Communities In Schools

Communities In Schools National Evaluation

Volume 1:

School-Level Report

Results from the Quasi-Experimental Study, Natural Variation Study, and Typology Study

Prepared by:

ICF International
9300 Lee Highway
Fairfax, VA 22031
(703) 934-3000
www.icfi.com

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ICF INTERNATIONAL

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1. Introduction

This chapter provides a brief overview of the design used to conduct the National Evaluation of Communities In Schools, Inc. (CIS). The elements and purpose of the School-Level Study and its importance to the National Evaluation are discussed.

1.1 Overview of the National Evaluation Design

CIS is a nationwide initiative to connect needed community resources with schools to help students, particularly those identified as at-risk, successfully learn, stay in school, and prepare for life. CIS employs a collaborative community-oriented approach to service delivery, based on the theory that students benefit from not only the type and quality of services, but also the processes for planning and delivering those services. To account for both the services delivered directly through CIS and the value added of existing services from CIS's resource leveraging and coordinative functions – and to also account for the sheer variation in local program operations – Caliber/ICF, the National Evaluation Team, has developed a comprehensive, multi-level, multi-phased evaluation model.

The CIS National Evaluation was designed to accomplish the following four objectives:

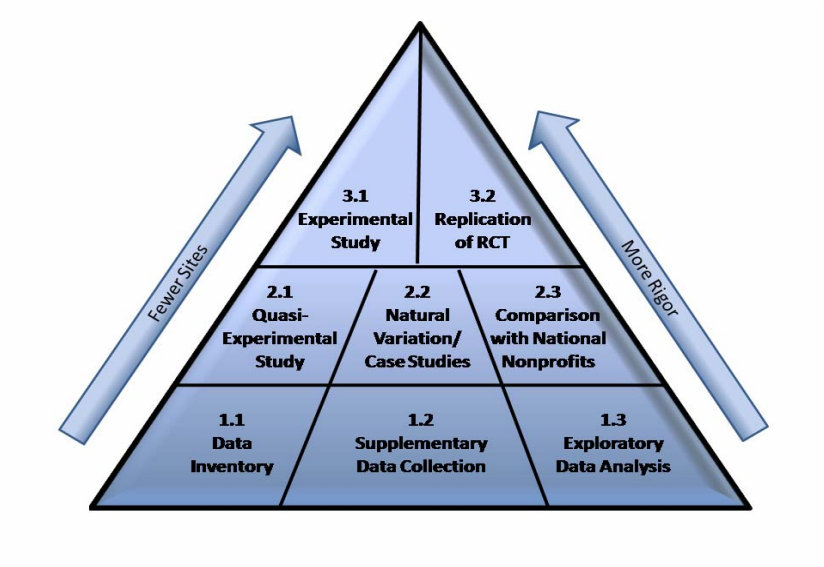
- Demonstrate effectiveness of the overall CIS model and specific model components;
- Understand how different aspects of the CIS model contribute to success and how they could be enhanced to strengthen effectiveness;
- Help the national office enhance its strategies for supporting state offices, local affiliates, and CIS sites, and help state offices enhance their strategies for supporting local affiliates; and
- Assist national and state offices and local affiliates in sustaining evaluation and seeking program funding.

THE EVALUATION PYRAMID

The overall evaluation design includes multiple components to best account for the multi-dimensional and versatile structure of CIS's operation and service delivery approach. The three-tiered pyramid shown in Exhibit 1 depicts a conceptual framework that incorporates the different components of the evaluation into one comprehensive evaluation design.

EXHIBIT 1:

CONCEPTUAL FRAMEWORK FOR THE CIS NATIONAL EVALUATION



The pyramid comprises three levels – base, mid, and top levels – that encompass eight distinct yet complementary components of the evaluation design. The base level involves an inventory and analysis of existing data, which was the primary focus in Year 1 of the evaluation. The mid-level of the pyramid – the focus of this report – features a Quasi-Experimental Study (2.1) that compares school level outcomes in CIS sites to matched, non-CIS sites using secondary data. This school-level analysis is supplemented by case studies (2.2), a Natural Variation Study (2.2), and a typology of CIS sites completed through exploratory data analysis (1.3) which help the Evaluation Team identify program components that are associated with particular outcomes. The top level of the pyramid is a randomized controlled trial (RCT) (3.1), widely considered to be the "gold standard" in research, as it will allow us to make inferences about whether CIS caused specific student-level outcomes of interest. The randomized controlled trial is being replicated (3.2) in multiple schools and different geographic settings to enhance the generalizability of the study.

1.2 Evaluation Questions

The National Evaluation was designed to address a set of specific questions that cut across all levels of CIS operations and service delivery and the eight evaluation components. These research questions are closely linked with the evaluation objectives and each falls under one of three domains of study: (1) strengthening the CIS Network at the state and national levels, (2) key processes at the affiliate and site levels, and (3) key outcomes for CIS students and schools. Table 1 presents a summary of evaluation questions for the evaluation studies across the three levels of the pyramid. Studies primarily responsible for answering each research question are marked as ☒, while studies marked as × provide supplemental information to answer each question.

TABLE 1. DETAILED EVALUATION QUESTIONS TO BE ADDRESSED BY CIS EVALUATION

	Base Level	Mid Level				Top Level
EVALUATION QUESTIONS	**Descriptive Study**	**Natural Variation Study: Within CIS Comparison**	***QED: CIS/Non-CIS Comparison Group Design***	**Case Studies of Sites Participating in the QED**	**External Comparison Study**	**RCT: Pilot Single CIS Site**
Domain #1: Strengthening the CIS Network at the State and National Level **What are the critical characteristics and relative contributions of the national office and state offices to CIS program operations? What are the implications of these findings for strengthening the operations of CIS at the national and state levels?**						
What is the need for support from national and state offices? To what extent are these needs being met currently?	×	☒		×	×	
How effective has the national office been in promoting new local affiliates (in locations without state offices) and new state offices?	☒	×		×	×	
How effective have the state offices been in promoting new local affiliates?	☒	×		×		
How effective have the national office and state offices been in conducting key network activities (e.g., developing partnerships and resources, monitoring, evaluation, reporting, marketing, and public relations)?	☒	×		×	×	×
How can these CIS mechanisms to carry out network activities be strengthened?		×		×	☒	×
Domain #2: Key Processes at the Affiliate and Site Levels **How successfully are CIS local affiliates and sites engaging in activities to maintain their operational health and more effectively serve students?**						
How successfully are CIS local affiliates engaging in long-term program improvement (such as the Q&S chartering process)?	×	☒				

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How successfully are CIS local affiliates conducting marketing and public relations efforts? Do these efforts help affiliates establish partnerships, develop resources, and increase awareness of the local program?	×	☒		×		
How successfully are CIS local affiliates assessing the need for and receiving training and technical assistance?	☒			×		
How successfully are CIS local affiliates expanding services to more sites or to more students in existing sites?	×	☒		×		×
How successfully are CIS local affiliates involving local boards of directors in oversight and strategic planning?	×	×		☒		
To what extent is CIS bringing in the community (partners, resources) into the schools? How effective are these partnerships in addressing need and creating positive outcomes?	×	☒		×		×
To what extent does the presence of CIS enable school personnel (teachers, administrators) to spend more time and have a greater focus on academics, as compared to non-CIS schools?				×		☒
Can any conclusions be drawn about optimal proportions of Level 1 and Level 2 services in a site?		☒		×		×
How successfully are student needs assessed and resources coordinated to meet those needs?		×		☒		
What is the most effective strategy for coordinating services within a site (i.e., full-time site coordinator vs. other strategies)?		×		☒		
To what extent do interventions address risk and/or protective factors?	×	×	×	☒		
To what extent does CIS engage families of youth? In what forms does this engagement take place?		×		☒		×

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Domain #3: Key Outcomes for CIS Students and Schools **What inferences can be drawn about CIS model effectiveness for served youth, schools, and communities? What are the implications of these findings for providing support at the national, state, and local levels that will improve student outcomes?**						
What are the rates of attendance, discipline, dropout, promotion, and graduation and the mean GPAs at CIS schools/sites?		×	☒			☒
• How do these rates vary by location, funding levels, state office presence, or other factors?		×	☒			
• How do these rates compare to non-CIS schools, or to state or national averages?	×	×	☒			
• What are the ranges of rates of individual attendance, discipline, dropout, and promotion?		×	☒			☒
• How do these rates differ by type and frequency of services offered?		×	☒			☒
• How have these outcomes changed over time?		×	☒			☒
What impact does CIS have on the overall school climate, including family involvement? How do these findings differ when comparing groups of students by level of involvement or by involvement/non-involvement in CIS?		×		×		☒
• What is the impact of school climate on student outcomes?		×		×		☒
• What site strategies and services are most effective in accomplishing these outcomes?		×		×		☒

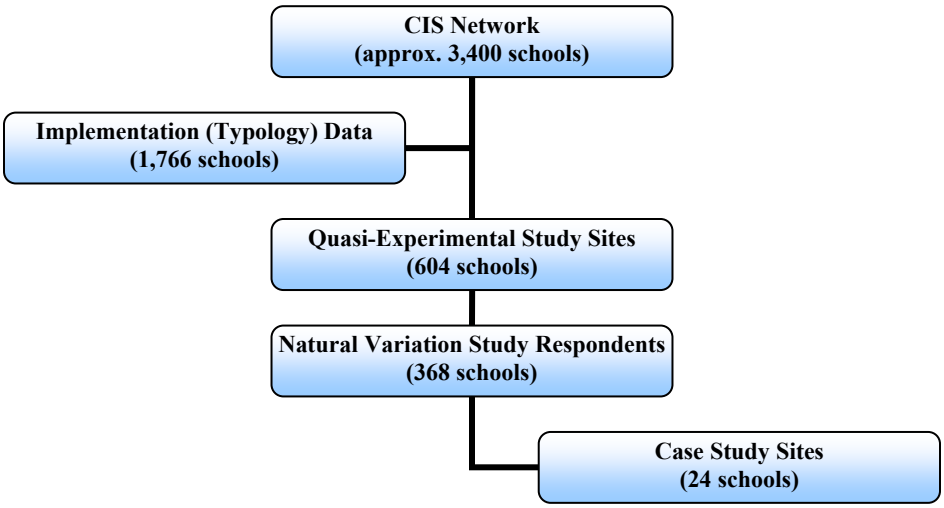
1.3 Overview of the School-Level Study

> ***The strength of this evaluation lies in the unique way quantitative school outcomes, responses to survey items, and in-depth interviews and focus groups combine to develop a comprehensive understanding of the CIS National Network. No element is complete without the others.***

The mid-level of the pyramid is designed to provide critical information and insights into the operation and effectiveness of Communities In Schools at the school level. Three essential components at the mid-level of the pyramid combine to reflect the richness and complexity of CIS at the school level: 2.1 Quasi-Experimental Study, 2.2 Natural Variation Study, and 2.2 Case Studies. Each of these studies adds its own specific value to the National Evaluation by answering a different question to help support lessons learned from each of the other studies. In addition, data from the Implementation Study (also called the Typology Study) will add an important dimension to the results; namely, the congruence of program operations to the CIS model. Exhibit 2 demonstrates the interconnection among the four components.

