest that “organizational structures that include supported time for reviewing and discussing data in small groups greatly increase the likelihood that the examination of data will be conducted and will lead to well informed decisions” (case studies⁵ cited in Means et al., 2010, and in this report’s References and Resources sections).
5. *Professional development and technical support for data interpretation*—where, for instance, bringing groups of teachers together to examine pertinent data and to relate data to their practices may improve the teachers’ instruction (Means et al., 2010).
6. *Tools for acting on data*—where, after teachers use data to identify students’ strengths and weaknesses, the resources help teachers adjust their instruction to student needs. Resources are typically organized around state content standards and may include lesson plans, instructional materials, or descriptions of best practices (Means et al., 2010).

The literature on data in education also addresses a variety of challenges that school districts may face as they develop and use data, including information systems challenges (i.e., challenges related to the people, processes, and technology surrounding data collection and use); research challenges (i.e., challenges related to conducting analyses that are both meaningful and methodologically sound); and strategic challenges (i.e., challenges related to using data and research to make decisions in areas such as allocating funding, planning programming, and hiring policies aimed at improving schools and increasing student learning) (Marsh et al., 2006).

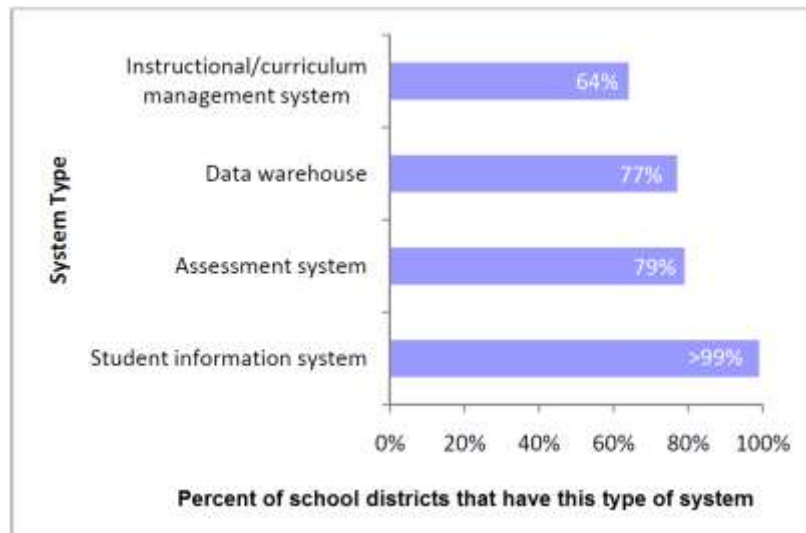
Information Systems Challenges

Across the United States, the technology capacities of school districts vary, although they have been slowly improving over time. For instance, Gallagher, Means, Padilla, and SRI International (2008) found that in a sample of 975 schools,⁶ the proportion of teachers reporting access to an electronic student data system significantly increased, from 48 percent in 2005 to 74 percent in 2007. Nevertheless, school districts are still in the process of building their data system technology capacities (Means et al., 2010), as shown in Figure 1.

⁵ See Copland, 2003; Datnow, Park, & Wholstetter, 2007; Wayman, Cho, & Johnston, 2007; and Wayman & Stringfield, 2006.

⁶ Teachers were sampled from 975 schools within school districts selected for the U.S. Department of Education’s National Educational Technology Trends Study district survey.

Figure 1. School Districts With Electronic Student Data Systems, by Type, SY 2007–08⁷



Note. Exhibit reads: In 2007–08, more than 99 percent of the school districts reported having a student information system. Source: 2007 district survey, question 4. Means, et. al., 2010, p. x, ES-2.

As school districts work with the technologies needed to use data, they may face information systems challenges—challenges related to the people, processes, and technology surrounding data use (Means et al., 2010; Wallace, 2012). The literature indicates that these challenges may include, for example, technology in disrepair, a lack of personnel with database expertise, and inefficient data collection processes, as well as linking separate data systems, establishing data systems that are accessible to a variety of users, and setting up data definitions and indicators, which we highlight in this section.

Linking

A common information systems challenge for school districts is the effective linking of separate data systems. For instance, Means et al. (2010) found that more than 60 percent of the surveyed school districts⁸ reported that a lack of interoperability across data systems was a current barrier to the expanded use of data-driven decision making.

⁷ The definitions for system types are: “instructional/curriculum management system” refers to systems that “provide a unifying framework to support access to curriculum and instructional resources such as planning tools, model lesson plans, creation of benchmark assessments, linkage to state content or performance standards, communication and collaboration tools (e.g., threaded discussion forums)”; “data warehouse” refers to “electronic data collection and storage systems that provide access to current and historical data on students, personnel, finances, and so on”; “assessment system” refers to “systems that support rapid organization and analysis of benchmark assessment data; and “student information system” refers to systems that “provide real-time access to student data such as attendance, demographics, test scores, grades, and schedules” (Means et al., 2010, p. x).

⁸ Data are from the *Study of Education Data Systems and Decision Making*. Data collection for the study included a national survey of school districts in spring 2007 and site visits during the 2006–07 and 2007–08 school years. See U.S. Department of Education. (2007). *Study of education data systems and decision making: 2007–08 district survey*. Washington, DC: Author. Retrieved from <http://www2.ed.gov/rschstat/eval/tech/use-of-education-data/use-of-education-data-appendix-b.pdf>. School districts and schools were selected for site visits based on their active involvement in the use

Means et al. (2010) further found that less than 50 percent of the school districts have electronic data systems that allow them to link outcomes, such as test scores, to processes, such as instructional practices. For example, only 40 percent of the school districts reported they could generate data reports that link student performance to participation in specific instructional programs, and only 38 percent reported they could execute queries⁹ that link student performance to teacher characteristics (Means et al., 2010).

Accessibility

Another common information systems challenge for districts is setting up data systems that teachers and administrators can easily understand and use. Historically, many schools have been “data rich” but “information poor” because vast amounts of relevant stored data were inaccessible to practitioners (Wayman 2005). In recent years, there have been improvements in computer technologies and training that facilitate more efficient access to student data, though this varies from district to district (Wayman, 2005). Having efficient access to student data allows teachers and administrators to assess student needs, monitor program implementation, and summarize results. For instance, school districts often encourage teachers to use progress monitoring tests—such as the DIBELS (Dynamic Indicators of Basic Early Literacy Skills) literacy assessment and other formative assessments—by making them available online, along with sample lessons that target student weaknesses (e.g., Fairfax School District’s eCART, <http://www.fcps.edu/is/instructionaltechnology/ecart/index.shtml>).

Data Definitions and Indicators

Finally, school districts may face challenges related to establishing data definitions and indicators, which is a key part of the process of setting up information systems for collecting and storing data. The Data Quality Campaign argues that for data to be useful, they must be high quality, comparable, and capable of being shared efficiently (Data Quality Campaign, 2012). Benchmarks and indicators should reflect the anticipated uses of data, be research based, and reflect the input of the communities that will be consumers and users of the data (Hoachlander, Griffith, & Ralph, 1996). Moreover, because states may receive Race to the Top points for fully implementing a longitudinal data system (U.S. Department of Education, 2009), some school districts may also aim to create data definitions and indicators that are usable in the context of longitudinal analysis. Setting up data definitions and indicators can be technically challenging. Sometimes, what makes the most sense as an indicator for conceptual purposes (such as ensuring comparability or use as part of a longitudinal data system) is not easy to implement and may have a higher time and cost burden for data collection.

of data for instructional improvement. The study team also conducted secondary analyses of national teacher survey responses, focusing on data system access and use.

⁹ Such queries may be available through state systems, although school districts may not have easy access to these systems. In general, work focused on how to link teachers’ contributions to student achievement is ongoing (Little, Goe, & Bell, 2009).

Research Challenges

School districts may also face *research challenges*—challenges related to, for example, conducting meaningful and methodologically sound analyses. For instance, a school district with a large data set that focuses on reading scores may want to understand where the need for reading supports is the greatest. Answering this question may require an iterative process of examining the data for different subgroups (e.g., minority students as compared with all students or elementary schools as compared with high schools). Or a school district might also want to know the effect of a certain intervention on reading scores, which then requires expertise in statistical modeling.

Ideally, analyses will facilitate the process of *assessing needs, monitoring implementation, and certifying the results* for schools and school districts. It is common for schools and school districts to have access to workshops or training on how to examine test data, although the content and the perceived quality may vary (Marsh et al., 2006). For more sophisticated work, school districts sometimes hire outside research consulting groups.

Strategic Challenges

Finally, school districts may face *strategic challenges*—challenges related to taking what is learned by *assessing needs, monitoring implementation, and certifying results* and using that learning to make decisions, in areas such as allocating funding, planning programming, and hiring personnel. Ultimately, the purpose of collecting useful data and analyzing it carefully is to give leaders and teachers the information they need to make decisions that help schools and students improve. For instance, a school might learn through data that a specific subgroup of students is struggling with reading and might then strategically allocate funding for reading coaches to help those most in need.

Schools and school districts now, more than ever, have a range of data with which to work. Some researchers suggest that educators are “drowning in too much data” (Marsh et al., 2006), and the processes surrounding data-driven decision making are complex. Researchers have found that a variety of factors may influence data-driven decision making at the district level, including factors external to the substance of the data itself, such as the motivation to use data and research, staff capacity, organizational culture and leadership, and the history of state accountability (Marsh et al., 2006; Nelson, Leffler, & Hansen, 2009). Researchers studying data use by educators suggest it is becoming more common for schools and states to conduct their own research and analyze data to find answers (Marsh et al., 2006; Nelson et al., 2009).

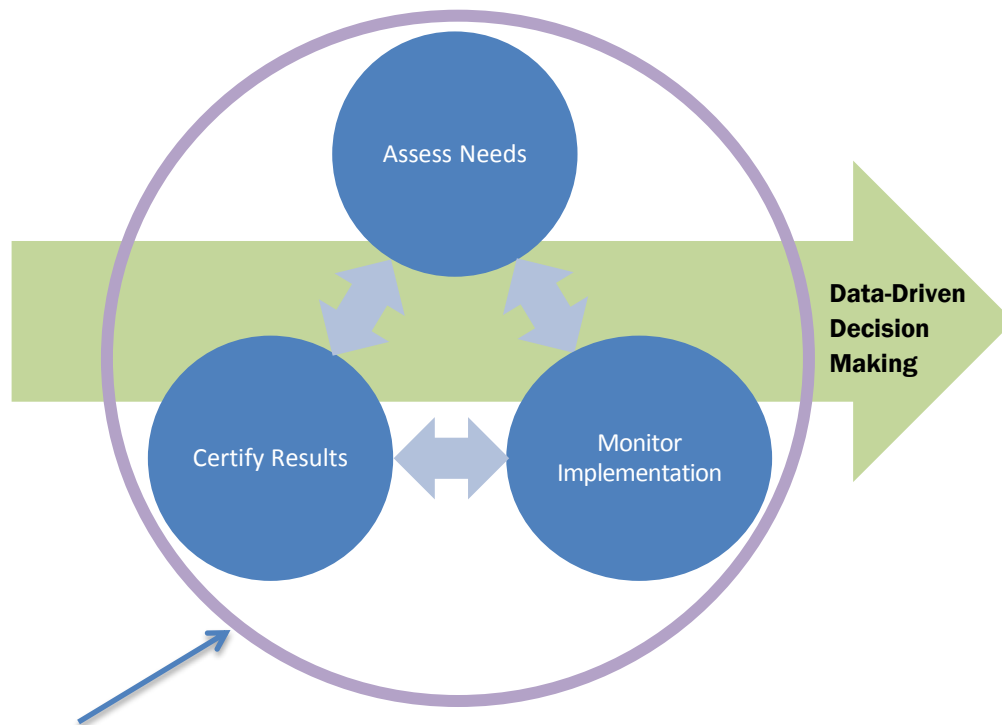
Uses of Data: A Data Cycle

In this environment—where a variety of factors are important for setting the conditions to use data effectively, and where a variety of challenges may impede implementation—school districts *use* the data they develop and manage in several key ways. Recent reviews of research on the access to and the use of data in schools and school districts have delineated three important uses of data, among others (Mandinach & Honey, 2008; Marsh et al., 2006; Nelson et al., 2009), including **assessing needs** and identifying areas for improvement (e.g., school-wide student literacy levels and

districtwide mathematics instructional strategies); **monitoring** (tracking the progress of) **implementation** (e.g., with regard to the curriculum or a school reform strategy); and **certifying results** by summarizing the extent to which performance meets a particular standard (e.g., student proficiency standards or teacher evaluation standards).

These uses of data then inform data-driven decision making (Lachat, 2001; Marsh et al., 2006) to make strategic decisions about education reforms, which aim to increase student learning. Moreover, throughout the data use process, **sharing data** may facilitate stakeholder engagement and accountability (Nelson et al., 2009). For instance, when community members are aware that a local school did not meet a certain standard, they may put pressure on local leaders to adopt new practices, helping to create the political capital that may be needed to make changes. These data use processes are represented in Figure 2 and serve as an organizing framework for the discussion of Say Yes Syracuse.

Figure 2. Data Use Cycle



Sharing data toward engaging stakeholders and enhancing accountability.

As Figure 2 indicates, this data use cycle can happen in any order, different types¹⁰ of data may be used in each phase of the cycle, and the phases of the cycle may occur concurrently. Data use ranges in scale from the macro to the micro; it occurs in classrooms, schools, programs, school districts, and states, as well as at the national level (Hamilton et al., 2009; Means et al., 2010). *Sharing data toward engaging stakeholders and enhancing accountability* is represented as a circle

¹⁰ Marsh et al. (2006) describe four types of data: input, output, outcome, and satisfaction.

around the other uses of data because education leaders and policymakers may share information throughout the processes of assessing needs, monitoring implementation, and certifying results.

Sharing data is likely to have implications for data activities, leading to increased or modified data collection and reconceptualization of the data systems that facilitate reporting and decision making. This paper treats sharing data as a fourth “data use.” Others (e.g., Marsh et al., 2006; Means et al., 2010) have created similar or expanded conceptual frameworks with different foci to explain data use and data-driven decision making, and this paper has been informed by their prior work.

These four uses of data serve as an organizing framework for Part 2, which explores the uses of data and the challenges related to those uses—as highlighted by prior research—in Say Yes Syracuse, a community-based education reform.

PART 2: Data Initiatives in Say Yes Syracuse

Part 2 organizes the data activities and products developed for use in Say Yes Syracuse within the data use framework: assessing needs, monitoring implementation, certifying results, and sharing data. We introduce each activity and product with a discussion of its goals and associated challenges. We then highlight, in a stand-alone section, the most mature of the data use activities—the **school review**—noting the progress made during three years of conducting school reviews and the innovative approaches designed to provide school leadership teams with information about student needs and available supports.

For comprehensive tables that summarize the data products, their audiences, and their uses, see Appendix A.

Using Data to Assess School and Student Needs and Form the Basis for the Delivery of Services

Say Yes Syracuse designed two data information products—a Student Monitoring System (SMS) and the School Review Process—for teachers, specialists, and principals to assess student and school needs and to serve as a basis of services, supports, and program offerings.

1. The Student Monitoring System

To assess student needs on a per student basis, Say Yes Syracuse invested in the conceptual development of a comprehensive SMS. The districtwide SMS was designed by SYTE as an approach intended to track the conditions of every student, plan and coordinate supports (including enrichments) across providers, and then use this information for continuous improvement.

SYTE developed the first research-based SMS in 2007 and implemented the data-driven system in the Say Yes Harlem chapter.¹¹ The original SMS identified 28 indicators across academic, social, and

¹¹ A description of the SMS indicators is provided in Appendix B.

health domains. Through ongoing review that included user input and data analysis, the final SMS planned for Say Yes Syracuse had 13 indicators in the three domains.

An SMS typically combines information from multiple sources, including education records, a brief teacher survey, a family health survey, and a student survey. The data from these sources are analyzed to indicate whether a student is on-track to thrive, on-track to graduate, or off-track to thrive or graduate. SMS is a screening tool that identifies student needs for remediation or enrichment based on individual scores.

SMS was piloted in 2010–11 with a small set of elementary schools and two middle schools. In 2010–11, teachers completed the survey, but no students or parents were surveyed. The reports based on the teacher survey results were provided to the schools, with no documented use of these reports. In 2011–12, both teachers and students completed the surveys.

SMS Challenges. Say Yes Syracuse brought a tested approach (albeit on a smaller scale) and analytic capacity to SMS development and implementation in SCSD. Say Yes Syracuse also engaged stakeholders in decisions regarding the SMS contents, offered consulting assistance to SCSD regarding the data system, and offered assistance to address the professional development needs of teachers and others who would be the audiences and the users of SMS data. However, the following challenges proved to be barriers to the completion of SMS implementation:

- The full SMS implementation required the administration of surveys and the linkage of data going beyond the existing district student information system (eSchool). SCSD did not have a champion for the effort, and the work of implementation was an added burden on SCSD staff.
- The SMS value rests in its continuous use by teachers and specialists. Although a team of district and expert researchers was assigned the task of planning SMS communication and use, this charge was not realized; as of the 2012–13 school year, SMS was not in operation.

2. School Review and School Profiles

To identify each school's strengths and challenges, Say Yes Syracuse planned a **school profile** targeted to each of the 33 schools in SCSD.¹² The process of collecting original data, mining existing data, analyzing results, and then displaying the data in a report for use in school improvement planning was termed a *school review*. The Say Yes Syracuse school review and the production of school profiles were carried out in three successive years: 2009–10, 2010–11, and 2011–12. An annual report was produced for each school, describing academic, socioemotional, and health conditions and supports.

Just prior to the implementation of Say Yes Syracuse, SCSD purchased the software to maintain a data resource of school and student characteristics (eSchool). The availability of this resource was critical to the school review effort because it held promise for mining existing data, such as the key characteristics of students and schools, when the original collection of such data would have been

¹² One school closed in 2010–11, and there was a merger of two schools prior to the 2011–12 school year. The school profiles did not address special prekindergarten programs, charter schools, or alternative schools.

prohibitive. For example, eSchool supplied demographic statistics, attendance data, coursework data, diploma types, disciplinary actions, and student-level achievement data. Another source of extant data vital to the production of the school profiles was the school and district report cards prepared by the New York State Education Department (NYSED) and made available on a public website. The data reported in the school report cards were at the aggregate level by school, and the information was based on at least one year of prior data.

Say Yes Syracuse invested resources in collecting and compiling new data and exploring the potential of eSchool to its maximum effectiveness. Two surveys new to SCSD (the School Climate Inventory and the Conditions for Learning Survey) were fielded throughout the school district to replace existing surveys and a walk-through checklist. These surveys yielded teacher and student perceptions on instructional and socioemotional conditions. The interviews with teachers, leaders, and specialists at schools, and the results of focus groups with students and parents that were conducted in the first two school review cycles, were analyzed to identify the themes of challenges and strengths, as well as views on program implementation and impact. (For more information, see *School Review in Focus*, p. 23.) In addition, Say Yes Syracuse proposed an innovation, the development of a detailed compendium of information about all programs available to schools that address the academic, socioemotional, and health needs of students. Say Yes Syracuse also collaborated with SCSD and SYTE staff and mined data from outcomes studies regarding postsecondary participation.

School Review Challenges. The challenges that emerged in the conduct of the school reviews were primarily related to information systems issues and the implications of these issues for the development of comprehensive information and useful indicators. However, the school review process took place during a time of local upheaval and in a context of additional reporting burden with pressures from state and federal sources. SYTE attempted to fit the school review with existing reporting and school improvement data needs. After a three-year partnership in the school review process, Say Yes Syracuse ended the school review activity at the request of SCSD, citing duplication of effort relative to other state and federal reporting requirements.

- *Information systems challenges in the use of existing data.* The greatest challenges in the school review and profile development efforts were related to the planned use of existing data in the information systems at district and state levels. Say Yes Syracuse anticipated using data that were stored at multiple sites and created for different purposes (i.e., state data were created for the accountability report cards; eSchool district data were designed for reporting but not high-level analysis). The two sources did not share common definitions, and the data collection periods differed. There were many technical limitations that emerged relative to use of the locally maintained database of school and student characteristics, including the lack of historical data, inconsistent entries, and lack of documentation. The specific problems experienced with the use of extant data sources for the school review (the eSchool and NYSED achievement data) and the new data collections are described in points a–d below.

a. eSchool Information System

- The processes of entering, interpreting, cleaning, and analyzing data were hindered by the absence of a data dictionary (i.e., code book), either online or in printed format, that explained the properties of each data element, defined the data contents, and indicated the beginning year that an element was first included in the system. For example, to appropriately plan longitudinal analyses, it would be helpful to know how long a given variable had been maintained in the system and how many years of data were available.
- The absence of a standardized convention in data entry led to a lack of consistency in the data entered. For example, course names and test names were not standardized across all schools, leading to difficulty in knowing whether two students in two different schools took the same classes.
- eSchool was dynamic and was intended to capture current student information. However, the overwriting of prior years' demographic data rather than the archiving of such data resulted in permanent data loss. For example, a student's current school year's meal status could be readily determined; however, his or hers meal status in previous school years was lost.
- The stated rules for adding and dropping students from eSchool did not appear to be consistently implemented. For example, some students who were active in 2008–09 were not included in 2008–09 attendance data pulled from eSchool at the end of 2010–11. Other limitations of eSchool related to developing indicators and reporting longitudinal analyses were as follows:
 - Elementary school academic grades were not maintained in the eSchool system.
 - Teachers could not be directly linked to the students they taught in a particular year.

Given these challenges and weaknesses within the most critical system documenting student- and school-level data, it would seem quite difficult to produce annual reports for each school. However, Say Yes Syracuse was able to resolve some of these issues.

- To maintain consistency in terms of student records, arrangements were made with the SCSD data office to download the eSchool data on a specific date each year (e.g., the day before the rollover each year, when the prior year's data was overwritten and new data was entered). This file was a source for school and student demographic data (which are key to analyses of subgroup results on surveys and academic outcomes); it was also an important source for indicators of attendance, coursework, diploma types, and disciplinary actions.
- Say Yes Syracuse and SCSD data record experts worked together to clarify the definitions for the eSchool elements.
- Where possible, Say Yes Syracuse also relied heavily on state report cards.

b. NYSED Report Card Data

In using the NYSED state report cards, the source of aggregate achievement data, Regents test scores, adequate yearly progress (AYP) results, teacher and student mobility rates, and the number of teachers and their credentials, Say Yes Syracuse faced the following challenges of timing and aggregation:

- The NYSED report card contents were based on one and two years of prior data.
- The NYSED report card release was delayed, and the data were presented in aggregate by school.

To address these challenges, Say Yes Syracuse used eSchool as a source for achievement data, although this continued to provide the challenges enumerated earlier.

c. New Data Collections

Additional challenges were experienced with the planned administration of two surveys new to SCSD: the Conditions for Learning Survey and the School Climate Inventory.

- Neither survey had been previously administered in SCSD, although these surveys had been administered and normed elsewhere, and these instruments were unfamiliar to both the teachers and the students.
- The data required for administering both surveys, such as the list of full-time classroom teachers and the list of students, were not entirely accurate due to the mobility of students and assignment changes for teachers.
- Say Yes Syracuse and SCSD introduced the initial survey administration hurriedly and, as a result, the first year's response rates were extremely low.

Say Yes Syracuse worked with SCSD administrators to design approaches that supported the administration of both surveys, with the response rates improving in successive years.

- SCSD contacted teachers and principals about the survey and arranged for the delivery of the paper-and-pencil-based student surveys and the online administration of the teacher surveys to address the survey needs requested by school staff.
- The surveys were administered in groups. All elementary and middle school students completed the surveys during their homeroom classrooms on a specific date; high school students participated during a selected block and date. Teachers were responsible for following up with students who were absent on that day.
- Teachers were provided a time window to complete the surveys and a link to the websites where they were hosted.
- Say Yes Syracuse collected the student surveys, processed and analyzed the results, and followed up with nonresponding schools, even visiting schools during

the school review period to remind them about the surveys and facilitate data collection and submission.

d. Review of Programs and Supports for the School Profiles

The school review sought to provide program information for school leaders and SYTE to assess what supports were available in each school to help students overcome barriers. This was a needed effort for the school profiles; however, the information could not be incorporated into the school profiles because:

- There was no comprehensive list that combined school-based and community-based services and supports.
- There was no uniform description of program goals, reach, implementation, or outcomes available from either SCSD or community organizations that were delivering the services.

Thus, Say Yes Syracuse undertook an extensive review and classification of all programs, as well as in-depth implementation reviews on several selected programs, including Say Yes afterschool and summer school programming and the district-wide Positive Behavioral Interventions and Supports (PBIS) program.

- A comprehensive list of programs and supports was gathered from all school visits.
- Programs were first classified as academic, socioemotional, or health-focused programs. Within those broad categories, programs were classified in subcategories (e.g., core curricula, supplemental programs, and enrichment programs) that were identified and defined by specialists in the three fields.
- Descriptions were developed based on literature about each program.
- The evidence of effects was summarized if high-quality research studies had been conducted and reported.
- Information about program staffing, reach, implementation, and outcomes was gathered at the school level by interviewing a variety of school personnel during school visits and by SYTE staff located at the schools.
- Items were added to the teacher and student surveys (in the third year of the reviews) to gather quantitative data about the perceptions of program implementation and outcomes.
- Say Yes Syracuse undertook original data collection (in the second year of the review) about the summer and afterschool programs.
- Say Yes Syracuse and SCSD collaborated on documentation regarding the districtwide PBIS implementation (in the second and third years of the review), with Say Yes Syracuse tapping into data collected by SCSD through the School-wide Evaluation Tool (SET).