EXHIBIT 2. INTERCONNECTION AND VALUE ADDED OF THE MID-LEVEL COMPONENTS OF THE EVALUATION PYRAMID

- ***Quasi-experimental study***: Where are CIS sites successful, compared to non-CIS sites?
- ***Natural variation model (within-CIS study)***: What are we doing at these successful CIS sites?
- ***Case studies***: How are we achieving success?
- ***Implementation study***: To what extent are schools implementing the CIS model?



The Quasi-Experimental Study is a comparative study of school-level outcomes in CIS sites and matched non-CIS sites. While the Quasi-Experimental Study will identify differing outcomes in the CIS and non-CIS sites, it is not sufficient to make definitive statements about the CIS process and the relationship between this process and outcomes. The other two mid-level strategies provide that perspective. These include a within-CIS comparison study (Natural Variation Study) and case studies of select CIS sites. The within-CIS comparison will look closely at the impact of various CIS implementation strategies on key system, school, and student level outcomes. The case studies will provide a detailed analysis of the specific services, interventions, and contexts associated with results. They will involve primary data collection through on-site observations, interviews, and focus groups with key stakeholders (e.g., state offices, local affiliate personnel, CIS coordinators within schools, principals, and teachers).

Our challenge in this part of the evaluation is not to identify a single 'best' strategy for CIS service delivery; rather, it is to identify best practices within those strategies.

The school-level studies will allow the Evaluation Team to understand what common strategies are in place at CIS sites, and more importantly, in what circumstances those strategies correspond with positive outcomes. Our challenge in this part of the evaluation is not to identify a single "best" strategy for CIS service delivery; rather, it is to identify best practices within those strategies. Through this evaluation, we hope to better inform the field about what strategies are working in given circumstances and ensure that best practices are replicated.

Together, the Quasi-Experimental Study, the within-CIS comparison design, the implementation study, and the case studies will provide the information necessary to understand the impact of CIS on school-level outcomes and the processes associated with changes in these outcomes over time.

1.4 Literature Review and Context for the Evaluation

Community-based integrated student services (CBISS) provide a lifeline for at-risk students struggling with academic, behavioral, health, or other issues. However, the majority of past research has only focused on the effects of individual interventions providing non-integrated support services to youth. Studies of these single-service programs have demonstrated their positive impact on student behavior; mentoring and after-school programming have the most substantial and scientifically supported evidence of positive outcomes (Connell, Gambone, & Smith, 2000). Roth and Brooks-Gunn (2000) discovered that programs incorporating principles of a youth development framework (positive-behavior focused; problem-behavior focused; and resistance skills-based) showed greater positive impacts on youth. They found that some youth development programs have been shown to significantly reduce mental health and behavioral problems faced by many youth, as well as decrease adolescent risk-taking behaviors and increase adolescent capabilities. Additionally, a meta-analysis of research on adventure programs for youth showed that wilderness-type programs were effective in promoting self-control, confidence in one's abilities to be effective, good decision-making, leadership, and school achievement, among other things (Hattie et al., 1997).

While the type of services offered is important in determining program success, the implementation process, or program structure, seems to have an even greater impact on the effect of interventions for at-risk youth. The length of implementation is one important factor influencing the effectiveness of youth prevention programs. In a review of 130 mental disorder prevention programs for youth, Greenberg et al. (1999) found evidence suggesting that multi-year preventive programs produce effects that last longer than those of short-term interventions. Several of the studies reviewed also included data indicative of "sleeper" effects, meaning that participants continued to show improvements in behavior much longer after the completion of the study than was anticipated. These sleeper effects often go unrecognized because program evaluations are not usually longitudinal in nature. The CIS quasi-experimental study is especially significant because it includes outcomes from schools implementing CIS for at least three consecutive years, allowing the Evaluation Team to examine the long-term impacts of providing integrated services to students.

> ***"Communities that offer a rich array of developmental opportunities for adolescents have fewer young people who exhibit risky behaviors and problems and show higher rates of positive development" (National Research Council, 2004).***

Overall, the literature reveals no single causal factor common among all effective youth development programs. Instead, several characteristics have emerged as being vital to a successful youth development intervention: social and emotional support from adults; opportunities to belong; promotion of pro-social norms (e.g., community service components); opportunities to experience mastery and to engage in activities that matter; skill building; integration of family, schools, and communities; physical and psychological safety; and a clear, well-executed structure (Eccles & Templeton, 2001). The research suggests that "programs for youth offered by more than one organization – in schools, community centers, or both – that focus on different areas of interest and through different kinds of curricula provide the greatest opportunity for young people to acquire personal and social assets" (National Research Council, 2004). By integrating these components into a single intervention with a single entry point into a child's life, one can anticipate that the positive effects on students would be even more profound.

"Comprehensive evaluations provide valid, useful information about the plausibility of the program theory, about implementation quality, about effects on individual program participants, about differential effects on different kinds of participants, about community-level effects, and about the processes causally generating effects" (Eccles & Templeton, 2001).

Communities In Schools, Inc. (CIS) is a community-based integrated student service program; the five basics of CIS – a one-on-one relationship with a caring adult, a safe place to learn and grow, a healthy start and a healthy future, a marketable skill to use upon graduation, and a chance to give back to peers and community – closely match those components that have been found, separately, to produce positive outcomes for at-risk students.

Our comprehensive school-level evaluation of the CIS program comes at a crucial time for the youth development, specifically dropout prevention, field. The rigorous research design of our Quasi-Experimental Study allows us to examine the effectiveness of a community-based integrated student service approach toward improving student behavior. This study will add to the body of evidence about effective strategies using integrated student supports for school reform. It will serve schools across the country in their development of comprehensive student support programs, as well as serve as a guiding force in the evolution of the CIS program.

Through the natural variation study (i.e., within-CIS comparison), we will be able to parse out the outcome domains most improved by CIS services. From another perspective, this will allow CIS the opportunity to identify the services benefiting students the most.

The case studies of high-implementing sites in the CIS network will allow us to identify and provide detail on promising practices for delivering community-based services within the school environment. The case studies will also provide a clear picture of which services are most effective in which context (e.g., urban, suburban, rural).

Finally, the implementation study (also known as the typology study) will provide CIS National with an in-depth look at how the CIS model is being implemented across the sites. Typology categories will be used as a key covariate in the quasi-experimental study, and will help the Evaluation Team make a critical link between process and outcome.

2. Methodology

This section details the methodology followed for each of four school-level studies: the Quasi-Experimental Study, the Case Studies, the Natural Variation Study, and the Implementation Study.

2.1 Quasi-Experimental Study Methodology

The purpose of the school-level study is to examine the effects of the Communities In Schools (CIS) program on several important outcomes across elementary, middle, and high schools served by CIS. Because an experimental study where students are randomly assigned to treatment and control conditions was not possible, our study matched CIS schools to comparable non-CIS schools on several school-level and student-level characteristics (see Table 4) using a replicable and precise computerized algorithm, "Optimal Match," which draws on the work of Rubin (1992). After adjusting for differences in school characteristics, the non-CIS schools identified as most similar to CIS sites provided the best basis for our comparison analyses.

Originally, 741 schools were selected from a larger sample of 3,325 schools served by CIS (see Appendix A). Given that the alignment of data across states is extremely challenging and time consuming, the Evaluation Team limited the sample to seven key states: Florida, Georgia, Texas, Michigan, North Carolina, Pennsylvania, and Washington. Collectively, these states contain approximately 78 percent of the schools in the CIS Network.

Ultimately, the data examined in the study included only regular public schools (magnet and charter CIS schools were excluded) from the seven participating states. Thus, the sample size was narrowed to 694 public schools, 86.7 percent of which were successfully matched to non-CIS schools (n=602). Table 3 reports the number of matched CIS schools per state and across all states for each school type.

TABLE 3: MATCHED CIS SCHOOLS BY STATE AND SCHOOL TYPE

	Elementary	Middle	High	**Total by State**
Florida	45	21	18	**84**
Texas	96	39	33	**168**
Georgia	75	42	29	**146**
Pennsylvania	9	9	11	**29**
North Carolina	53	28	23	**104**
Michigan	29	8	5	**42**
Washington	14	11	4	**29**
Total by School Type	**321**	**158**	**123**	**602**

Each CIS school was matched to a non-CIS school on several pre-implementation (i.e., baseline) characteristics. The logic behind the matching process was to find non-CIS schools that, based on their characteristics, would have had a similar chance of implementing CIS. Elementary and middle schools were matched on seven baseline variables, and high schools were matched on eight (Table 4).

Variables were drawn from the National Center for Educations Statistics' Common Core of Data and State Department of Education websites and offices. Specifically, the number of students eligible for free and reduced lunch, the total number of students (as a measure of school size), and student racial/ethnic composition came from the Common Core of Data. State Departments of Education provided information – either through their websites or through direct requests – regarding academic performance of schools (percentage of students who perform at or above a passing proficiency level), attendance rates, and – for some states – data on the number of students with special needs. The eighth matching variable used for high schools was promoting power, a widely-accepted proxy for dropout rates, which compares 12th grade enrollment at a school to 9th grade enrollment four years earlier.