- *Research challenges.* Say Yes Syracuse sought to go beyond the data elements in these sources, to combine them and develop analytic indicators. These indicators were to be based on research-based benchmarks regarding student well-being. The limitations of the data systems proved a daunting challenge to this analytic goal. Data retrieved using Query Studio (an eSchool function) were often fragmented. Multiple files needed to be downloaded and merged to include different information, such as demographic characteristics, academic status, courses taken, and the disciplinary actions for a student in a particular school year. To track such information about a student during his or her high school academic career in Syracuse required multiple iterations of such merging efforts. Analyses to determine if students were on-track to thrive required multiple variables, all merged during the course of several years, which proved to be a formidable challenge in terms both of staff effort and of maintaining adequate numbers of students in the database without compromising the data required for each student.
- *Challenges related to burden on SCSD staff and schools.* School staff members who manage information systems and the school personnel who input their data are critical to the integrity and usefulness of a data system. Say Yes Syracuse's data initiatives were dependent on the knowledge and the expertise of SCSD staff members who managed eSchool and knew the idiosyncrasies of their own data system as well as the state accountability systems. The initiatives depended, too, on the willingness of district and school leaders to participate and support data collection. SYTE did not have a prior agreement with SCSD regarding support and access to local data. Requests made to assist with survey administration, data file development, and definitions of data elements placed a new burden on school and district personnel.
- *Strategic challenges.* In the first two years of briefings, school teams in SCSD reported that the data in the school profiles were informative and that the program information stimulated discussion about the most effective supports being implemented on behalf of students. However, the school review process was costly when implemented fully. Say Yes Syracuse pared down the activities in Year 3 to demonstrate its affordability and anticipated transitioning the process to SCSD. Still, Say Yes Syracuse school review activities were considered an additional burden and, in some cases, a duplication of effort regarding reporting, particularly as Race to the Top reporting requirements became a priority and as the new SCSD leadership established strategic initiatives.

Using Data to Monitor Implementation

Say Yes Syracuse monitored the progress of the overall reform initiative with annual implementation reports. Another implementation-related data product was the development of due diligence reports.

1. Annual Implementation Reports

SYTE aimed to tap the various resources collected in multiple data initiatives in Say Yes Syracuse to monitor the progress of implementation. For SYTE program leaders, Say Yes Syracuse prepared two annual **implementation reports**, building on hundreds of interviews collected during the school review and bolstering these data with targeted interviews about the Say Yes Syracuse program

implementation with community leaders engaged in and/or knowledgeable about SYTE. In each report, Say Yes Syracuse reported progress by goals and the core principles, as well as recommendations to advance toward the goals of the initiative.

Challenges for the Implementation Reports. The challenges of producing annual implementation reports fall primarily within the second of the challenge types: i.e., *research* challenges. With portions of the Say Yes Syracuse initiative always underway and with planning for these a constant, parts of the Say Yes Syracuse model were not finalized, which complicated the research task of clarifying questions, measuring objectives, and planning an approach to deliver a report on the progress of the initiative. In addition, there was debate about whether the implementation reports could serve both internal continuous improvement goals (e.g., improving the timing and delivery of Say Yes Syracuse services) and external communication goals (e.g., building stakeholder support and engagement in Say Yes Syracuse and reporting on the impact of the initiative). This latter need impinged on the reports because the outcomes studies (described later), which were planned and underway, could not serve SYTE for this communication function on an annual basis.

- The implementation reports were designed to measure progress on the core principles, a set of conditions mutually agreed to by SCSD, SYTE, and SU. The core principles represented a commitment but were written in language that could not be easily translated into measurable objectives. During the first two years of reporting on the implementation, Say Yes Syracuse struggled with the definition of the immediate and long-term objectives and the design of instruments sensitive enough to reveal progress and challenges.
- Measuring the impact of program implementation was difficult because specific programs supported in the initiative (e.g., the afterschool and summer camp programs, in-school health clinics, legal clinics, and supports for middle school and high school students) were being implemented on a quadrant-by-quadrant, rolling basis. With the treatment at different stages throughout the city (from not-yet-implemented to multiyear implementation) and frequent updates and changes being made in the treatment model where it was being implemented, it was not possible to get a picture of or report on the results for the initiative as a whole at one point in time.
- Say Yes Syracuse was not well understood by all of the participants and the stakeholders, especially in the first two years of the initiative, so interviews about its progress and results yielded a variety of perspectives, making it difficult to extract meaningful recommendations for the next steps.

To address these challenges, Say Yes Syracuse held several meetings, where the purpose and the contents of the implementation reports were discussed. Two reports were produced for internal use. A summary report was created for external funders. In the third year of Say Yes Syracuse, the redesign of the implementation study became a priority, reflecting much reconsideration of an approach that would fit the internal and external audiences interested in the progress of Say Yes Syracuse.

2. Due Diligence Reports

For CBOs seeking to be partners with SYTE in the delivery of services, Say Yes Syracuse proposed the development of **due diligence reports** and began to deliver these in 2008–09. SYTE anticipated forming partnerships to seek grant opportunities—funds from state and national governmental entities and foundations—to deliver support programs, such as legal clinics, health clinics, afterschool and enrichment programs, and social services to children and families. As planned by SYTE, any CBO interested in working with SYTE in a particular service area would voluntarily agree to engage in a due diligence review by (1) sending information to the reviewers, (2) participating in a site visit, and (3) engaging in an expert review of the results. A screening process was created based on a full description of the program and the rating of six dimensions: demonstrated effects, data availability, the quality and fidelity of implementation, a program theory of action, alignment with the SYTE mission, and staff expertise.

Say Yes Syracuse developed a process for communicating with CBOs, collecting and reviewing materials, and designing a rubric to rate each CBO program reviewed on the six dimensions. The final product was a brief report produced and shared with SYTE. The report provided recommendations to direct further improvement in each dimension and was intended to lead to focused support in areas of need to help CBOs prepare to scale up to the point where they could provide services to the entire SCSD. SYTE leaders shared the results of the due diligence reports with CBOs. Approximately 26 reviews were completed during the four years. Say Yes Syracuse anticipated transitioning the due diligence reviews to a local agency.

Challenges for the Due Diligence Work. As we reviewed the due diligence work, it seemed that the most important challenges were related to communicating about the activity with stakeholders, the perception that it was not useful, or confusion about its use; i.e., challenges that fall within the fourth data use, *sharing data and engaging stakeholders*. CBOs were already part of the Syracuse community, and many already provided reports about their work on an annual basis to their funders, accrediting organizations, and national organizations of which they were members or affiliates. The following challenges proved to be barriers to accomplishing the due diligence effort:

- The purpose of the due diligence effort was not well understood by all of the CBOs.
- Not all Syracuse-based CBO programs were appropriate for the SYTE mission, yet many believed they were required to undergo this process.
- CBOs already reported on many program dimensions to funders and viewed Say Yes Syracuse’s due diligence effort as burdensome.
- CBOs were not interested in further assistance based on the recommendations in the due diligence reports.

Currently, the approach to agency review is under revision, and a process to transition the due diligence activity to a local agency is underway. Changes regarding the review categories and communications with agencies are aspects of the new approach.

Using Data to Certify Results

For external audiences, such as researchers, prospective funders, and members of the stakeholder communities, Say Yes Syracuse designed a series of ongoing outcome investigations: (1) secondary and postsecondary outcomes for Syracuse students overall, as well as those receiving the SYTE scholarship; (2) school-level changes in achievement, attendance, and behavior for SCSD students compared with matched school districts in New York state not receiving SYTE supports; and (3) student-level within-district comparisons of achievement, attendance, and disciplinary outcomes for students who received Say Yes supports compared to those who did not. The specific data investigations are described in the following narrative.

The future plans school reports were developed using data collected in the Future Plans surveys. The reports provided the high schools and SCSD with school-level data on postsecondary expectations, academic preparedness for college, college supports, barriers to college access, college characteristics, and the influence of SYTE on college plans. The school-level reports were produced in response to school requests for this information. The final set of reports to high schools containing data collected between school years 2008–09 and 2011–12 were shared in April 2013.

The **comparative outcomes report** is to be conducted using achievement, attendance, disciplinary, and graduation data from eSchool and the NYSED report cards. This report compares school-level outcomes for elementary, middle, and K–8 schools in Syracuse to school outcomes in matched districts. The five Syracuse high schools were matched to similar schools across New York State for these comparisons. Analyses at the student level were designed to take advantage of the quadrant-based rollout of Say Yes supports and compared students who received supports to those in the same schools the year before supports began. This report shows whether SCSD’s academic outcomes (achievement, attendance, graduation, and dropout statistics) have statistically improved since the implementation of Say Yes Syracuse.

One particular outcome that the AIR team hopes to include in the outcomes report if supporting data are available is the **college eligibility index**. This indicator is calculated based on high school course-taking, course grades, and grade point average (GPA) data from eSchool. The index was developed around the admissions requirements of State University of New York schools. It considers students’ grades in English, mathematics, science, social studies, and foreign language, as well as GPAs, to establish whether students are on track to go to college. Preliminary analyses examining the 2005 cohort of SCSD freshman were completed, and additional validity studies of this index are planned.

A **postsecondary analysis** was conducted as part of a 2010 evaluation report and will be repeated in 2013 if relevant data are made available. These analyses use college enrollment data from the National Student Clearinghouse, combined with graduation data from eSchool and college selectivity data from the Integrated Postsecondary Education Data System (IPEDS). The report provided descriptive data on the percentage of high school graduates enrolling in college by graduation year. It also provided data on college selectivity, two-year versus four-year schools, and public versus private schools.

Challenges for Outcomes Reporting. The Say Yes Syracuse data initiatives to document the outcomes for students—the future plans school reports, the outcomes report, the college eligibility index, and the postsecondary analysis—faced the following challenges related to the planned use of extant data and support for the conduct of the outcomes studies and their strategic use:

- Data on the participation of students in signature programs (e.g., afterschool programs) were not maintained by SCSD or Say Yes Syracuse, making it impossible to compare the outcomes for students who received supports with those who did not receive supports.
- eSchool data were not appropriately maintained for longitudinal data analysis. Specifically, staff members could alter data from previous school years, and there were no written protocols in place to monitor this (see the specific examples listed in the previous section). As a result, data in eSchool that changed from day to day (e.g., free or reduced-price lunch program participation and English language learner [ELL] status), could not be downloaded for previous school years.
- Initially, SCSD did not have access to data from the National Student Clearinghouse; thus key data needed for the outcomes' investigations were not available. However, NYSED provided all New York school districts a trial of the Clearinghouse, which allowed access to data up until the 2009–10 school year. SCSD currently has plans to obtain these data from the Western New York Regional Information Center.
- Say Yes Syracuse attempted to gather survey data from students who had graduated from high school, but the response rate was low and the survey was discontinued.

To address these challenges, Say Yes Syracuse:

- Used data (when possible) from the NYSED report cards on outcomes, such as graduation rate and achievement scores.
- Conducted focus groups with SCSD graduates who were attending (or not attending) college to collect information on challenges and supports with SYTE and college going more generally.

Sharing Data to Engage Stakeholders in the Initiative and Assure Transparency and Accountability

Say Yes Syracuse sought to operate through multiple task forces and governing groups, expecting that stakeholders would engage in working together toward the success of Say Yes Syracuse, raise questions, offer suggestions, and generally facilitate implementation of the initiative. Say Yes Syracuse considered the purpose of each task force and group in terms of stakeholder interests and expertise. There was a community advisory group, where representatives of all stakeholder groups met, heard reports on progress and plans, and discussed ways to achieve success. An operating committee—consisting of representatives from all the key partners—met three to four times per month. This committee determined operating details and addressed challenges that affected the functionality of the initiative's partners, including SCSD, the school board, the mayor's office, and the chief community organization, as well as university and research partners.

Say Yes Syracuse provided data to the various constituent groups at various intervals based on events, needs, or requests. For example, the initiative responded to data requests from the leaders of SCSD, the local newspaper, and the community advisory group. Several vehicles— such as PowerPoint presentations—were used to share data in this context. Say Yes Syracuse also explored the design of analytic tools that would place key data in the hands of SCSD administrators. The dashboard, for example, represented an additional effort undertaken to address a long-term goal of SYTE to build an accessible resource of data chronicling the changes in the community as a result of Say Yes Syracuse.

Dashboard

For internal and external stakeholders (higher education institutions, school boards, the mayor, community leaders, and parents), Say Yes Syracuse conceptualized a **dashboard** that would track a specified set of conditions relevant to the educational and economic health of the city and would be accessible online to all members of the community. Say Yes Syracuse designed the dashboard to help the city improve services and efficiency by providing a resource of relevant data. The dashboard was expected to draw on multiple sources of data, including SCSD and the state of New York. The plan proposed that the dashboard be managed by a local organization that would continually update the data to reflect the changing status of institutions serving children and families in Syracuse.

After a series of meetings with community leaders, Say Yes Syracuse proposed a list of indicators for the dashboard, including: school enrollment; English language arts (ELA) and mathematics outcomes; achievement gaps; parents' expectations for students' achievement and postsecondary outcomes; student perceptions and behavioral outcomes; health outcomes; and community demographics, conditions, and family socioeconomic status.

Where possible, the indicators were to describe the percentage of students off-track, on-track, or on-track to thrive for a given outcome. (These levels were used throughout the Say Yes Syracuse data products.) Underlying this designation was research regarding benchmarking, specifically to address the level at which students would be likely to be successful in K–12 or postsecondary education. The dashboard proposed to disaggregate indicators by race, ELL status, special education status, socioeconomic status, and school level.