TABLE 4: INFORMATION USED FOR MATCHING IN ELEMENTARY, MIDDLE, AND HIGH SCHOOLS

BASELINE INFORMATION	
ELEMENTARY/MIDDLE SCHOOLS	HIGH SCHOOLS
• Attendance Rates	• Attendance Rates
• Number of students receiving free and reduced lunch	• Number of students receiving free and reduced lunch
• Number of students with special needs	• Number of students with special needs
• Total number of students in the school	• Total number of students in the school
• Percentage of students passing the state Math test	• Percentage of students passing the state Math test
• Percentage of students passing the state English Language Arts (ELA) test	• Percentage of students passing the state English Language Arts (ELA) test
• Racial Composition	• Racial Composition
	• Dropout Rates

Four cohorts of CIS schools were studied, with cohort membership dependent on the baseline year before CIS implementation. All Cohort 1 CIS schools started implementing their programs during the 1999-2000 school year; Cohort 2 CIS schools began during the 2000-2001 school year; Cohort 3 CIS schools began their implementation during the 2001-2002 school year; and Cohort 4 CIS schools started in the 2002-2003 school year (Table 5). All CIS schools in the study have been implementing CIS for at least three consecutive years.

TABLE 5: CIS BASELINE AND IMPLEMENTATION YEARS BY COHORT

Cohort	Pre-CIS Implementation School Year (Baseline)	CIS Implementation School Year	End of Three-Year Implementation (Post3)
Cohort 1	1998-1999	1999-2000	2001-2002
Cohort 2	1999-2000	2000-2001	2002-2003
Cohort 3	2000-2001	2001-2002	2003-2004
Cohort 4	2001-2002	2002-2003	2004-2005

Before matching, elementary, middle, and high schools were divided into subsets based on their location. Specifically, the Common Core of Data school locale code was used to divide urban, suburban, and rural schools into three groups. Schools in large and mid-sized cities were classified

as ‘Urban’ schools; schools located in the urban fringe of a large or mid-size city or in a large town were defined as ‘Suburban’ schools; and schools in small towns and rural areas were categorized as ‘Rural’ schools. Thus, 36 subgroups of CIS schools per state were matched to non-CIS schools based on their year of CIS implementation (four cohorts), locality (three categories of urbanicity), and school type (three school levels: elementary, middle, and high).

Some CIS schools were matched with comparable schools within their districts, but the majority of the matched schools came from districts outside of each CIS affiliate district. This was due to the specific nature of the matching, as it was difficult to find a comparable non-CIS school with highly similar characteristics within the same district. Because the matching was performed without school replacement, none of the matched non-CIS schools were duplicated in the analyses.

To examine how well the one-to-one optimal matching procedure worked, we obtained balance statistics for the matched pairs on all variables included in the procedure. T-tests were used to compare means for the two groups of schools, CIS and non-CIS, on school- and student-level characteristics. Results indicated that the key matching variables were well balanced and there were no systematic or significant (mean) differences between the matched CIS and non-CIS schools (Tables 6-12). Specifically, matching on most of the variables resulted in improved balance for the matched pairs of schools, revealing accuracy to within a quarter of a standard deviation across all variables.

TABLE 6: BASELINE STATISTICS FOR MATCHED PAIRS OF SCHOOLS IN FLORIDA (N=168)

	CIS	Non-CIS
• Absences	11%	11%
• Passing rates in Grade 5 Math	32%	36%
• Passing rates in Grade 4 ELA	44%	47%
• Passing rates in Grade 8 Math	47%	50%
• Passing rates in Grade 8 ELA	41%	46%
• Passing rates in Grade 10 Math	60%	63%
• Passing rates in Grade 10 ELA	36%	35%
• % special education	16%	16%
• % free lunch	51%	46%
• Total enrollment	1,024	1,072
• % White	50%	52%
• % African American	38%	37%
• % Hispanic	11%	9%
• Promoting Power	58%	63%

The matched non-CIS schools came from a larger pool of 1,925 elementary, 614 middle, and 480 high schools in Florida. With propensity score analysis, we were able to effectively control for baseline differences between the matched pairs of schools.

TABLE 7: BASELINE STATISTICS FOR MATCHED PAIRS OF SCHOOLS IN GEORGIA (N=292)

	CIS	Non-CIS
• Passing rates in Grade 4 Math	50%	51%
• Passing rates in Grade 4 ELA	62%	63%
• Passing rates in Grade 8 Math	34%	39%
• Passing rates in Grade 8 ELA	58%*	64%
• Passing rates in Grade 10 Math	86%	87%
• Passing rates in Grade 10 ELA	93%	94%
• % free lunch	62%	61%
• Total enrollment	778	779
• % White	36%	38%
• % African American	61%	58%
• % Hispanic	3%	3%
• Promoting Power	53%	56%

The matched non-CIS schools came from a larger pool of 1,402 elementary, 499 middle, and 397 high schools in Georgia. With propensity score analysis, we were able to effectively control for baseline differences between the two groups of schools, with the exception of passing rates in eighth grade ELA (***p* < .05)**.

* We were able to effectively control for baseline differences between the CIS and non-CIS schools with the exception of passing rates in eighth grade ELA (***p* < .05)**.

TABLE 8: BASELINE STATISTICS FOR MATCHED PAIRS OF SCHOOLS IN TEXAS (N=336)

	CIS	Non-CIS
• Attendance	96%	96%
• Passing rates in Grade 4 Math	84%	84%
• Passing rates in Grade 4 ELA	86%	86%
• Passing rates in Grade 8 Math	87%	88%
• Passing rates in Grade 8 ELA	88%	89%
• Passing rates in Grade 10 Math	82%	83%
• Passing rates in Grade 10 ELA	86%	87%
• % special education	11%	12%
• % free lunch	66%*	57%
• Total enrollment	892	838
• % White	21%	20%
• % African American	17%	18%
• % Hispanic	61%	60%
• Promoting Power	59%	57%

The matched non-CIS schools came from a larger pool of 3,642 elementary, 1,428 middle, and 1,347 high schools in Texas. With propensity score analysis, we were able to effectively control for baseline differences between the matched pairs of schools for all matching variables, with the exception of the percentage of students receiving but free / reduced lunch (***p* < .05)**.

* We were able to effectively control for baseline differences between the CIS and non-CIS schools with the exception of the percentage of students receiving but free/reduced lunch (***p* < .05)**.

TABLE 9: BASELINE STATISTICS FOR MATCHED PAIRS OF SCHOOLS IN NORTH CAROLINA(N=208)

	CIS	Non-CIS
• Attendance	95%	95%
• Passing rates in Total School Performance for Elementary	73%	74%
• Passing rates in Total School Performance for Middle	74%	73%
• Passing rates in Total School Performance for High Schools	64%	63%
• % free lunch	47%	46%
• Total enrollment	709	683
• % White	55%	53%
• % African American	36%	38%
• % Hispanic	4%	4%
• Promoting Power	62%	64%

The matched non-CIS schools came from a larger pool of 1,318 elementary, 460 middle, and 369 high schools in North Carolina. With propensity score analysis, we were able to effectively control for baseline differences between the matched pairs of schools for all matching variables.

TABLE 10: BASELINE STATISTICS FOR MATCHED PAIRS OF SCHOOLS IN MICHIGAN (N=84)

	CIS	Non-CIS
• Passing rates in Grade 4 Math	83%	83%
• Passing rates in Grade 4 ELA	74%	73%
• Passing rates in Grade 7 Math	84%	80%
• Passing rates in Grade 7 ELA	73%	65%
• % free lunch	67%	69%
• Total enrollment	547	475
• % White	36%	35%
• % African American	52%	52%
• % Hispanic	6%	6%
• Promoting Power	37%	38%

The matched non-CIS schools came from a larger pool of 2,158 elementary, 1,066 middle, and 693 high schools in Michigan. With propensity score analysis, we were able to effectively control for baseline differences between the matched pairs of schools for all matching variables.

TABLE 11: BASELINE STATISTICS FOR MATCHED PAIRS OF SCHOOLS IN PENNSYLVANIA (N=58)

	CIS	Non-CIS
• Passing rates in Grade 5 Math	34%	34%
• Passing rates in Grade 5 ELA	37%	39%
• Passing rates in Grade 8 Math	43%	45%
• Passing rates in Grade 8 ELA	51%	55%
• Passing rates in Grade 11 Math	54%	54%
• Passing rates in Grade 11 ELA	60%	59%
• % free lunch	57%	51%
• Total enrollment	899	811
• % White	50%	54%
• % African American	38%	34%
• % Hispanic	8%	10%
• Promoting Power	78%	80%

The matched non-CIS schools came from a larger pool of 1,390 elementary, 558 middle, and 485 high schools in Pennsylvania. With propensity score analysis, we were able to effectively control for baseline differences between the matched pairs of schools for all matching variables.

TABLE 12: BASELINE STATISTICS FOR MATCHED PAIRS OF SCHOOLS IN WASHINGTON (N=58)

	CIS	Non-CIS
• Passing rates in Grade 4 Math	69%	70%
• Passing rates in Grade 4 ELA	43%	45%
• Passing rates in Grade 7 Math	65%	64%
• Passing rates in Grade 7 ELA	50%	50%
• Passing rates in Grade 10 Math	58%	56%
• Passing rates in Grade 10 ELA	33%	29%
• % free lunch	20%	20%
• Total enrollment	648	694
• % White	68%	69%
• % African American	12%	10%
• % Hispanic	7%	8%
• % Asian	12%	12%
• Promoting Power	81%	80%

The matched non-CIS schools came from a larger pool of 1,187 elementary, 473 middle, and 357 high schools in Washington. With propensity score analysis, we were able to effectively control for baseline differences between the matched pairs of schools for all matching variables.

2.2 Natural Variation Study Methodology (Within-CIS Comparison)

The Natural Variation Study examines the degree to which program implementation relates to outcomes within the CIS Network. Data for the study was gathered through the administration of the Site Coordinator Survey (see Appendix B), a modified version of the Critical Processes Survey that was administered to CIS schools in January 2006.