SYTE anticipated working with a local agency to host the dashboard and keep it up to date. In 2013 the dashboard framework was updated by SYTE and the Syracuse Operating Committee. Say Yes to Education's director of research and programs and a graduate student at the Maxwell School at Syracuse University populated and now maintain the dashboard on behalf of the Syracuse Operating Committee.

In the process of developing the dashboard, SYTE engaged multiple stakeholders in discussions about indicators that would be valued, as well as the process of creating and managing such an indicator system on behalf of the entire city.

- The list of dashboard indicators underwent numerous revisions.
- Say Yes Syracuse sought a community agency to institute and populate the dashboard, but an agency would not commit resources to accomplish this.

- At the same time as the community dashboard was under development, several other entities, including SCSD and a large community foundation, discussed creating their own dashboards.

About one third of the Say Yes Syracuse data resources were committed to developing a comprehensive school review process and producing annual, individual school profiles. The scope and maturity of this activity lends itself to a more thorough treatment, which follows, and highlights the accomplishments, since the challenges have already been enumerated.

Lessons From the School Review Process

In this section of the paper, we focus on the most mature data product of Say Yes Syracuse—the school profile. We explore in greater detail the data sources (original and extant), planning, contents, and innovative approaches (e.g., program review, indicator development, data analysis, and the briefing process for school teams) that were designed to produce the school profile.

In 2008–09, Say Yes Syracuse leadership discussed ways of accomplishing the following goals: (1) monitoring the implementation of Say Yes Syracuse signature programs in schools and (2) organizing information for principals and instructional teams that would support the school’s strategic improvement process at the building level. They conceptualized a school profile that would draw on extant and original data, identify student needs, highlight available school supports and programs to address these needs, and be replicable each year, serving as a progress monitoring tool. The individual school profile was designed to provide specific information for each school and its communities. In this way, it also addressed the fourth use of data that we have explored in this paper: the engagement of stakeholders in the mission of Say Yes Syracuse. The school profiles—produced in 2009–10, 2010–11, and 2011–12—were designed as the basis of year-to-year assessments regarding the strengths and the challenges of a school community as measured by academic, socioemotional, and health indicators.

Original Sources

The research team administered the following data collection tools.

1. Protocols for the interviews and the focus groups
 - Protocols for interviews with school specialists, such as student support staff (e.g., social workers, school psychologists, and guidance counselors), academic support staff (e.g., instructional coaches, speech teachers, and English as a second language [ESL] teachers), and school nurses. These protocols sought information about student needs; ways to respond to these needs; and the sufficiency of resources, programs, or supports that were working well and ones that were not working as well, including Say Yes Syracuse supports.
 - Protocols for focus groups with teachers, students, and parents. These protocols gathered information about student needs; ways of responding to those needs; and the sufficiency of resources, programs, or supports that were working well and ones that were not working as well, including Say Yes Syracuse supports.

- Protocol for principal interviews. This protocol gathered information from the perspective of administrators about what a school was already doing well to support students' academic, socioemotional, and health needs and where a school desired additional support.
2. Table shell and instructions for information request on programming. These instruments facilitated the collection of information on school programming. In each school, a staff member or team completed the program reach table, which compiled information on the names of every program operating in the school, the number of students and grades participating in each program, and the frequency and the intensity of program delivery, among other characteristics. In total, there were about 200 individual programs identified across all schools and the district.
 3. Conditions for Learning student survey. This survey, developed and managed by American Institutes for Research, was administered to all students in grades 2–12 in regular SCSD schools. It focused on the instructional challenges and socioemotional conditions for learning in each school. It was a paper-and-pencil-based survey with similar topics across grades, but it was tailored for specific grade levels (elementary, middle, or high school).
 4. School Climate Inventory teacher survey. Through the University of Memphis (a subcontractor), this survey was administered to all Unit 1 instructional staff (i.e., including regular teachers, aides, and special teachers) in SCSD. This online teacher survey focused on the instructional conditions and support in the schools.
 5. The School-Wide Evaluation Tool (SET). SCSD staff used SET to evaluate the implementation of the PBIS program in 2010–11. SCSD staff conducted the evaluation (which occurred in fall 2010 and spring 2011), although Say Yes Syracuse drew on the results in developing the school profiles. The SET implementation manual can be found at http://www.pbis.org/evaluation/evaluation_tools.aspx
 6. Summer school review and afterschool program observation and interview forms. In the second year of school review work, the school profile included a special section focused on the SYTE initiative of providing high-quality summer and afterschool programs for the students. At schools with summer programs, interviews, focus groups, and structured observations of academic and enrichment activities were conducted with tools designed by the research team. Using the nationally normed Youth Program Quality Assessment (Youth PQA) tools, the school review team observed each existing afterschool program in elementary and K–8 schools and conducted interviews with program personnel involved in decision making and program delivery. This was a one-time effort, and the results were presented in the 2010–11 school profiles.
 - Youth Program Quality Assessment (Youth PQA) Form A. This observation tool evaluated the quality of the SYTE afterschool programs in each school and identified staff training needs by observing afterschool classes.
 - Youth Program Quality Assessment (Youth PQA) Form B. This interview protocol evaluated the quality of the SYTE afterschool programs in each school and identified staff training needs by interviewing the afterschool coordinator. Both forms were developed by High/Scope Educational Research Foundation.

Extant Data

The school profiles also drew on several files from eSchool for K–12 students enrolled each school year from 2007–08 to 2010–11. A set of files were first extracted independently and then merged to produce academic indicators by school and subgroup.

1. The demographic files from eSchool provided gender, race/ethnicity, immigrant status, date of birth, individualized education program (IEP) status, ESL status, and free or reduced-price lunch status.
2. An academic indicator file for K–12 students provided disciplinary records, attendance, and course taking for middle school students, and New York state achievement test results in ELA and mathematics (for students in grades 3–8) and ELA and Regents test results (for high school students).
3. An academic indicator file for high school students provided final course grades, retention information, GPA, the type of diploma received, the number of courses taken and successfully completed, grade level when taking specific classes, and grades received for Algebra II.
4. NYSED report cards provided information about teacher and student mobility rates, the number of teachers and their credentials, and a school's AYP status.

Development of the School Profile Template

Midway into the 2009–10 school year, which was the first year of the school review, the Say Yes Syracuse team began the process of data collection, analysis, and product design of the school profile. A focus group was conducted in Syracuse to seek feedback from SCSD principals, particularly regarding their use of the profile as a decision-making tool. Say Yes Syracuse built the profile template around the academic, socioemotional, and health domains addressed in the SYTE theory of action and identified three essential components for each domain: outcomes, conditions, and programs. Within these essential components, the profile would fulfill the four uses of data described throughout this paper: student needs would be identified; program status and outcomes would be monitored; and a set of recommendations would serve to engage school personnel, parents, and stakeholders in continued improvement.

The core of the school profile remained essentially the same, but refinements were made each year in which the profiles were produced. Appendix C details the evolutionary changes that occurred over the three years of school review. Additional detail about the indicators that were developed for the school profiles is in Appendix D. The list of program focus areas by domain is in Appendix E.

As indicated in Appendix C, the key differences by year of the school review were as follows:

- In the first year, the contents of each profile were built around the indicators, and the narrative emphasized the analysis of the interviews and the focus group data gathered from individual site visits. The recommendations were drawn from the reported outcomes described in the indicator graphs along with descriptions of needs and the resources to address those needs. Additionally, a technical background document was prepared for each

school, which among other documentation provided a table on the research evidence of effects of the programs tailored to that school.

- In the second year, each school with an afterschool and/or summer program sponsored by SYTE received in its profile a review of the quality aspects of that program as implemented. The school profiles also contained the results of SCSD-conducted SET interviews and observations regarding the status of PBIS on each campus. The indicators used in the first year's profiles remained the same in the second year, with some improvements in measuring attendance, disciplinary actions, and diploma status. Achievement scores for both years were calibrated to address state changes in scores.¹³ For each outcome indicator (with the exception of the high school ELA and mathematics scores), differences of 10 points or more from profile Year 1 to profile Year 2 were reported as changes.¹⁴ New information about many indicators was presented by subgroup. A recommendations table reported the Year 1 recommendations and progress made, based on interviews and focus groups. Implementing the reporting standards required that any statements on implementation and impact were to be based on more than one source in the interview and focus groups notes. Beginning in Year 2, the technical background document was generalized, and the evidence of effects tables showed all of the programs. This significantly reduced the burden of preparation (because only one version, not 33 versions, was needed) and allowed the addition of information on cross-school reports on the programs, aggregated from across the profiles.
- In the third year, school visits and interviews—with the exception of principals who participated in telephone interviews to provide an update on conditions and program implementation and impact—were omitted. The SYTE school-based staff, who played a significant role in Year 2 as data co-collectors, took on an even more prominent role, gathering program details for each program and support by domain and topic area. Say Yes Syracuse also designed a systematic analysis approach to compile qualitative and descriptive data from the principal interviews, the three-year trends identified in the indicators, and the results from student and teacher reports on commonly used academic and socioemotional programs.

In addition to the accomplishments of creating useful indicators and successfully combining new and extant data, the Say Yes Syracuse school profile team developed innovative approaches to address the challenges of (1) documenting programs and supports, and (2) analyzing multiple types of data for school improvement planning.

¹³ The cut-points for the attendance behavior indicator were revised based on findings from the University of Chicago Consortium on Chicago School Research. The graduation rate indicator replaced a diploma earned indicator. The new indicator used cohort status data for a high school cohort after four years of education to include students in the entire school district. We replaced a disciplinary actions indicator that was based on eSchool disciplinary actions data because analyses of eSchool showed that different actions were associated with the same incident/behavior across schools. The revised indicator used student incident data. Source: Say Yes Syracuse School Review Subtask 3: Quantitative Data Analysis Update, July 28, 2010.

¹⁴ A conservative approach was taken because there were limitations in conducting the statistical significance testing.

1. Approach to Program Review for the School Profiles

The school review sought multiple perspectives on the greatest needs of students and the resources available to address those needs within the school community. Say Yes Syracuse first obtained a list of programs and services provided to students in SCSD from the district as a starting point, and the programs were reviewed one by one at each school visit as site visitors to schools in the first year of data collection sought to understand which were actively being implemented and the purpose for each. Say Yes Syracuse compiled the program information in a “mega table.” The mega table revealed that there was inconsistent information about the purpose, reach, and results of the programs. Site visit teams developed an approach to gather information about the program descriptions and appropriately categorize them in the correct domain (i.e., academic, socioemotional, and health) and within a specific focus area in that domain. The program taxonomy is shown in Appendix E. More than 200 national and local programs were documented during the school review process.

In the second and third years of school reviews, Say Yes Syracuse gathered additional information about each program as implemented. Collected data focused on program capacity, reach, and views regarding implementation and impact at individual schools. The site visit teams conducted interviews during the site visits (in the second round of school reviews) and developed new items for the student and teacher surveys that probed perceptions of the presence of key features and program outcomes (in the third round of school reviews).

Also, Say Yes Syracuse *designed evidence of effects tables* for the technical background document that accompanied each school profile. These tables summarized the evidence of effects for programs operating in SCSD. They drew on existing rigorous reviews of the research (e.g., the What Works Clearinghouse, the Best Evidence Encyclopedia, and Blueprints for Violence Prevention); studies posted on the program developers’ websites; and anecdotal reports from teacher, administrator, parent, and student interviews and focus groups (which were presented side by side with the research). The evidence of effects tables did not constitute a systematic review of the research, and the notes that accompanied the tables contained caveats, such as a reminder that other existing evidence may be less readily available or simply not found for the current profile tables. Guiding questions for users also accompanied the evidence of effects tables:

Ideally, when thinking about programming (in terms of both continuing current programs and implementing new programs), school staff should consider the evidence of effects of the programs as part of the picture. Staff should consider whether research indicates that the programs will work for a school’s unique population, strengths, and needs. Staff members should ask whether there is evidence that the program works in their school’s context. Furthermore, when weighing the evidence, staff members should consider the quality of the research (Are the studies strong? Are there many studies with similar findings?); the source of the research (Did the developer or another self-interested party pay for the study?); and the research limitations (Was the study on an obsolete version of the program?) (School Review Team, *Technical Background Document*, 2012).

2. Developing An Approach to Integrate Qualitative and Quantitative Data

Once the Say Yes Syracuse school profile team extracted, cleaned, and readied quantitative data from surveys and eSchool, they produced school profile graphs and tables. However, the school review process yielded qualitative and descriptive data of various kinds, and there was little precedent available to objectively compile the results in a standardized manner—that is, treating each type of data equally. Say Yes Syracuse had already created rules for identifying common themes across the respondent groups, in line with the NVIVO approach used to analyze interviews and focus groups.¹⁵ When the assortment of data types included survey responses (about programs) and interview comments (about implementation and outcomes), it became necessary to develop an analysis approach to integrate the various types of data.