The Site Coordinator Survey has three main sections:

- **Section 1** addresses short-term services that are widely accessible by all students in the school (i.e., Level 1 services).
- **Section 2** addresses targeted and sustained intervention services that are provided for students enrolled in specific CIS initiatives/programs (i.e., Level 2 services).
- **Section 3** includes general questions about school context, such as involvement of stakeholders in CIS programs and site coordinators' satisfaction with CIS affiliate support.

Administered in May 2007 to 576 eligible CIS sites in the seven quasi-experimental study states, the Site Coordinator Survey achieved a 64 percent response rate (368 valid responses). Table 13 provides more detail on each state's participation in the study.

TABLE 13: SITE COORDINATOR SURVEY PARTICIPANTS BY STATE

State	Eligible sites	Valid respondents	Response rate
Florida	94	54	57.4%
Georgia	190	56	29.5%
North Carolina	51	30	58.8%
Michigan	32	26	81.2%
Pennsylvania	25	23	92.0%
Texas	165	165	100.0%
Washington	24	13	54.2%
Total	**576**	**368**	**63.9%**

Initial analysis of the Site Coordinator Survey provided substantial descriptive data about program implementation across the CIS Network. In addition, the survey provided data for the development of the CIS Typology, which is used to identify the relationship between context, processes, services, and outcomes. The resulting typology and process data from the Site Coordinator Survey were used to conduct a Natural Variation Study, which examines how various degrees of implementation of the CIS model were related to outcomes. The ultimate goal of the Natural Variation Study is to determine which CIS models work best in given situations. The Natural Variation analyses presented in this report include profiles of high performers (i.e., CIS sites that reported positive outcomes) versus others. By gaining insight into what successful CIS sites are doing, the Evaluation Team will be in a position to identify promising practices and then confirm the validity of those practices during the case study site visits.

2.3 Typology Methodology

A major obstacle in a large-scale study such as the CIS National Evaluation is the variation in program context and services delivered across CIS sites. This challenge was anticipated in August 2005, at the outset of the study. During a meeting of CIS's Network Evaluation Advisory Committee (NEAC), all parties agreed that the development of a typology of programs was necessary. This typology would provide a clearer understanding of CIS processes at the site level, as well as identify important covariates for the quasi-experimental study. By comparing program outcomes across typologies, we can gain an understanding of which models work in given circumstances. The ultimate goal of the typology was not to determine the single best service delivery model; rather, it was to clarify how models work, and why they work in some circumstances and not others. In other

words, the typology is one of the key elements of the natural variation study, as it will allow us to study the link between process and outcomes. The typology of CIS programs was developed with these goals in mind:

- Address the relationships among program context, services, and outcomes.
- Provide structure to the quasi-experimental study sampling.
- Provide CIS with a way to define the types of sites in their network.

The primary data sources for development of a typology of programs are the Critical Processes Survey (CPS) and the Site Coordinator Survey (SCS). The Critical Processes Survey was administered to every site in the CIS network in January 2006, and was developed to fill a critical gap in data on processes at the site level. It was designed to gain a broad and general understanding of site-level processes, in order for the Evaluation Team – and CIS National – to gain additional knowledge about the diversity in programming that is central to the CIS model. In order to encourage the highest response rate possible, this survey was designed to require only 20 minutes to complete. The survey was a success, generating information on 1,894 sites in the CIS network.

The Site Coordinator Survey was administered in May 2007 for an entirely different purpose. This survey was intended to be the centerpiece of data collection for the Natural Variation Study, which was designed to gain an understanding in the differentiators between high-performing sites and other sites. The survey was administered to all sites in the Network that were selected to be part of the quasi-experimental study, and 368 valid responses were obtained. In addition to providing valuable data for the Natural Variation Study, this survey was critical for the development of an improved typology of sites.

The method to developing a typology of CIS schools is simple. By scoring a number of elements of the CIS process using a simple rubric – which is based on the identification of "tipping points" in expected performance – we are able to add up those scores and arrive at a composite figure for how well each site approximates the ideal CIS model. Of course, the prerequisite to employing this methodology is knowledge of what constitutes ideal CIS processes. Two recent developments have allowed us to gain particularly high confidence in our rubric:

- ❖The CIS Total Quality System (TQS) was released in 2007. This set of integrated standards and policies provided the Evaluation Team with a solid set of ideals by which the model could be ascertained.

- ❖The original typology rubric was vetted to CIS National and the Implementation Task Force, which ensured that the scoring system was both based on National Office priorities and grounded in practice.

To take our hypothesis a step further, it would stand to reason that if CIS sites follow ideal processes, they would be in a better position to affect student- and school-level outcomes. If we are able to use the typology to make this critical link between process and outcome, it will become the linchpin of numerous analyses and will solidify the external validity (i.e., generalizability) of results.

CIS is best described as a "process" of engaging schools and students, and filling gaps in need. Because the CIS model is intended to fill gaps in need, the program may take on a variety of forms in different locations, depending on the circumstances of the school or community. It is therefore important to delineate core functions of the process. Based on our knowledge of the CIS program, our understanding of the TQS, and our discussions with front-line staff, we developed four domains that capture the essence of the CIS process:

- ❖ Needs Assessment,
- ❖ Planning,
- ❖ Service Provision, and
- ❖ Monitoring and Adjustment.

Each of the questions from the Critical Processes Survey and Site Coordinator Survey that were considered in the development of the typology were categorized into one of these four domains. By scoring the CIS process from start to finish, we can develop a common metric to describe adherence to the model. In order to capture this process accurately, however, thought must be given to (1) what elements of the process are more important than others, and (2) what the thresholds are for performance. The determination of these critical "tipping points" was greatly facilitated by extensive discussions with CIS National staff, as well as a review of the TQS. Table 14 presents the typology scoring rubric, which includes a review of the Site Coordinator Survey question, its corresponding question from the Critical Processes Survey, and notes on the TQS standard

(if applicable) that covers each question.

TABLE 14: TYPOLOGY SCORING RUBRIC

Needs Assessment Domain			
SCS Question	**CPS Question**	**Scoring**	**Notes**
Q11&12: Does CIS conduct an assessment (L1)	Q20	Yes: 5 pts. No: 0 pts.	
Q13: How often are needs assessments conducted? (L1)	Q20	More than once a year: 5 pts. Once a year: 3 pts. Less than once a year: 1 pt.	TQS Site Operations Standard II.3
Q14: Types of information for identifying needs (L1)	Q21	5 types of info: 5 pts. 4 types of info: 4 pts. 3 types of info: 3 pts. 2 types of info: 2 pts. 1 type of info: 1 pt. 0 types of info: 0 pts.	
Q15: Types of information for prioritizing overall needs (L1)	Q23	Student and external factors: 5 pts. Student needs only: 3 pts. External factors only: 2 pts. No needs assessment: 0 pts.	
Q34 & Q35: Does CIS conduct a needs assessment? (L2)	Q31	Yes: 5 pts. No: 0 pts.	
Q36: How often does CIS conduct a needs assessment? (L2)	Q31	More than once a year: 5 pts. Once a year: 3 pts. Less than once a year: 1 pt.	
Q37: Types of information for identifying needs (L2)	Q32	5 types of info: 5 pts. 4 types of info: 4 pts. 3 types of info: 3 pts. 2 types of info: 2 pts. 1 type of info: 1 pt. 0 types of info: 0 pts.	
Q38: Types of information for prioritizing overall needs (L2)	Q34	Student and external factors: 5 pts. Student needs only: 3 pts. External factors only: 2 pts. No needs assessment: 0 pts.	
Planning Domain			
SCS Question	**CPS Question**	**Scoring**	**Notes**
Q20: Does CIS have an annual operations plan (L1)	None	Yes: 5 pts. No: 0 pts.	TQS Site Operations Standard I.2
Q21: What is included in that plan (L1)	None	5 types of info: 5 pts. 4 types of info: 4 pts. 3 types of info: 3 pts. 2 types of info: 2 pts. 1 type of info: 1 pt. 0 types of info: 0 pts.	TQS Site Operations Standard II.3
Q43: Does CIS have an annual operations plan (L2)	None	Yes: 5 pts. No: 0 pts.	TQS Site Operations Standard II.3

Q44: What is included in that plan (L2)	None	5 types of info: 5 pts. 4 types of info: 4 pts. 3 types of info: 3 pts. 2 types of info: 2 pts. 1 type of info: 1 pt. 0 types of info: 0 pts.	TQS Site Operations Standard I.2
Services Domain			
SCS Question	**CPS Question**	**Scoring**	**Notes**
Q22 & Q45: How many of the 5 basic needs do they address (L1 & L2 combined)	Q24 & Q36	5 basics covered: 5 pts. 4 basics covered: 4 pts. 3 basics covered: 3 pts. 2 basics covered: 2 pts. 1 basic covered: 1 pt.	
Q22: Percentage of students in school served by CIS (L1)	Q10	Above 75%: 5 pts. 50% to 75%: 3 pts. 25% to 49%: 2 pts. 1% to 24%: 1 pt. 0%: 0 pts.	TQS Site Operations Standard III.1
Q45: Percentage of students in school served by CIS (L2)	Q12	Above 5%: 5 pts. 1% to 5%: 3 pts. 0%: 0 pts.	TQS Site Operations Standard IV.1
Q9: How much time site coordinator spends coordinating CIS services	Q8	100%: 5 pts. 76-99%: 4 pts. 50-75%: 3 pts. 26-50%: 2 pts. 1-25%: 1 pt. 0%: 0 pts.	TQS Site Operations Standard I.3
Monitoring and Adjusting Domain			
SCS Question	**CPS Question**	**Scoring**	**Notes**
Q29: How often does CIS review student progress (L1)	None	More than once/grading period: 5 Once per grading period: 3.5 pts. Once per semester: 2.5 pts. Once per year: 1 pt. Never/less than once/yr: 0 pts.	TQS Site Operations Standard III.3
Q51: How often does CIS review student progress (L2)	Q41	More than once/grading period: 5 Once per grading period: 3.5 pts. Once per semester: 2.5 pts. Once per year: 1 pt. Never/less than once/yr: 0 pts.	TQS Site Operations Standard IV.5

Appendix C contains a copy of the Typology Report, and provides a thorough detail of the methodology used to develop the typology, results of the typology development, and implications for CIS.

3. Findings and Results by Outcome

After checking for baseline differences on several school characteristics between CIS and non-CIS schools, the Evaluation Team then compared the matched pairs on outcomes measured at pre-implementation and three years post-implementation. The CIS sites were compared with their non-CIS matches on several outcomes; all schools were compared on achievement and attendance outcomes, with high schools additionally compared on dropout, graduation, and SAT scores and participation rates. Behavioral data were available for only two states, and results of these analyses are detailed below.

How to Interpret These Findings:

In this report, the Evaluation Team presents a number of graphs showing trends in outcomes over time. These graphs provide information on how CIS schools' outcomes changed over time – and provides information on how quickly those outcomes started to change.

When interpreting these graphs, consider the pre-post change of the CIS group in relation to the pre-post change of the comparison group. The difference between these two numbers is our net change score, which reflects the value-added of the CIS program.

For example, if CIS schools reported a 6% increase in graduation rates between the year prior to implementation and three years after implementation, and the comparison school reported a 2% increase during the same period, the net change would be +4% in favor of CIS.

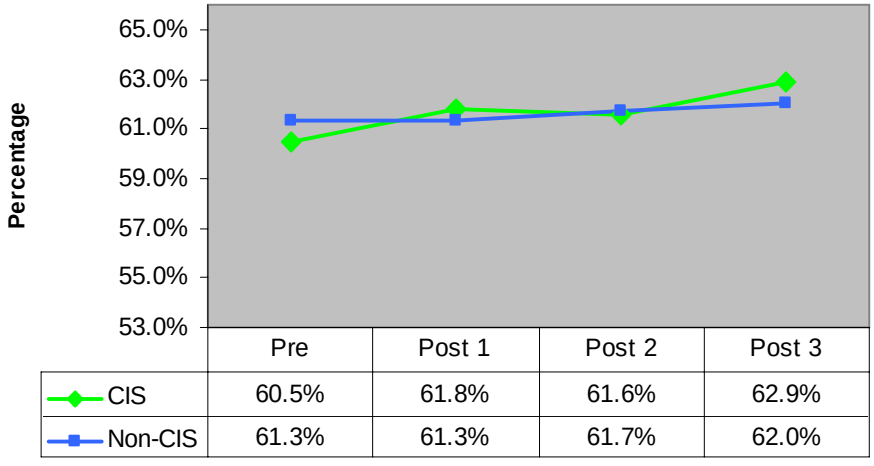
For many of the analyses presented below, Level 1 and Level 2 services were studied separately. Level 1 services are also known as short-term, whole-school services that are provided to all students, regardless of their risk for developing serious problems. Examples of Level 1 services include presentations and assemblies, motivational speakers, and health fairs. Level 2 services are targeted and sustained interventions provided for specific students over a period of time. These services are provided based on individual student needs assessments and include such services as one-on-one academic tutoring, linkages to legal or medical resources, and substance abuse or anger management counseling. While most schools provide various services at each level, some provide only Level 1 services and some provide services only at Level 2. The implications of providing services at each of the two levels will be explored below as they relate to different outcomes.

3.1 Promoting Power Findings

Main Results: Promoting Power

Promoting power was calculated as the number of 12th graders enrolled in a high school compared with the number of 9th graders enrolled there three years earlier. This is a widely accepted proxy for the calculation of dropout rates.

Exhibit 3: Promoting Power (n=82)



	Pre	Post 1	Post 2	Post 3
CIS	60.5%	61.8%	61.6%	62.9%
Non-CIS	61.3%	61.3%	61.7%	62.0%

Dataset: pp_hi; Variables: pp_pre_all, pp_post1_all, pp_post2_all, pp_post3_all

The promoting power analysis for CIS high schools shows that there are significant differences in promoting power and that CIS high schools are making steady progress toward keeping students in school compared to non-CIS high schools. As shown in Exhibit 3 above, after three years of CIS presence in a high school, promoting power increased by 2.4% [$F_{(1, 81)}$= 5.48, p=.022]. This pre-post difference was statistically significant. Comparison high schools reported a small increase of 0.7% in promoting power. These results, which demonstrate a net increase of +2.0%[1] in promoting power, provide support for CIS's effectiveness as a dropout prevention program.

[1] Please note that our overall net change scores may differ from changes reported in trend plots due to differences in rounding.

Findings by Performance Level (Natural Variation Study Findings): Promoting Power

A word on findings by performance level: In this section, CIS sites are classified as higher performers and lower performers according to their reported net change in promoting power outcomes across the three-year implementation period. In order to determine what CIS processes and services differentiate higher performers from lower performers, the Evaluation Team developed summary profiles for each outcome by presenting the frequencies or means of key items from the Site Coordinator Survey; which correspond with the four CIS process domains: needs assessment, planning, services, and monitoring and adjustment.

When making comparisons across schools in the services domain, we simplified the analysis by grouping 22 individual types of services into eight categories, as shown in Table 15.

TABLE 15: INDIVIDUAL CIS SERVICES WITHIN EACH SERVICE CATEGORY

Service Category	Individual Service Type
Maintaining family and peer relationship	Mentoring
	Family strengthening/ engagement
Academic	Academic preparation/ assistance
Case management	Case management
	Legal services
	Linkages to resources (food/clothing/financial)
Behavior	Anger management/conflict resolution
	Gang intervention/prevention
	Substance abuse prevention/intervention
	Social/life skills development
	Leadership skills development/training
	Truancy prevention
After school	Out of school time programs
	Creative/performing arts activities
	Recreational/sports activities
Career	College exploration/preparation
	Career development/training/employment
Public services	Service learning
Health	Pregnancy prevention
	Teen parenting/child care
	Physical health screening/education
	Mental health services/counseling

Table 16 reveals a relationship between CIS service time and schools' performance on reducing dropout rates. Specifically, students in higher performing schools received Level 1 (school-wide) and Level 2 (targeted, sustained) services for more hours than those in lower performing schools.

TABLE 16: SERVICES BY PERFORMANCE LEVEL – PROMOTING POWER*

Items	Higher Performers (n=25)	Lower Performers (n=10)
Percent of students served in schools:		
Level 1 services	23.7%	**42.6%**
Level 2 services	19.7%	**34.7%**
Numbers of types of services provided:		
Level 1 services**	**13**	8
Level 2 services	**10**	9
Average service hours per student: maintaining family and peer relationships:		
Level 1 services	**8.1**	1.1
Level 2 services	77.8	**27.0**
Average service hours per student: academic services:		
Level 1 services**	**8.3**	0.7
Level 2 services	51.4	**111.5**
Average service hours per student: case management:		
Level 1 services**	**2.7**	0.9
Level 2 services**	**128.2**	39.5
Average service hours per student: behavioral services:		
Level 1 services**	**19.8**	1.3
Level 2 services**	**244.8**	50.5
Average service hours per student: after school services:		
Level 1 services**	**1.1**	0.1
Level 2 services**	**54.6**	5.5
Average service hours per student: career services:		
Level 1 services**	**14.4**	0.6
Level 2 services**	**53.8**	15.5
Average service hours per student: services of providing public services:		
Level 1 services**	**1.0**	0
Level 2 services**	**40.2**	1.5
Average service hours per student: health services:		
Level 1 services	1.6	**1.8**
Level 2 services	117.4	**143.6**

*Larger numbers between higher and lower performer are in bold
** Statistically significant at the p<.05 level between higher and lower performers
Dataset: regression; Variables: pp_group, inten_relation1, inten_academic1, inten_case1, inten_behav1, inten_aftsch1, inten_career1, inten_public1, inten_health1, inten_relation2, inten_academic2, inten_case2, inten_behav2, inten_aftsch2, inten_career2, inten_public2, inten_health2, stper_l1, stper_l2, level1_type, level2_type

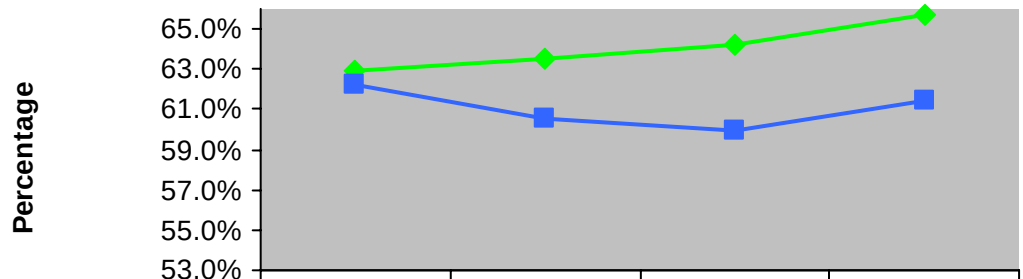
Statistically significant differences were observed between higher performers and lower performers on the number of service hours dedicated to academic services, case management, behavioral services, after-school programs, career services, public service, and services that help maintain family and peer relationships. In addition, we observed differences between the two groups in the number of service types available: higher performers provided more Level 1 and Level 2 services than did lower performers.

These results must be interpreted with caution, as we cannot ensure that the positive relationship found between types/hours of services provided and dropout rates holds across all CIS schools: these findings are based on limited sample sizes. In addition, promoting power results reveal a trade-off issue between the number of hours and types of services provided and the number of total students served; that is, higher performers served about 20 percent fewer students than did lower performers. The question for CIS then becomes, is it better to serve more students in need, or to serve fewer students to ensure higher quality services? While information provided in Table 16 cannot answer this question, it does reveal that higher performing CIS schools offer more hours and types of services. To establish a causal link between service hours/types and dropout rates, further analysis is necessary. For more information regarding findings by performance level, please see Appendix E for a group of profile tables on higher vs. lower performers on a range of outcomes.

Findings by Implementation Level: Promoting Power

High implementing CIS sites demonstrated more success over time on reducing dropout rates (i.e., increasing promoting power) than their non-CIS comparison schools. During the three years after implementation of the CIS program, promoting power of high implementers increased 2.8%, with an increase of nearly 1% per year, while promoting power of non-CIS comparisons decreased slightly by 0.8%, for a net change of +3.6%. That is, schools that implemented the CIS model with fidelity were 3.6% more likely to keep students in school than their comparison schools (Exhibit 4).