Say Yes Syracuse determined that for evaluative comments to appear in a table summarizing the assessment of select programs at a school, at least two reports were required from the four possible sources of information. Table 1 provides the general guidelines for assessing a school’s positive or negative response to a program. Each individual respondent group’s feedback was judged as either leaning favorably or not, and then, by looking across the different groups’ leanings, the summary statement was generated. In addition, there was a category for mixed views (e.g., if opinions were divergent). The sources included both qualitative and quantitative data.

Table 1. Assessing a School’s Response Regarding Programs

Assessment	Possible Respondent Groups			
	Principal Interview	Programming Tables	Teacher Survey	Student Survey
Identified favorably	Comments or evidence offered of effectiveness Comments on positives/strengths of implementation	Comments or evidence offered on effectiveness Comments on positives/strengths of implementation	At least 75% say it is at least “a little bit effective,” and at least 50% say it is at least “fairly effective.”	For elementary schools, at least 50% or more agree “sometimes” or “yes” on all points. For middle and high schools, at least 50% agree or strongly agree on all points.
Identified with challenges	Comments on ineffectiveness Comments on implementation challenges	Comments on ineffectiveness Comments on implementation challenges	Twenty-six percent or more say it is “not at all effective,” and less than 50% say it is at least “fairly effective.”	For elementary schools, 49% or more report “no” on at least one point. For middle and high schools, 49% or more disagree or strongly disagree on at least one point.

¹⁵ NVivo is a software tool for analysis of qualitative data (http://www.qsrinternational.com/products_nvivo.aspx).

3. Briefing Process for the School Teams

At the end of the first year of the school review, Say Yes Syracuse met with principals and presented the process and the results of the school profiles. In the second school review cycle, Say Yes Syracuse and SCSD organized a briefing process in which individual school teams worked together with the results described in the school profile. The briefing process was targeted to existing school-designated teams of teachers, specialists, and administrators. Each school team received its school profile and the technical background document in advance of the briefing. On the day of the briefing, the school teams came together, meeting at a school site for about two hours in the late afternoon. At this meeting, Say Yes Syracuse provided an overview of the school review process. The individual teams then assessed the results in the school profile, working at their own pace and focusing on what was most important to the team. The results tables summarized the trends presented by the indicators and the review of all programs. Briefing tools included guidance for linking results, recommendations, and areas of school improvement to facilitate the revision of school improvement plans. Say Yes Syracuse facilitators provided a set of overall prompts or questions to the school teams to stimulate discussion and assist the team in arriving at recommendations that Say Yes Syracuse could integrate into the final version of the profile. The school teams generated corrections and also new content, in the form of recommendations that became part of the final profile. The guiding prompts were:

- For the outcomes and conditions,
 - What are relative strengths and weaknesses?
 - What are the trends during the period of reporting?
 - Are some groups of students struggling or excelling more than others?
- Regarding the programming information,
 - Are there gaps in coverage in terms of topics or grades? Are there any overlaps?
 - Do programs operate cohesively?
 - Are there any implementation issues?
 - Which programs seem particularly successful or unsuccessful?

The briefings also resulted in feedback to Say Yes Syracuse regarding program needs. The school teams provided updates and corrections that were used to finalize the profiles.

The School Review process was the culmination of three years of work gathering new data, investigating and using extant data, establishing relationships with school leaders, understanding the unique characteristics and needs of the SCSD schools, and producing innovative tools for data-driven decision making. The processes of indicator development and program review are replicable in other initiatives. The lessons learned regarding system challenges, research approaches, and strategic uses of data informed our conclusions and recommendations.

PART 3: Summary and Reflection on Lessons Learned

This paper began by describing the conditions for support related to using data in K–12 education; the challenges encountered in the process; and the uses of data for decision making toward improved student outcomes. It then turned to examine the data activities in Say Yes Syracuse, a community-based reform initiative that proposed to use data to assess needs, monitor implementation, summarize and certify outcomes, and facilitate the engagement of stakeholders and accountability. The data efforts in Say Yes Syracuse relied on the existing data resources at both district and state levels. The data efforts also depended on new school level data collections. Say Yes Syracuse brought to the effort expert knowledge in areas of data use, indicator development, and program and supports implementation, along with technical assistance for data interpretation and stakeholder engagement. The combined resources proved successful in terms of the production of some tools; however, the effort to produce and support the four uses of data fell short in many of its goals.

In this conclusion, we look for some explanations by returning to the conditions, described in Part 1 (pp. 5–6), that research indicates are significant for effective information systems. These include:

1. *Adequacy of state, district, and school data systems for accountability and data-driven decision making*
2. *Leadership for educational improvement and the use of data*
3. *Tools for generating actionable data and acting on data*¹⁶
4. *Social structures and supported time for analyzing and interpreting data*
5. *Professional development and technical support for data interpretation* (Means et al., 2010, pp. 3–5)

In the discussion that follows, we consider the Say Yes Syracuse effort in light of these conditions, indicating whether they were in existence and how they may have affected the Say Yes Syracuse plans for data work and data products.

Adequacy of State, District, and School Data Systems for Accountability and Data-Driven Decision Making

Three Say Yes Syracuse data efforts—developing an SMS, conducting a school review, and producing outcomes reports—were designed to improve the existing capacity of SCSD data systems and support schools in offering high-quality, data-driven instruction. However, limitations of local and state data systems hampered the Say Yes Syracuse data efforts.

The local data source—eSchool-generated data—was problematic. It was dynamic; it was created for reporting, not analysis; its content lacked consistency; and there were no tools to support its analytic use. Similarly, data on programs and supports were not available, for example, enrollment data in afterschool programs or other community services delivered in the school. NYSED data were

¹⁶ Means et.al, 2010, describes tools for generating actionable data and tools for acting on data as separate conditions. In this summary, they have been combined.

available; however, the timeline, the variation in definitions of key indicators, and the use of prior year's data affected the coherence and the consistency of the findings that were presented in Say Yes Syracuse products. One particular resource, the National Student Clearinghouse, was never fully implemented by SCSD for its own use, which effectively prevented a postsecondary analysis from being accomplished.

Say Yes Syracuse tried to remedy the limitations and inconsistencies cited above by adding on to the system. The SMS system and the development of school profiles were proposed to make up for the perceived limitations of the current data resources and required implementing new data collection, analysis, and reporting efforts. Over time, SCSD did not embrace these new collection, analysis and reporting efforts as part of its strategy to collect information on student needs or programs. These new data collections were not incorporated in the data information system that existed, nor did they become the foundation for an improved system focused on instruction. Thus, the design of the SMS and the school review did not actually enhance the current system.

Leadership for Educational Improvement and the Use of Data

Absent a jointly developed plan for Say Yes Syracuse data activities, and in the face of frequent SCSD leadership changes, Say Yes Syracuse and SCSD operated from year to year in a state of flux, changing the goals for data efforts while they were underway. Neither the leadership nor the audiences for data seemed convinced of the utility or sustainability of Say Yes Syracuse initiatives.

SCSD leadership underwent significant changes during the period of developing the data products for Say Yes Syracuse. Leadership changes included: (1) the person who was the district liaison to the Say Yes Syracuse data team, (2) the office that maintained and produced the data reports, (3) the academic divisions, and (4) the superintendent. During this period, the data being collected in eSchool were being used for state reporting on specific indicators, such as disciplinary actions; but the data resource was not being used actively as a tool for improving teaching or assessing student needs.

Say Yes Syracuse, for its part, did not begin its activities with a clear, jointly developed plan for sustaining leadership for data activities. Annual negotiations among the partners in Say Yes Syracuse related to scope and products did not facilitate full buy-in at the district level. The annual input from the partners in Say Yes Syracuse also served as a limiter of products from year to year. Say Yes Syracuse partners made several attempts to negotiate the contents and the structure of the proposed data efforts and to resolve problems with SCSD to further the goals of data use. For example, Say Yes Syracuse developed an information memo detailing challenges with using eSchool and suggesting improvements. The lack of consistent leadership and districtwide buy-in, accompanied by perpetual changes in the scope of the data activities and the product specifications, created tensions; and these tensions were enhanced by concerns about burden being placed on district and school staff. In this unsettled environment, one could imagine that SCSD could see the data efforts proposed by Say Yes Syracuse as one-time activities that would not have long-term viability for its needs.

Tools for Generating Actionable Data and Acting on Data

Say Yes Syracuse sought to develop analytic tools and presentations of data that would be useful to school and district leaders and especially teachers, such as the SMS, the school profile, due diligence reports, outcome studies, and the community dashboard. However, the district did not complete the SMS, community organizations did not use the due diligence reports to address program improvement, and the school profile tools were not fully used as designed by school improvement teams.

Research indicates that school staff need data summaries that are broken down by subgroup and that include useful detail about student strengths and weaknesses (Means et al., 2010). Educators and policy makers are more likely to use research and data if they are local in scope, and related to the current vision for instruction or related policies (Marsh et al., 2006). To give a full picture to its users, a district information system would contain tools to integrate and link data from a variety of sources.

The eSchool system, as a dynamic system that was overwritten each year, had limited tools for this type of analysis. Say Yes Syracuse reviewed the system and made recommendations for its improvement which were not implemented.

Say Yes Syracuse designed tools to put actionable data in the hands of teachers and district and community leaders such as the SMS and dashboard blueprints. These tools did not always reach the implementation stage. After facing a variety of technical and managerial challenges, Say Yes Syracuse made two contributions to the “toolkit” for school leaders and faculty. Both succeeded in positing actionable data in the hands of educators, however, their use was limited to a period of about three years:

- The first contribution was building on existing data, however problematic, to produce annual measures of academic, socioemotional, and health outcomes and needs. In doing so, Say Yes Syracuse provided rich information that had not existed before this effort. The development of indicators required an understanding of the data sources, knowledge of benchmarking, experience working with measurement tools, and engagement with multiple working partnerships. The knowledge developed during the school review process was shared with SCSD and SYTE with the hope that it could be a foundation for future analytic work by SCSD.
- The second contribution was the development of information about the panoply of programs and supports existing across SCSD schools. At the start of the implementation of Say Yes Syracuse there was a strong motivation among partners to improve services to students by understanding and marshaling the capacity of community organizations, which served students and their families. However, until 2009–10, an assessment of existing programs operating in the SCSD schools had not been done. In the first year of the school review, Say Yes Syracuse developed a process for documenting the existence, use, and benefit of the programs, work intended to aid principals’ and district administrators’ strategic decision making in the future. In addition, the due diligence reviews provided insight into the many community organizations and their program capacity.

Social Structures and Supported Time for Analyzing and Interpreting Data

Say Yes Syracuse sought opportunities to collaborate with school and district leaders to analyze and interpret new and extant data and, in doing so, create contexts in which school leaders and community members would use the data to improve teaching and learning. However, these collaborative structures were not institutionalized within SCSD and not sustained within Say Yes Syracuse. Specifically, in the first three years of Say Yes Syracuse, SCSD provided school teams with some supported time to meet and discuss school profiles. Additionally, SCSD created a task force with Say Yes Syracuse to design professional development for teachers who would implement the SMS. However, when SCSD discontinued or put on hold data initiatives, the social structures were also disbanded.

Say Yes Syracuse, as a component of its data efforts, sought to incorporate opportunities for school faculty and leaders to analyze and interpret data. This was most fully realized during the principal and school team briefings vis-à-vis the school profiles, especially in the second school review cycle. Each school brought a team of faculty and specialists and dissected the results of the school profile, formulating recommendations based on the team's deep understanding of student needs and school and district capacity. As another example, Say Yes Syracuse and SCSD had the opportunity to review data after conducting the first data collection of information about the summer and afterschool programs, and they used their findings to support a new request for proposals to hire afterschool providers. Third, the district staff who conducted interviews and school visits as part of the districtwide PBS initiative had the opportunity to collaborate with the Say Yes Syracuse site visit teams in the development of the school profiles. In this case, Say Yes Syracuse team members incorporated the findings provided by SCSD staff in the school profiles. However, the structured collaboration ended with the discontinuation of the school review and school profile activity.

Professional Development and Technical Support for Data Interpretation

Professional development and technical support for data use were seen as important activities during the implementation of Say Yes Syracuse. Starting in 2009–10, Say Yes Syracuse planned to support the transition of data activities to SCSD and community organizations through professional development and technical support; however, these plans did not come to fruition. As described above, Say Yes Syracuse suggested collaborative structures and engagement with educators and had limited success in sustaining these structures.

As a component of the school review activity and the proposed SMS, Say Yes Syracuse offered professional development assistance to school district staff, teachers, and principals to facilitate data use and interpretation. Say Yes Syracuse also proposed support to CBOs based on the areas of recommendations that emerged from the due diligence reviews. Other training and technical assistance efforts suggested included the following: support for changes to the data information system, support for the selection of programs based on the program reviews in the school profiles, and support for a research consortium that would locate further data use activities in a local organization consisting of university and district researchers. With these professional learning efforts, Say Yes Syracuse hoped to transition activities of school review, due diligence, and the SMS so that Syracuse stakeholder groups could sustain these systems and practices. As of December

2012, Say Yes Syracuse’s proposals to implement the SMS and the school review were not acted upon. However, at the time of this report’s writing, a newly constituted SCSD office devoted to research and accountability was being planned and a new director hired. Additionally, the due diligence process is being redesigned and will be hosted by a locally based organization, as anticipated by Say Yes Syracuse.

Conclusion

For Say Yes Syracuse, data efforts were intended to address several important objectives integral to the reform initiative:

1. Data about school and student needs are the basis for the delivery of services.
2. Data about the implementation of the initiative and its outcomes inform model development and implementation and address questions about whether the initiative works.
3. Access to data facilitates the public sharing of—and accountability for—progress and results.

From the project’s initiation, however, many conditions for productive data use were not in place in Syracuse. For example, existing data resources were not comprehensive and did not lend themselves to analysis and evaluation goals; leadership regarding data resources was not consistent; little support for administrators’ and teachers’ data use existed; and some educators in SCSD considered the burden of additional data collection to outweigh the benefits. Information system challenges and decisions about use of data became powerful barriers and, despite efforts to share data, various partners did not become fully engaged, nor were they able to reap the benefits anticipated in the data work.

Still, over three-plus years, Say Yes Syracuse addressed many of the information system challenges and designed ways to work around the limitations, producing school profiles with detailed and sophisticated tools for principals, teachers, specialists, and district administrators; due diligence reports with potential to improve the implementation of programs; and tools that could have conveyed results and progress to the broader community.

Say Yes Syracuse conceptualized and produced data products to assess needs, monitor implementation, certify results, and share data. The processes and approaches developed specifically for Say Yes Syracuse are adaptable to other reform efforts in which data will take a central role. For example, the lessons learned about SMS, school review and due diligence reviews are informing Say Yes Buffalo. The technical lessons learned about limitations and challenges in state and district data systems can be applied in similar work with districts.

Many of these lessons learned during the three-plus years of work are consistent with the well-documented difficulties of implementing and using information systems and documenting school reform efforts (Tyack & Cuban, 1995; Means et al., 2010) and the concomitant challenges with reforming the way participants understand and use data. In this era of data-driven decision making, school districts are becoming more sophisticated in their data use and presentation (Marsh et al., 2006). Technological advances, knowledge about measurement, and research on data use strategies are facilitating these improvements in many districts (U.S. Department of Education,

1996; Marsh et al., 2006). The Say Yes Syracuse data activities unfolded in a context and at a time when many of these supportive conditions were not in existence, and they were not implemented during the initiative. Although the vision for data use proposed and implemented by Say Yes Syracuse was not fully realized, the lessons learned from the effort can serve as a starting point for the development of future data products, which can help leaders make strategic decisions to meet the needs of districts and schools and to improve student learning.

References

- Data Quality Campaign. (2012, April). *Supporting education policy and practice through common data standards: A policymaker's guide*. Retrieved from <http://www.dataqualitycampaign.org/files/CommonDataStandardsGuide.pdf>
- Gallagher, L., Means, B., Padilla, C., & SRI International. (2008). *Teachers' use of student data systems to improve instruction: 2005 to 2007*. Retrieved from <http://www2.ed.gov/rschstat/eval/tech/teachers-data-use-2005-2007/teachers-data-use-2005-2007.pdf>
- Hackman, J. R., & Wageman, R. (1995). Total quality management: Empirical, conceptual and practical issues. *Administrative Science Quarterly*, 40, 309–342. Retrieved from http://groupbrain.wjh.harvard.edu/jrh/pub/JRH1995_1.pdf
- Hamilton, L., Halverson, R., Jackson, S. S., Mandinach, E., Supovitz, J. A., Wayman, J. C., et al. (2009). *Using student achievement data to support instructional decision making* (NCEE 2009-4067). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. Retrieved from http://ies.ed.gov/ncee/wwc/pdf/practice_guides/dddm_pg_092909.pdf
- Herman, R., Dawson, P., Dee, T., Greene, J., Maynard, R., Redding, S., et al. (2008). *Turning around chronically low-performing schools* (NCEE 2008-4020). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. Retrieved from http://ies.ed.gov/ncee/wwc/pdf/practice_guides/Turnaround_pg_04181.pdf
- Hoachlander, G., Griffith, J. E., & Ralph, J. H. (1996). *From data to information: New directions for the National Center for Education Statistics* (NCES 96-901). Washington, DC: U.S. Department of Education, National Center for Education Statistics. Retrieved from <http://nces.ed.gov/pubs96/96901.pdf>
- Kendziora, K., Osher, D., & Schmitt-Carey, M. A. (2007). *Say Yes to Education: Student assessment system indicators, benchmarks, and tools project*. Washington, DC: American Institutes for Research.
- Lachat, M. A. (2001). *Data-driven high school reform: The breaking ranks model*. Providence, RI: Brown University, The Education Alliance. Retrieved from http://www.alliance.brown.edu/pubs/hischlrfm/datdrv_hsrfm.pdf
- Little, O., Goe, L., & Bell, C. (2009). *A practical guide to evaluating teacher effectiveness*. Washington, DC: National Comprehensive Center for Teacher Quality. Retrieved from <http://www.tqsource.org/publications/practicalGuide.pdf>
- Maeroff, G. I. (2010). *What it takes to launch district-wide reform: How Say Yes got off the ground in Syracuse*. Unpublished manuscript.

- Mandinach, E., & Honey, M. (Eds.) (2008). *Data-driven school improvement: Linking data and learning*. Washington, DC: Economic Policy Institute and Teachers College.
- Marsh, J. A., Pane, J. F., & Hamilton, L. S. (2006). *Making sense of data-driven decision making in education*. California: Rand Education. Retrieved from http://www.rand.org/pubs/occasional_papers/OP170.html
- Means, B., Padilla, C., Gallagher, L., & SRI International. (2010). *Use of education data at the local level: From accountability to instructional improvement*. Washington, DC: U.S. Department of Education. Retrieved from <http://www2.ed.gov/rschstat/eval/tech/use-of-education-data/use-of-education-data.pdf>
- Nelson, S. R., Leffler, J. C., & Hansen, B. A. (2009). *Toward a research agenda for understanding and improving the use of research evidence*. Portland, OR: Northwest Regional Educational Laboratory. Retrieved from http://educationnorthwest.org/webfm_send/311
- Tyack, D., & Cuban, L. (1995). *Tinkering toward utopia*. Cambridge, MA: Harvard University Press.
- U.S. Department of Education. (2007). *Study of education data systems and decision making: 2007–08 district survey*. Washington, DC: Author. Retrieved from <http://www2.ed.gov/rschstat/eval/tech/use-of-education-data/use-of-education-data-appendix-b.pdf>
- U.S. Department of Education. (2009). *Race to the Top program executive summary*. Washington, DC: Author. Retrieved from <http://www2.ed.gov/programs/racetothetop/executive-summary.pdf>
- U.S. Department of Education. (2012a). *ESEA flexibility*. Washington, DC: Author. Retrieved from <http://www.ed.gov/esea/flexibility>
- U.S. Department of Education. (2012b). *No child left behind*. Washington, DC: Author. Retrieved from <http://www2.ed.gov/nclb/landing.jhtml>
- U.S. Department of Education. (2012c). *Race to the Top fund*. Washington, DC: Author. Retrieved from <http://www2.ed.gov/programs/racetothetop/index.html>
- Wallace, P. (2012). *Information systems in organizations: People, technology and processes*. New York: Prentice Hall.
- Wayman, J. C. (2005). Involving teachers in data-driven decisions making: Using computer data systems to support teacher inquiry and reflection. *Journal of Education for Students Placed at Risk*, 10(3), 295–308. Retrieved from <http://myclass.nl.edu/tie/tie533/TeacherDataUse.pdf>

Resources

- Achieve Inc. (2012). *Achieving the common core*. Washington, DC: Author. Retrieved from <http://www.achieve.org/achieving-common-core>
- Ayers, J. (2011). *No Child Left Behind waiver applications: Are they ambitious and achievable?* Washington, DC: Center for American Progress. Retrieved from http://www.americanprogress.org/wp-content/uploads/issues/2011/12/pdf/nclb_waivers.pdf
- Boake, C. (2002). From the Binet–Simon to the Wechsler–Bellevue: Tracing the history of intelligence testing. *Journal of Clinical and Experimental Neuropsychology*, 24(3), 383–405. Retrieved from <http://www.peakassociates.com/SMU/Projects/binetsimontowechslerbellevue.pdf>
- Childress, S., Elmore, R. F., Grossman, A. S., Moore Johnson, S. (Eds.) (2007). *Managing school districts for high performance*. Cambridge, MA: Harvard Education Press.
- Cohen, D. K., & Hill, H. C. (2001). *When state education reform works*. New Haven, CT: Yale University Press.
- Goals 2000: Reforming education to improve student achievement*. (1998, April). Retrieved from <http://www2.ed.gov/PDFDocs/g2kfinal.pdf>
- Hanushek, E. A. (2010). An evidence-based world. In C. E. Finn, Jr. (Ed.), *American education in 2030*. Retrieved from <http://www.hoover.org/taskforces/education/AE2030>
- Hurburt, S., Le Floch, K. C., Therriault, S. B., Cole, S., & Wei, T. E. (2011). *Baseline analyses of SIG applications and SIG-eligible and SIG-awarded schools* (NCEE 2011-4019). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. Retrieved from http://www.air.org/files/IES_201140192.pdf
- Jennings, J. (2012). *Reflections on a half-century of school reform: Why have we fallen short and where do we go from here?* Washington, DC: Center on Education Policy.
- Marion, S., & Sheinker, A. (1999). *Issues and consequences related to state-level minimum competency testing*. Minneapolis: University of Minnesota, National Center on Educational Outcomes. Retrieved from <http://www.cehd.umn.edu/NCEO/onlinepubs/archive/AssessmentSeries/WyReport1.html>
- McNeil, M. (2012). States punch reset button with NCLB waivers. *Education Week*, 32(8), 1, 25. Retrieved from http://www.edweek.org/ew/articles/2012/10/17/08waiver_ep.h32.html

- National Center for Education Statistics. (2012a). *NAEP: Measuring student progress since 1964*. Washington, DC: Author. Retrieved from <http://nces.ed.gov/nationsreportcard/about/naephistory.asp>
- National Center for Education Statistics. (2012b). *2011 NAEP-TIMSS linking study*. Washington, DC: Author. Retrieved from <http://nces.ed.gov/timss/naeplink.asp>
- Nohara, D. (2001, June). *A comparison of the National Assessment of Educational Progress (NAEP), the Third International Mathematics and Science Study Repeat (TIMSS-R), and the Programme for International Student Assessment (PISA)* (Working Paper 2001-07). Washington, DC: National Center for Education Statistics. Retrieved from <http://nces.ed.gov/pubs2001/200107.pdf>
- O'Day, J. A., Bitter, C. S., & Gomez, L. M. (2011). *Education reform in New York City*. Cambridge, MA: Harvard Education Press.
- Partnership for Assessment of Readiness for College and Careers. (2012). *About PARCC*. Washington, DC: Achieve Inc. Retrieved from <http://www.parcconline.org/about-parcc>
- Petersen, G. J., & Dlugosh, L. (2008). How NCLB has affected the practice of school district superintendents. In T. J. Kowalski and T. J. Lasley (Eds.), *Handbook of data-based decision-making for education* (pp. 455–470). London: Taylor and Francis.
- Rowan, B., Correnti, R., Miller, R. J., & Camburn, E. M. (2009). *School improvement by design: Lessons from a study of comprehensive school reform programs*. Philadelphia: Consortium for Policy Research in Education. Retrieved from http://www.cpre.org/sites/default/files/researchreport/828_sii-final-reportweb-file.pdf
- SAT Program. (2012). *History of the tests*. Retrieved from <http://sat.collegeboard.org/about-tests/history-of-the-tests>
- Sheehy, K. (2012, September). *Common core standards are a "heavy life" for districts, educators*. Retrieved from <http://www.usnews.com/education/high-schools/articles/2012/09/28/common-core-standards-are-a-heavy-lift-for-districts-educators>
- U.S. Department of Education. (2006). *Models matter: The final report of the National Longitudinal Evaluation of Comprehensive School Reform*. Washington, DC: Author.
- U.S. Department of Education. (2009). *President Obama, U.S. Secretary of Education Duncan announce national competition to advance school reform*. Washington, DC: Author. Retrieved from <http://www2.ed.gov/news/pressreleases/2009/07/07242009.html>
- U.S. Department of Education. (2011). *What ESEA flexibility means for students, teachers, and parents: Answering the public's questions*. Washington, DC: Author. Retrieved from <http://www.ed.gov/esea/flexibility>

- U.S. Department of Education. (2012a). *Total number of schools in restructuring 2011–12*. Washington, DC: Author. Retrieved from <http://www.eddataexpress.ed.gov/data-element-explorer.cfm/tab/data/deid/521/>
- U.S. Department of Education. (2012b). *Mapping America's educational progress 2008*. Washington, DC: Author. Retrieved from <http://www2.ed.gov/nclb/accountability/results/progress/nation.pdf>
- U.S. Department of Education. (2012c). *Stronger accountability: Adequate yearly progress*. Washington, DC: Author. Retrieved from <http://www2.ed.gov/nclb/accountability/ayp/edpicks.jhtml>
- Vinovskis, M. A. (1998). *Overseeing the nation's report card: The creation and evolution of the National Assessment Governing Board (NAGB)*. Washington, DC: U.S. Department of Education, National Assessment Governing Board. Retrieved from <http://www.nagb.org/content/nagb/assets/documents/publications/95222.pdf>
- Vinovskis, M. A. (1999). *The road to Charlottesville: The 1989 education summit*. Washington, DC: National Education Goals Panel. Retrieved from <http://govinfo.library.unt.edu/negp/reports/negp30.pdf>
- The White House. (2009, February). *Remarks of President Barack Obama—As prepared for delivery: Address to joint session of Congress*. Washington, DC: Author. Retrieved from http://www.whitehouse.gov/the_press_office/Remarks-of-President-Barack-Obama-Address-to-Joint-Session-of-Congress/

Appendix A: Table of Data Sources for the Review of Products

During the four years of work on Say Yes Syracuse, the project team collected multiple planning documents, timelines, drafts of instruments, and correspondence leading to decisions. These materials were significant to the analysis of the use of data in Say Yes Syracuse:

1. Annual plans described the purpose of the data product and documented changes made and the rationale.
2. Annual timelines showed the cycles of data collection and the delivery dates.
3. Records of quarterly SYTE meetings documented decision making about tasks and resources.
4. Templates for the data products illustrated the conceptualization.
5. Correspondence showed how limitations and problems were addressed in decision making.
6. The final data products

A display of products, indicators, and sources produced in the Say Yes Syracuse initiative is provided in the following table and in Appendix B.