Exhibit 4: High Implementers vs. Non-CIS Comparisons: Promoting Power (n=30)

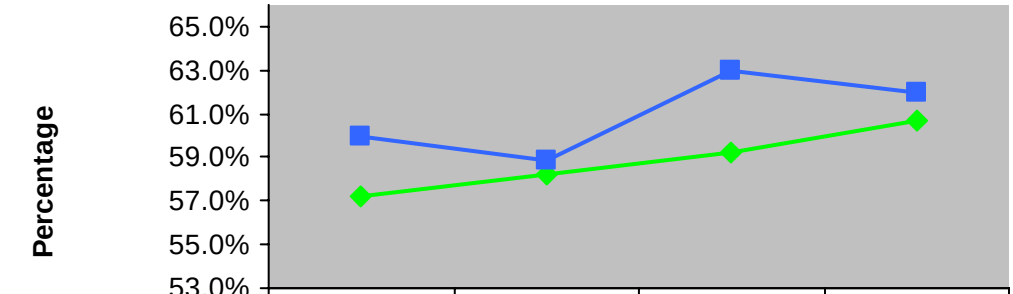


	Pre	Post 1	Post 2	Post 3
High Implementers	62.9%	63.5%	64.2%	65.7%
Non-CIS Comparison Schools	62.2%	60.5%	59.9%	61.4%

Dataset: finaldb_20080316; Variables: pp_pre_all, pp_prec_all, pp_post1_all, pp_post1c_all, pp_post2_all, pp_post2c_all, pp_post3_all, pp_post3c_all, high_implementers

While CIS high implementers outperformed their comparison sites, partial implementers underperformed relative to their comparison sites. Exhibit 5 shows that CIS partial implementers had a lower mean promoting power than their non-CIS comparisons across time. However, promoting power for CIS partial implementers increased more than in comparison sites, for a net change of +1.5%.

Exhibit 5: Partial Implementers vs. Non-CIS Comparisons: Promoting Power (n=17)

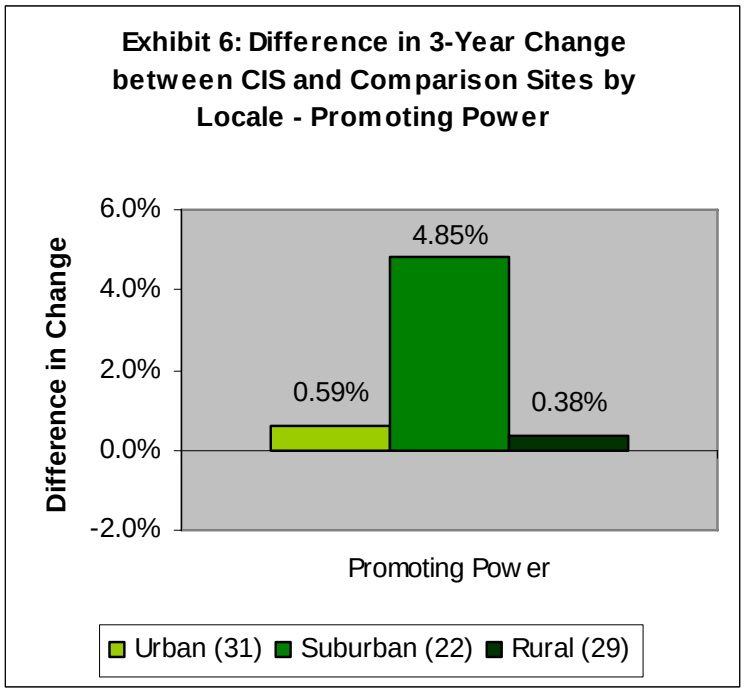


	Pre	Post 1	Post 2	Post 3
Partial Implementers	57.2%	58.2%	59.2%	60.7%
Non-CIS Comparison Schools	60.0%	58.9%	63.0%	62.0%

Dataset: finaldb_20080316; Variables: pp_pre_all, pp_prec_all, pp_post1_all, pp_post1c_all, pp_post2_all, pp_post2c_all, pp_post3_all, pp_post3c_all, high_implementers

Findings by Locale: Promoting Power

While an analysis of the data reveals that CIS appears to be having an overall effect on dropout rates, a closer look at subgroups within the sample can help determine how to best allocate resources to where they are needed most. Exhibit 6 shows the difference in the three-year net change between CIS schools and their matched comparison sites by locale (urban, suburban, or rural) for promoting power.



Dataset: mrg_final_jg; Variables: locale_final, final_diff_pp

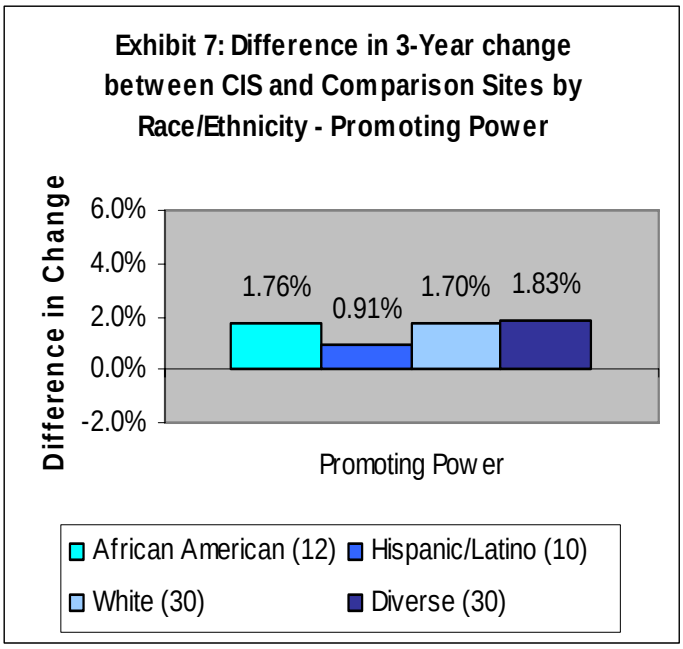
As depicted in Exhibit 6, suburban, urban, and rural high schools outperformed their comparison sites in reducing dropout rates. Urban and rural schools performed only slightly better, while suburban sites performed the best overall in promoting power. Compared to their rural counterparts, urban and suburban schools had relatively more intensive site coordination, needs assessment processes, and monitoring of student progress. This may provide a partial explanation as to why suburban sites reported solid progress in reducing dropout rates; however, it does not account for the difference between urban and suburban schools. The National Evaluation Team will investigate this issue further in the case studies. For more information regarding this sub-grouping, see Appendix F.

Findings by Race/Ethnicity: Promoting Power

Exhibit 7 shows the difference in the three-year net change between CIS schools and their matched comparison sites by race/ethnicity (African-American, Hispanic/Latino, White, and Diverse) for promoting power. Each of these first three race/ethnicity subgroups (African-American, Hispanic/Latino, and White) is comprised of schools having at least 60 percent enrollment of that particular racial/ethnic group.

Schools in the African-American subgroup had an average of 88 percent African-American student enrollment, schools in the Hispanic/Latino subgroup had an average of 86 percent Hispanic/Latino student enrollment, and schools in the White subgroup had an average of 80 percent White student enrollment. The Diverse subgroup is comprised of the remaining schools in the sample, for which the means of racial composition reveal no group with greater than 38 percent representation.

For more information regarding this sub-grouping, see Appendix G.



Dataset: mrg_final_jg; Variables: locale_final, final_diff_pp

As evidenced by Exhibit 7, schools that are primarily African-American, Hispanic/Latino, White, and Diverse all performed above their comparison sites in promoting power. Primarily African-American, White, and Diverse schools outperformed their comparison sites more than

Hispanic/Latino schools did in regards to promoting power, but these differences between the groups were less than one percent.

Promoting power is one of the few outcome variables in which primarily African-American schools outperformed their comparison schools to a greater extent than did primarily Hispanic/Latino schools. This may be due to the fact that site coordinators at African American schools have been employed by CIS longer on average than those at Hispanic/Latino schools (5.2 years vs. 4.7 years). Primarily African-American schools are also almost twice as likely as Hispanic schools to offer only Level 1 services (21.1% vs. 11.0%). This supports other findings suggesting that Level 1 services may be particularly important in effecting school-level change. Level 1 services have the potential to change an entire school climate and may subsequently raise school-wide expectations about staying in school and may have particular implications for primarily minority schools.

Summary of Promoting Power Findings

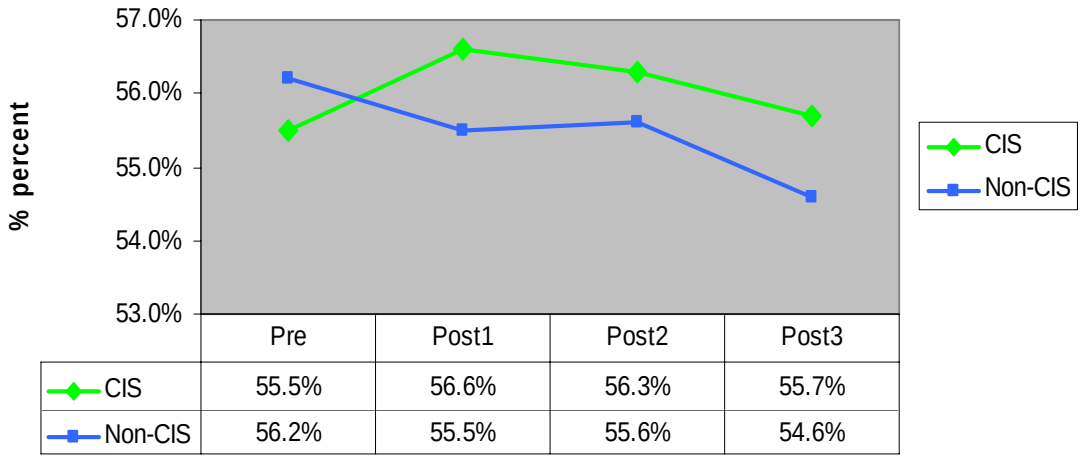
After three years of CIS program implementation, CIS high schools performed better in promoting power relative to their comparison sites. The more successful CIS schools, in terms of improving promoting power, provided more service hours at both Levels 1 and 2 than CIS schools that did not have a positive effect on promoting power. Moreover, the Evaluation Team found that CIS high implementers are more effective than partial implementers in increasing promoting power. While all subgroups of schools performed better relative to their comparison sites in increasing promoting power, suburban schools emerged as leaders in the locale sub-grouping, and African-American, White, and Diverse schools maintained a similarly high level of promoting power within the race/ethnicity sub-grouping. Overall, CIS appears to be reducing the number of dropouts, with schools that provide a fuller implementation of the CIS model leading the way.

3.2 Graduation Rate Findings

Main Results: Graduation Rates

Because each state calculates graduation rates differently, the Cumulative Promotion Index was used as a proxy for actual graduation rates. The Cumulative Promotion Index is a measure of on-time graduation, and represents the steps on a student's way to graduating from high school: promotion from 9th to 10th grade, from 10th to 11th grade, from 11th to 12th grade, and receiving a high school diploma. By comparing these steps to enrollment figures from the previous year, the Cumulative Promotion Index captures the process of completing school – and the chances of completing school on time with a regular diploma. Of the seven states studied, five states had complete data on the number of students who graduated between 1998 and 2005.

Exhibit 8: Graduation Rate (Cumulative Promotion Index) (n=90)



	Pre	Post1	Post2	Post3
CIS	55.5%	56.6%	56.3%	55.7%
Non-CIS	56.2%	55.5%	55.6%	54.6%

Dataset: GradRate_hi ; Variables: gradrate_pre_all ,gradrate_post1_all, gradrate _post2_all, gradrate _post3_all, qed

CIS schools showed an increase of 0.2% in on-time graduation rates after three consecutive years of CIS implementation. The non-CIS comparison schools showed a decrease in on-time graduation rates of 1.6% within three years. The net change between CIS and non-CIS schools was 1.7% across all schools in the quasi-experimental study where valid data were available.

Findings by Performance Level: Graduation Rate

Findings from the Natural Variation Study indicate that higher performing schools serve more students on average and provide fewer services than do the lower performing schools.

TABLE 17: SERVICES BY PERFORMANCE LEVEL – GRADUATION RATE*

Items	Higher Performers (n=31)	Lower Performers (n=19)
Percent of students served in schools:		
Level 1 services	**35.7%**	17.0%
Level 2 services	**25.6%**	16.9%
Numbers of types of services provided:		
Level 1 services	10	**12**
Level 2 services	7	**10**
Average service hours per student: maintaining family and peer relationships:		
Level 1 services **	**10.8**	3.1
Level 2 services **	34.8	**105.0**
Average service hours per student: academic services:		
Level 1 services	**10.5**	3.5
Level 2 services	63.4	**164.3**
Average service hours per student: case management:		
Level 1 services	**2.5**	1.7
Level 2 services	84.5	**230.1**
Average service hours per student: behavioral services:		
Level 1 services	**29.1**	6.3
Level 2 services	135.6	**358.7**
Average service hours per student: after school services		
Level 1 services	4.7	**4.9**
Level 2 services	45.8	**99.2**
Average service hours per student: career services:		
Level 1 services	**18.5**	4.8
Level 2 services	58.9	**122.4**
Average service hours per student: services of providing public services:		
Level 1 services **	0.1	**1**
Level 2 services	21.0	**38.7**
Average service hours per student: health services:		
Level 1 services	1.1	**1.8**
Level 2 services	77.1	**147.4**

*Larger numbers between higher and lower performer are in bold
** Statistically significant at the p<.05 level between higher and lower performers
Dataset: regression; Variables: gradrate_group inten_relation1 inten_academic1 inten_case1 inten_behav1 inten_aftsch1 inten_career1 inten_public1 inten_health1 inten_relation2 inten_academic2 inten_case2 inten_behav2 inten_aftsch2 inten_career2 inten_public2 inten_health2 stper_l1 stper_l2 level1_type level2_type

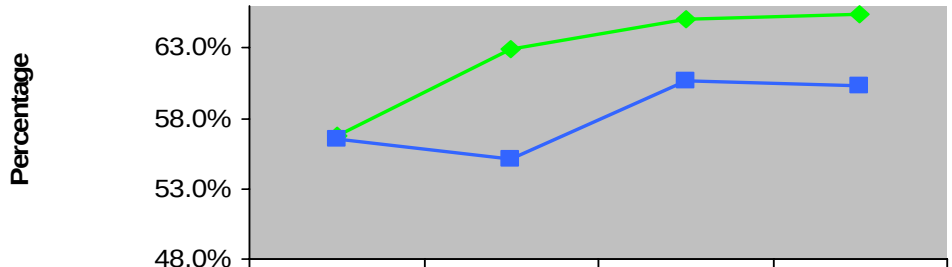
Interestingly, students in higher performing schools received more Level 1 services but fewer Level 2 services than those in lower performing schools. The linkage between graduation and Level 1

services may be simple: if Level 1 services are intended to affect the whole school – and the present study is a study of school-level effects – the finding that Level 1 services make a difference may not be surprising.

Findings by Implementation Level: Graduation Rate

In Exhibit 9, graduation rates of CIS high implementers increased by 8.6% across three post-implementation years, with a sizeable increase of 6.2% in the first year. The net change for high implementers above their comparison sites is +4.8%. The total increase in graduation rates for high implementers is statistically significant, [$F_{(1,42)}$=6.28, p<.01].

Exhibit 9: High Implementers vs. Non-CIS Comparisons: Graduation Rate (n=43)



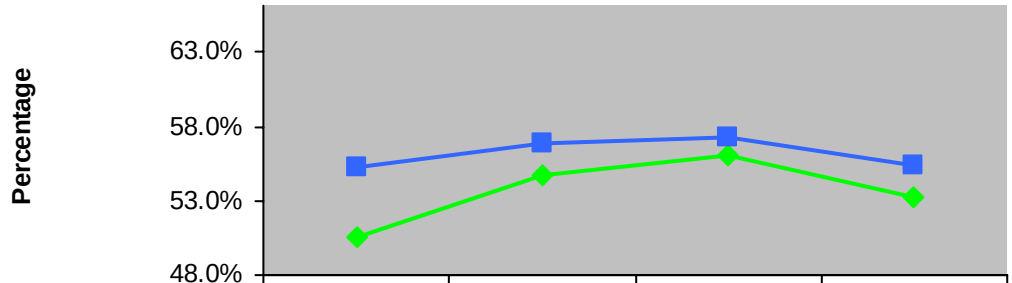
	Pre	Post 1	Post 2	Post 3
High Implementers *	56.8%	63.0%	65.1%	65.4%
Non-CIS Comparison Schools	56.5%	55.1%	60.7%	60.3%

* p<.05: Pre – Post2, Pre – Post3, Post1 – Post2, Post1 – Post3

Dataset: finaldb_20080316; Variables: gradrate_pre_all gradrate_prec_all gradrate_post1_all gradrate_post1c_all gradrate_post2_all gradrate_post2c_all gradrate_post3_all gradrate_post3c_all high_implementers

Partial implementers reported similar growth in graduation rates over their non-CIS comparisons across all three post-implementation years, as depicted in Exhibit 10. The net difference in graduation rates between these two groups is +2.5%, or about half the difference between high implementers and their comparisons. Although partial implementers did not outperform their comparisons by as much as high implementers did, graduation rates spiked dramatically by 4.2% in partial implementers within the first year.

Exhibit 10: Partial Implementers vs. Non-CIS Comparisons: Graduation Rate (n=20)

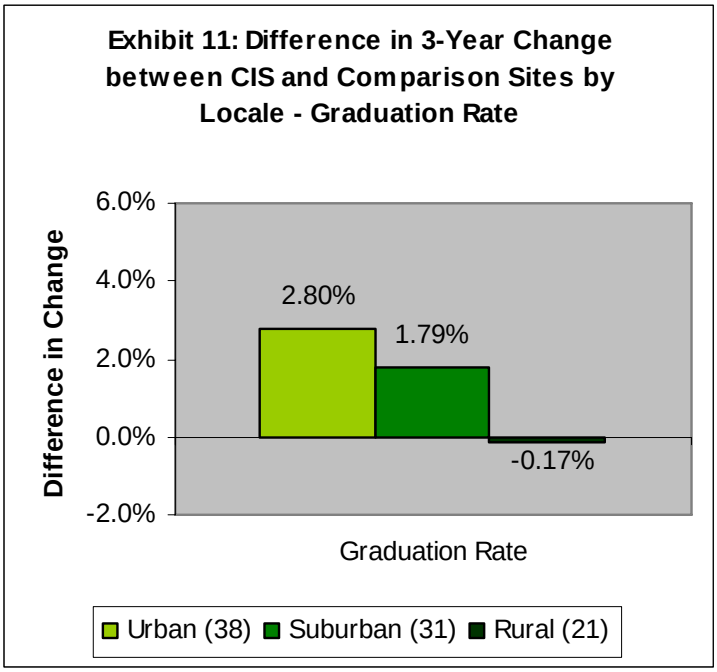


	Pre	Post 1	Post 2	Post 3
Partial Implementers	50.5%	54.7%	56.1%	53.2%
Non-CIS Comparison Schools	55.2%	56.9%	57.3%	55.4%

Dataset: finaldb_20080316; Variables: gradrate_pre_all gradrate_prec_all gradrate_post1_all gradrate_post1c_all gradrate_post2_all gradrate_post2c_all gradrate_post3_all gradrate_post3c_all high_implementers

Findings by Locale: Graduation Rate

Exhibit 11 shows the difference in the three-year net change between CIS schools and their matched comparison sites by Locale (Urban, Suburban, and Rural) for graduation rate. Urban and Suburban high schools performed better in graduation rate than their comparison sites, but Rural high schools have fallen slightly behind their comparison sites in graduation. Urban schools performed the best overall in graduation rate.