Product Name: Student Monitoring System (SMS) Purpose: To provide per student information to guide instructional and support decisions Audience: Teachers, principals, and SCSD administrators Distribution: Proposed and Piloted, but not implemented to scale				
Data Source	When Collected?	Collection Process	Indicators	Respondent Group (if applicable)
eSchool, various surveys	Proposed	Downloaded and original surveys	<ul style="list-style-type: none"> • New York state ELA and mathematics scores • Regents ELA and mathematics scores • Attendance • Core academic content courses • Grade retention • Diploma conferred • College eligibility • Health screening • Social capital • Cultural capital • Socioemotional learning • Behavior • Citizenship 	Teachers Students Parents

			<ul style="list-style-type: none"> • Peers • Learning supports at home 	
College Board	Annual	N/A	SAT scores (for college readiness)	N/A
National Student Clearinghouse	January, August	Downloaded online	College attendance Participation characteristics	N/A
Product Name: School Review Purpose: To provide an annual school-level summary of student conditions and outcomes (academic, socioemotional and health) and a review of programs and supports Audience: School leadership teams Distribution: School Profiles to Schools, SCSD, Say Yes to Education				
Data Source	Collection Cycle	Collection Process	Indicators	Respondent Group (if applicable)
School Climate Inventory	Fall	Online survey	<ul style="list-style-type: none"> • Instructional quality • Academic environment • Perception of support by parents and community 	Teachers
Conditions for Learning Survey	Fall	In-person paper administration	<ul style="list-style-type: none"> • Instructional challenge • Perceptions of support, safe and respectful climate, peers' social and problem-solving skills with subgroup analysis 	Students (Grades 2-12)
eSchool	August	Downloaded online	<ul style="list-style-type: none"> • New York state ELA and mathematics scores • Regents test results for high school students • Student demographics • IEP, ESL, and free or reduced-price lunch status • Attendance • Core academic content courses • Diploma • Disciplinary actions 	N/A
NYSED website	March (or when released)	Downloaded from Web and report cards	<ul style="list-style-type: none"> • Student and teacher mobility • Number of teachers and credential status • Accountability data 	N/A

Product Name: Implementation Report Purpose: Monitor progress toward Say Yes to Syracuse goals Audience: Say Yes to Education Distribution: Say Yes to Education				
Data Source	Collection Cycle	Collection Process	Indicators	Respondent Group (if applicable)
School reviews and stakeholder interviews	Annual	Extant data and original interviews	Say Yes Syracuse Non negotiables	Stakeholders
Product Name: Due Diligence Report Purpose: Review programs, evidence, data, staff, implementation, alignment to Say Yes to Education mission, and theory of action of programs delivered by CBOs Audience: SYTE staff working with CBOs Distribution: Vice president of SYTE, liaison to CBOs, and CBO leadership				
Data Source	Collection Cycle	Collection Process	Indicators	Respondent Group (if applicable)
Background, plans, staff information, hiring, evaluations	Continuous	Request for information from AIR and site visit to view program in operation	<ul style="list-style-type: none"> • Evidence of impact • Data availability • Staff expertise • Leadership expertise • Implementation fidelity and quality • Theory of action and research base • Alignment to SYTE 	Executive director of CBO seeking due diligence review
Product Name: Effectiveness Study Purpose: To measure the effectiveness of Say Yes Syracuse initiative Audience: External audiences, Say Yes to Education, SCSD Distribution: Some preliminary reports have been developed, full impact study will be completed in 2014				
Data Source	Collection Cycle	Collection Process	Indicators	Respondent Group (if applicable)
nyStart (New York State Testing and Accountability Reporting Tool)	March (or when released)	Downloaded from Web	<ul style="list-style-type: none"> • New York state ELA and mathematics scores • Attendance • Graduation rate 	N/A
eSchool	August	Downloaded from Web until 2012; thereafter, provided through research Memorandum of	<ul style="list-style-type: none"> • New York state ELA and mathematics scores • Regents ELA and mathematics scores • Attendance • Graduation rate 	N/A

		Understanding (MOU)	<ul style="list-style-type: none"> • Diploma • College readiness 	
Say Yes Senior Survey	Spring	In-person paper administration	College readiness	Graduating high school seniors
College Board	N/A	N/A	College readiness	N/A
National Student Clearinghouse	January, August	Downloaded from Web until 2010; for 2013, provided by SCSD through research MOU	College attendance Participation characteristics	N/A
Product Name: Effectiveness Study—Future Plans School Reports Purpose: Inform schools about the future plans and college plans of the graduating seniors Audience: Principals, SCSD leaders Distribution: Schools, SCSD leaders				
Data Source	Collection Cycle	Collection Process	Indicators	Respondent Group (if applicable)
Say Yes Senior Survey	Spring (2009–2012)	In-person paper administration	College readiness	Graduating high school seniors
Product Name: Effectiveness Study—Outcomes Analysis Purpose: Match school districts and schools to determine if Syracuse’s outcomes are improving Audience: SYTE, SCSD Distribution: Selected results shared at community meetings and with SCSD				
Data Source	Collection Cycle	Collection Process	Indicators	Respondent Group (if applicable)
NYSED website, eSchool	March (or when released)	Downloaded from Web	<ul style="list-style-type: none"> • New York state ELA and mathematics scores • Regents ELA and mathematics scores • Attendance • Suspensions • Dropout • Graduation 	
Product Name: College Effectiveness Study—Eligibility Index Purpose: Understand whether students are taking the courses needed to get into college Audience: SYTE, SCSD Distribution: Preliminary analysis of the 2005 cohort was conducted.				
Data Source	Collection Cycle	Collection Process	Indicators	Respondent Group (if applicable)
eSchool	August	Downloaded from eSchool until 2012	<ul style="list-style-type: none"> • Courses taken 	N/A

			<ul style="list-style-type: none"> • Course grades • GPA 	
Product Name: Effectiveness Study—Postsecondary Analysis Purpose: To determine if college enrollment and persistence has improved Audience: Preliminary analysis was conducted when NSC data were available. Distribution: N/A				
Data Source	Collection Cycle	Collection Process	Indicators	Respondent Group (if applicable)
National Student Clearinghouse	January, August	Downloaded from Web until 2010	College enrollment College characteristics	N/A
IPEDS (Integrated Postsecondary Education Data System)	Annual	Collected by National Center for Education Statistics (NCES)	<ul style="list-style-type: none"> • College level (two-year or four-year) • Institution type (public or private) • Carnegie classification (college selectivity) 	N/A
Product Name: Dashboard Purpose: Provide community access to important data indicators to monitor progress Audience: Community defined broadly (schools, parents, and community stakeholders) Distribution: Conceptual plan distributed to SYTE and community leaders				
Data Source	Collection Cycle	Collection Process	Indicators	Respondent Group (if applicable)
NYSED website	March (or when released)	Downloaded from Web	<ul style="list-style-type: none"> • New York state ELA, mathematics and science scores • Regents ELA and mathematics scores 	N/A
eSchool	August	Downloaded from Web	<ul style="list-style-type: none"> • New York state ELA and mathematics scores • Regents ELA and mathematics scores • Core courses • College readiness • Diploma • Graduation rate • Attendance • Disciplinary actions • Allergies/asthma • Obesity • Free or reduced-price lunch 	N/A
eSchool	August	Downloaded from Web	Enrollment by race/ethnicity, ELL status, special education status, and gender	N/A

NYSED report cards	March (or when released)	Downloaded from Web	Core academic content scores by subgroup	N/A
Family survey	January	New survey proposed	<ul style="list-style-type: none"> • Expectation of high school graduation • Expectation of college attendance • Education and supports for students 	Families of SCSD students
National Student Clearinghouse	January, August	Downloaded from Web	<ul style="list-style-type: none"> • Enrollment in four-year postsecondary schools, overall and by subgroup • Enrollment in two-year or vocational postsecondary schools, overall and by subgroup 	N/A
Conditions for Learning survey	Fall	In-person paper administration	Conditions for learning in school, by dimension and subgroup	Students (Grades 2-12)

Appendix B: Student Monitoring System Indicators

These 13 indicators comprise the conceptual plan for the Say Yes Syracuse SMS. A detailed literature review provides the research base behind each indicator (Kendziora, Osher, & Schmitt-Carey, 2007).

Health Domain

1. Overall health screening

Social Domain

2. Social capital
3. Cultural capital
4. Socioemotional learning
5. Behavior
6. Citizenship
7. Peers
8. Learning supports at home

Academic Domain

9. ELA/literacy
10. Mathematics/numeracy
11. Attendance
12. Grade retention
13. College eligibility (high school only)

Appendix C: School Profile Evolution, 2009–12

Main Sections	Subsections	Year 1	Changes	
			Year 2	Year 3
Academics	Outcomes	<p>Three to five indicators (depending on school level)</p> <ul style="list-style-type: none"> • ELA performance • Mathematics performance • Attendance • Success in core courses (middle school/high school only) • Diploma type (high school only) • Subgroup analyses in appendices 	<ul style="list-style-type: none"> • Indicators from Year 1 with two data points • Analysis of indicators by subgroup for current year in main body 	<ul style="list-style-type: none"> • Indicators from Year 1 with three data points • Analysis of indicators by subgroup for current year in main body
	Conditions	<p>Three indicators</p> <ul style="list-style-type: none"> • Instructional quality (teacher) • Academic environment (teacher) • Instructional challenge (student) • Subgroup analyses in appendices 	<ul style="list-style-type: none"> • Indicators from Year 1 with two data points • Analysis of indicators by subgroup for current year in main body 	<ul style="list-style-type: none"> • Indicators from Year 1 with three data points • Analysis of indicators by subgroup for current year in main body
	Programs	<ul style="list-style-type: none"> • Overall assessment of strengths and challenges • Table showing programs, description, students served, comments on implementation 	<ul style="list-style-type: none"> • Additions to tables regarding reach and participation • Move away from organization of text by program subareas 	<ul style="list-style-type: none"> • Additions to tables regarding staffing, location of program, grades, number of students, capacity, years in operation, timing • Addition of quantitative information from teachers and students on select programs from surveys
Socioemotional	Outcomes	Disciplinary actions	<ul style="list-style-type: none"> • Indicators from Year 1 with two data points • Analysis of indicators by subgroup for current year in main body 	<ul style="list-style-type: none"> • Indicators from Year 1 with three data points • Analysis of indicators by subgroup for current year in main body

Main Sections	Subsections	Year 1	Changes	
			Year 2	Year 3
	Conditions	<ul style="list-style-type: none"> • Student perceptions of safe and respectful climate, support within the school, and peers' social and problem-solving skills • Teachers' perceptions of support provided by parents and local community 	<ul style="list-style-type: none"> • Indicators from Year 1 with two data points • Analysis of indicators by subgroup for current year in main body 	<ul style="list-style-type: none"> • Indicators from Year 1 with three data points • Analysis of indicators by subgroup for current year in main body
	Programs	<ul style="list-style-type: none"> • Overall assessment of strengths and challenges • Table showing programs, description, students served, comments on implementation 	<ul style="list-style-type: none"> • Additions to tables regarding reach and participation • Move away from organization of text by program subareas 	<ul style="list-style-type: none"> • Additions to tables regarding staffing, location of program, grades, number of students, capacity, years in operation, timing • Addition of quantitative information from teachers and students on select programs from surveys
Health	Outcomes	No data	Addition of data on numbers of students with asthma, allergies, overweight or obese body mass indexes (BMIs)	Data on numbers of students with asthma, allergies, overweight or obese body mass indexes (BMIs)
	Conditions	No data	No data	No data
	Programs	<ul style="list-style-type: none"> • Overall assessment of strengths and challenges • Table showing programs, description, students served, comments on implementation 	<ul style="list-style-type: none"> • Additions to tables regarding reach and participation. • Move away from organization of text by program subareas 	Additions to tables regarding staffing, location of program, grades, number of students, capacity, years in operation, timing
Postsecondary	Outcomes	No data	No data	Added indicators on college-going rates for all students and by subgroup
	Conditions	No data	No data	No data
	Programs	No data	No data	Reference to academic support and college counseling programs at the high school level, discussed in academic section

Main Sections	Subsections	Year 1	Changes	
			Year 2	Year 3
Specific Implementation reviews	Afterschool	No data	Data based on observations and interviews	Survey responses about program
	Summer school	No data	Data based on observations at selected schools	Survey responses about program
	PBIS	No data	Based on SET interviews and school visits	<ul style="list-style-type: none"> Survey responses about program Updates from SET if available
Recommendations	—	By dimension and program (academic, socioemotional, health)	<ul style="list-style-type: none"> Revisit year 1 recommendations Description of status and needs Year 2 recommendation based on data collected 	<ul style="list-style-type: none"> Summary of areas of strength and challenge by dimension for outcomes, conditions, and programming Needs and recommendations
Technical background document	—	School-specific documents	Standard document used across schools	Standard document used across schools
Strategies limiting/enabling data collection	—	<ul style="list-style-type: none"> Setting specific windows for data collection Communications' support from district 	<ul style="list-style-type: none"> Additional data collections for afterschool and summer school Collaboration with district on PBIS 	<ul style="list-style-type: none"> Elimination of site visits Addition of items to teacher and student surveys Collaboration with district on PBIS
Analysis constraints	—	<ul style="list-style-type: none"> Variable survey response rates Lack of program information 	<ul style="list-style-type: none"> Increased attention to reporting standards Formatting/stylistic changes 	Continuation of reporting standards with additions necessary because of reduced qualitative information available

Appendix D: Say Yes Syracuse School Profile—Indicators Overview

Indicators	Data Sources	Grade(s)	Benchmarks		
			On Track to Thrive	On Track	Off Track
Academic Outcomes					
ELA achievement	New York state and Regents ELA assessment	3–8 9–12	<ul style="list-style-type: none"> New York: Score level 4 Regents: Score at or above 85 	<ul style="list-style-type: none"> New York: Score level 3 Regents: Score between 65–84 	<ul style="list-style-type: none"> New York: Score level 2 or below Regents: Score below 65
Mathematics achievement	New York state and Regents mathematics assessment	3–8 9–12	<ul style="list-style-type: none"> New York: Score level 4 Regents: Score at or above 85 	<ul style="list-style-type: none"> New York: Score level 3 Regents: Score between 65–84 	<ul style="list-style-type: none"> New York: Score level 2 or below Regents: Score below 65
Success in core content courses	Extant data (eSchool)	6–12	Achieving honors grades, 90 or better, in regular classes (or the lower merit grades, 85 or better, for advanced classes): <ul style="list-style-type: none"> For all courses, if three or fewer courses taken In at least 75% of the courses if four or more classes taken 	No failures in any of the core content courses taken	Failure in any one of the core content courses taken
Attendance	Extant data (eSchool)	K–12	Attendance rate at or above 96%	Attendance rate between 90% and 95%	Attendance rate below 90%
Graduation rate ¹⁷	Extant data (eSchool)	12	Earning a Regents diploma with advanced designation	Earning a Regents diploma	Earning a local diploma, dropping out of school, still in school, or being incarcerated ¹⁸

¹⁷ The graduation rate data were downloaded from the SCSD eSchool database for Cohorts 2004, 2005, 2006, and 2007 after four years of education.

¹⁸ Students earning an IEP diploma were excluded from the data analysis for graduation rate.

Indicators	Data Sources	Grade(s)	Benchmarks		
			On Track to Thrive	On Track	Off Track
Instructional quality (teacher report)	Teacher survey scales: instruction and relevance	K-12	All scale means are at or above the on-track to thrive cut-point of each scale	All scale means are at or above the on-track cut-point of each scale	Any scale mean is at or below the off-track cut-point of each scale
Instructional challenge (student report)	Student survey scale: instructional challenge	2-12	Scale mean is at or above the on-track to thrive cut-point	Scale mean is at or above the on-track cut-point	Scale mean is at or below the off-track cut-point
Academic support (teacher report)	Teacher survey scales: collaboration, expectation, leadership, and environment	K-12	Three or more scale means are at or above the on-track to thrive cut-point of each scale	All scale means are at or above the on-track cut-point of each scale	Any scale mean is below the off-track cut-point of each scale
Socioemotional Development Status					
Disciplinary actions	Extant data	K-12	Having no in-school suspensions, out of school suspensions, alternative to suspensions, bus suspensions, formal hearings, informal hearings, or special education hearings	Having less than three in-school suspensions and no out of school suspensions, alternative to suspensions, bus suspensions, formal hearings, informal hearings, and special education hearings	Having three or more in-school suspensions or one of the following: out of school suspensions, alternative to suspensions, bus suspensions, formal hearings, informal hearings, and special education hearings
Safe and respectful climate (student report)	Student survey scale: student support	2-12	Scale mean is at or above the on-track to thrive cut-point	Scale mean is at or above the on-track cut-point	Scale mean is at or below the off-track cut-point
Student support (student report)	Student survey scale: student support	2-12	Scale mean is at or above the on-track to thrive cut-point	Scale mean is at or above the on-track cut-point	Scale mean is at or below the off-track cut-point
Socioemotional peer climate (student report)	Student survey scale: socioemotional peer climate	2-12	Scale mean is at or above the on-track to thrive cut-point	Scale mean is at or above the on-track cut-point	Scale mean is at or below the off-track cut-point

Indicators	Data Sources	Grade(s)	Benchmarks		
			On Track to Thrive	On Track	Off Track
Community and family engagement (teacher report)	Teacher survey scale: involvement	K-12	Scale mean is at or above the on-track to thrive cut-point	Scale mean is at or above the on-track cut-point	Scale mean is at or below the off-track cut-point
Health Status					
Number of students with allergies	School records	K-12	Benchmarks not used in presentation. Includes only those students who are being treated for allergies. Does not account for students with untreated or undiagnosed allergies.		
Number of students with asthma	School records	K-12	Benchmarks not used in presentation.		
Percentage of students with overweight BMA	State-mandated school health screenings	K, 2, 4, 7, 10	Benchmarks not used in presentation. BMI is calculated by multiplying the weight in pounds by 703 and dividing by the height in inches squared. Because the amount of body fat differs by age and between boys and girls during childhood and adolescence, "BMI-for age" is used. Overweight indicates that a student's BMI-for-age is between the 85th and 95th percentiles.		
Percentage of students with obese BMI	State-mandated school health screenings	K, 2, 4, 7, 10	Benchmarks not used in presentation. Obese indicates that the BMI-for-age is at the 95th percentile or above.		
Postsecondary					
Percentage of graduates enrolling in college or university, by school type	National Student Clearinghouse	12	Benchmarks not used in presentation. Graduates include students earning all types of diplomas.		
Indicators on Academic Programs					
Percentage of students reporting their agreement with features of select programs	Student survey: new items for 2011-12	2-12 (dependent on program)	Benchmarks not used in presentation. Elementary student reports are for Say Yes After School and Say Yes Summer Camp. Middle school student reports are for AVID (Advancement Via Individual Determination), Fast ForWord, and Liberty Partnership Program. High school student reports are for AVID and on the helpfulness of individuals after school, including Say Yes Tutors.		
Percentage of teachers reporting on effectiveness of select programs	Teacher survey: new items for 2011-12	K-12 (dependent on program)	Benchmarks not used in presentation. Elementary teacher reports are for Say Yes After School, Say Yes Summer Camp, and Earobics. Middle school teacher reports are for AVID, Fast ForWord, Wilson Reading, and Liberty Partnership Program. High school teacher reports are for AVID, Talent Development, and Say Yes Tutors.		

Indicators	Data Sources	Grade(s)	Benchmarks		
			On Track to Thrive	On Track	Off Track
Indicators on Socioemotional Programs					
Percentage of students reporting their agreement with features of PBIS	Student survey: new items for 2011-12	2-12 (dependent on program)	Benchmarks not used in presentation.		
Percentage of teachers reporting their agreement with features of the program	Teacher survey: new items for 2011-12	K-12 (dependent on program)	Benchmarks not used in presentation.		

Appendix E: Program Taxonomy of Say Yes Syracuse School Profile—Description of Areas of Focus in Academic, Socioemotional, and Health Supports

Academic Supports

- **Curriculum**
 - The core curriculum includes whole-school approaches that mainly or entirely consist of curriculum and instruction. The core curriculum is the foundation for instructional content in the core subjects: ELA, mathematics, science, and social studies/history. The core curriculum in most schools is the SCSD curriculum, but it can be, in some schools, another curriculum, such as International Baccalaureate. In addition, school-wide instructional and restructuring programs are listed here.
 - Supplementary supports are academically focused ELA or mathematics programs that occur during the school day but generally outside standard class instruction. Tutoring is a common approach. (More general tutoring offered after school is discussed in the “afterschool” bullet point.) Some examples are Earobics, Fast ForWord, Mathletics, and Everyday Counts.
 - Acceleration and college readiness supports generally occur during the school day and may be within or outside standard class instruction. They focus on academics that are accelerated (e.g., honors and advanced placement classes or regular classes taken at an earlier-than-usual grade) and supports that target preparing students for college (e.g., AVID and Gear Up).
- **Enrichment.** These supports are offered during or after the school day to provide students exposure to arts, environment, and other cultural enrichment (e.g., Arts in Mind, Nature in the City, and Go Green). Many of the supports in other categories (e.g., afterschool or summer programs) offer enrichment activities, but supports are identified as enrichment only if that is their primary focus.
- **Career exploration.** These supports are designed to help students think through career options. They could be aimed at students who will go directly from high school into careers or students who will pursue careers in college. Some examples include Junior Achievement, CNY Career Exploration, and CHOICE.
- **Afterschool.** These supports occur outside the regular school day and generally include tutoring, homework help, and enrichment activities. The emphasis is primarily academic, although many of the supports have an enrichment component.
- **Summer school.** Summer school occurs during the summer and has at least some academic content. It may also have an enrichment component.

Socioemotional Supports

- **Character education and life skills.** These supports focus on character education (moral reasoning and the development of qualities such as respect, caring, and conflict resolution), values development, citizenship, social inclusion, service learning, respect, tolerance, leadership development, and self-presentation. They may be part of the school day or after school and may be school-wide or targeted. Examples include Community of Caring and Peaceful Schools.
- **School and social connectedness.** These supports focus on helping students develop connections to the school and other people, often through mentoring. The supports might be offered during or outside the school day, but they generally occur outside core instruction.
- **Socioemotional learning.** These supports focus on promoting the identification of emotions in self and others, emotion regulation (e.g., anger management), taking the perspective of the other, building a repertoire of effective strategies to deal with social problems (e.g., interpersonal conflicts), and building coping-with-stress skills and self-esteem.
- **Violence and delinquency prevention.** These supports focus on conflict resolution, mediation strategies, and bullying behaviors. They generally are part of the regular school day but outside core instruction. Some examples include Jenna Mentors, mediation programs, No Bullying, and gang prevention.
- **Behavior management and discipline.** These supports are generally school-wide and focus on improving student behavior. Some examples include PBIS, in-school suspension.
- **At-risk behavior prevention.** These supports, which are generally offered to students individually or in small groups, aim to prevent at-risk behavior. They often involve discussions or counseling on drug and alcohol abuse or pregnancy prevention. Some examples include the Alcohol and Drug Abuse Prevention Education Program, DARE (Drug Abuse Resistance Education), and pregnancy prevention programs.
- **Safety.** These supports introduce students—generally younger students—to safety issues. They tend to be short, annual events. One example is Officer Friendly.
- **Family support.** These supports focus on providing resources for students (and their families) to address nonacademic problems (e.g., Huntington Family Center), as well as supports that promote parent involvement and development (e.g., general equivalency diploma programs for parents and parent connection programs).

Health Supports

- **Mental health.** Mental health treatment includes counseling, anger management, family support, and similar services. They generally occur during the school day but outside core instruction. Some examples include lunch groups, ARISE Child and Family Services, and the Primary Mental Health Project.

- **Wellness.** Coordinated wellness services might include—in a single program—nutrition, physical activity, and support for young mothers. Examples include Peace and Fitness Day and the SCSD Wellness Initiative.
- **Nutrition.** These supports could include classes or discussions focused on healthy eating, obesity prevention or awareness programs, and supports to provide healthy snacks. Some examples include Taste Buds, Think Breakfast, Healthy Snacking, and Cookshop.
- **Physical activity.** These supports emphasize physical activity but may also include other components. Some examples are Peaceful Playground, Let's Go 24/7, Hoops for Hearts, and Healthy Steps.
- **Medical checkups.** Medical checkups bring students to medical providers or bring providers to the students and can include school-based health clinics. Some examples include Give Kids a Smile and the New York School-Based Health Centers.

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