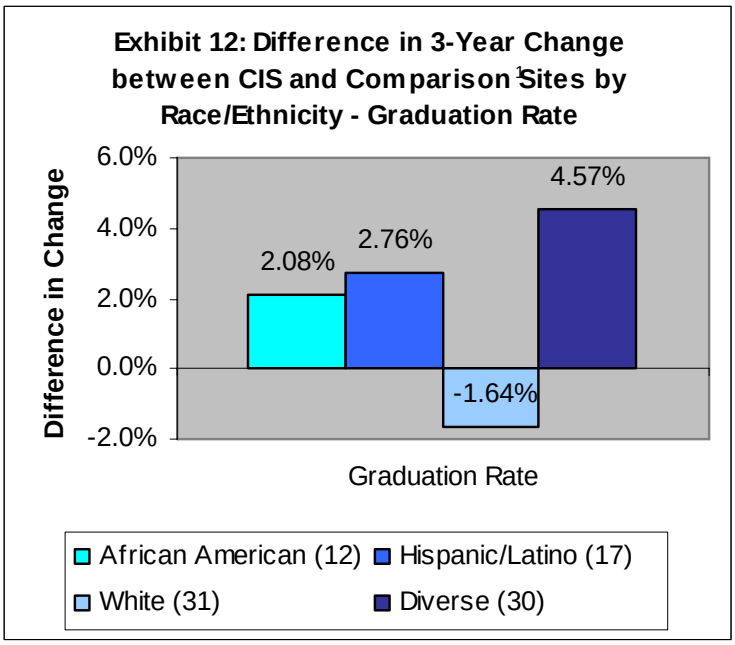


Dataset: mrg_final_jg; Variables: locale_final final_diff_grad

These results reflect a similar pattern to those displayed in the Locale profiles in Appendix F. More Urban CIS schools have site coordinators who spend at least three quarters of their time coordinating services (70%), followed by Suburban schools (54%), and then Rural schools (48%). This pattern exists as well for site coordinator experience, number of needs assessments conducted per year, frequency of monitoring, and level of implementation (high or partial).

Findings by Race/ethnicity: Graduation Rate

Exhibit 12 shows the difference in the three-year net change between CIS schools and their matched comparison sites by race/ethnicity (African American, Hispanic/Latino, White, and Diverse) for graduation rate.



Dataset: mrg_final_jg; Variables: race_final final_diff_grad

As evidenced by Exhibit 12, schools that are primarily African American, Hispanic/Latino, and Diverse all performed above their comparison sites in graduation rate. Primarily White schools performed below their comparison sites. Diverse schools differ above their comparison sites more than the other subgroups in graduation rate.

Exhibit 12 emphasizes the contrast between primarily White schools and Diverse schools. Based on their profiles in Appendix G, the difference between these two categories of schools appears to be the extent to which they implement the CIS model, as seen above in the Locale sub-grouping. Fifty-nine percent of Diverse schools' site coordinators spend at least three quarters of their time coordinating services, compared with only 45% of those at primarily White schools. More Diverse schools conduct needs assessments more often, make plans at both the L1 and L2 service levels, qualify as high-implementing sites, and offer both L1 and L2 services, than do primarily White schools. Diverse schools also offer more of every type of service at both levels than do White schools.

Summary of Graduation Rate Findings

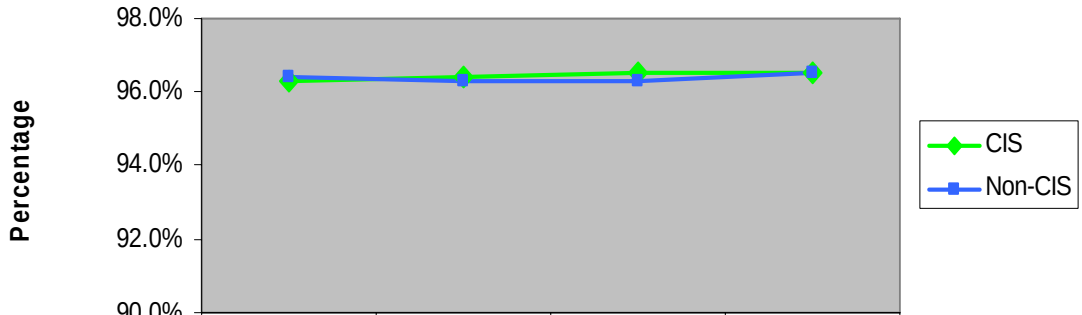
CIS sites performed marginally better in graduation rate than their comparison sites, and the highest performing CIS sites were those serving *more students* but providing *fewer services*. Both high and partial implementers outperformed their comparison sites in graduation rate. All subgroups performed better than comparison sites in graduation rate except for Rural and primarily White schools, which did not tend to use the full CIS model in their programs. Overall, CIS is linked with slight increases in graduation rate, in particular within subgroups that use the full CIS model and use their resources to serve more students with fewer services.

3.3 Attendance

Main Results: Attendance

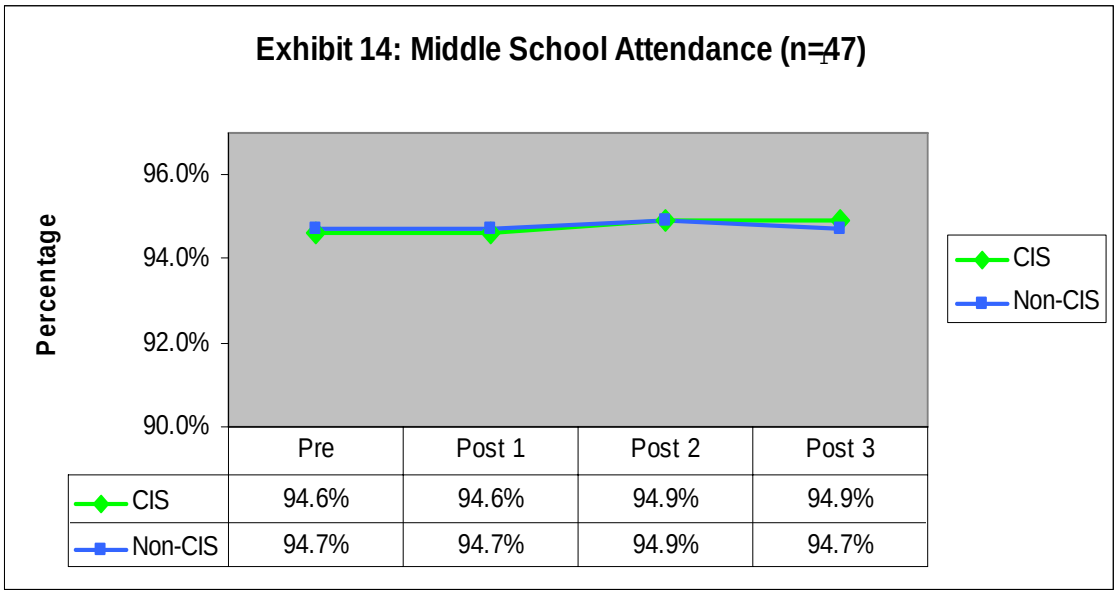
Attendance was measured as the ratio of students attending school to annual student membership. Information on the number of attendees for the years 1998 to 2005 were available for two states for elementary, middle, and high schools separately. More information about differences in the CIS process by school type is presented in Appendix H.

Exhibit 13: Elementary School Attendance (n=98)



	Pre	Post 1	Post 2	Post 3
CIS	96.3%	96.4%	96.5%	96.5%
Non-CIS	96.4%	96.3%	96.3%	96.5%

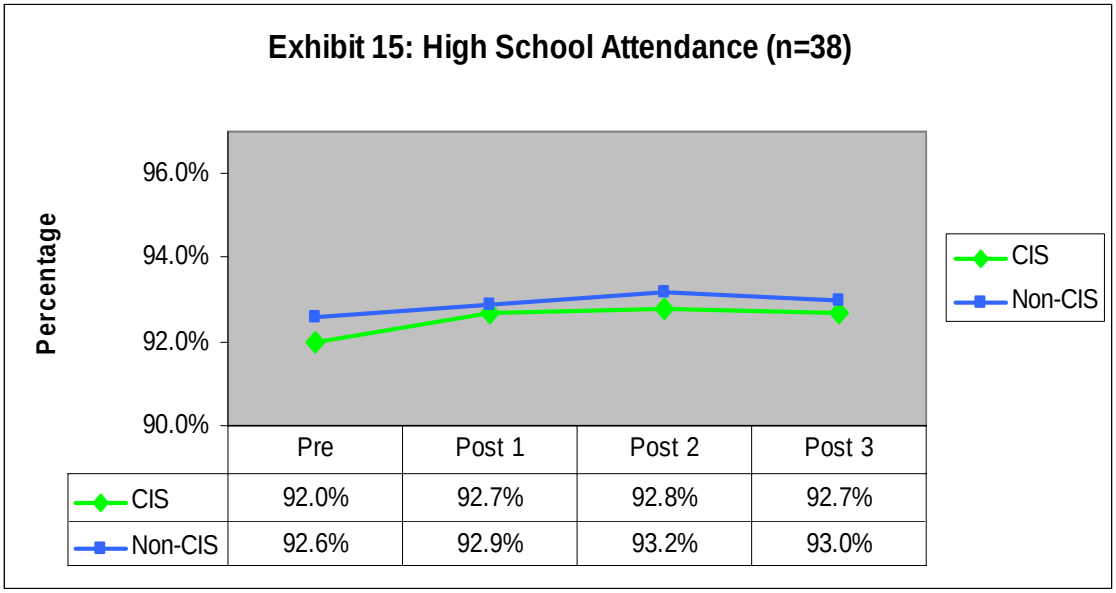
Dataset: Attend_elementary Variables: attrate_pre_all attrate _post1_all attrate _post2_all attrate _post3_all qed



Dataset: Attend_middle Variables: attrate_pre_all attrate _post1_all attrate _post2_all attrate _post3_all qed

CIS elementary schools had a small but significant gradual increase in attendance rate from baseline to after three years of implementation of 0.3% [$F_{(1, 97)}$=4.7, p=.032]. On the contrary, non-CIS schools showed almost no improvement in attendance rate in the same three-year period, for an overall net change between CIS schools and their comparisons of +0.1% in elementary attendance rates (Exhibit 13).

CIS middle schools had a very small, non-statistically significant increase in attendance rate within three years. CIS schools' attendance rates increased by 0.3% after three years of implementation [$F_{(1, 46)}$= 4.08, p =.049], for a net increase above comparison sites of +0.3%.



Dataset: Attend_high Variables: attrate_pre_all attrate _post1_all attrate _post2_all attrate _post3_all qed

CIS high schools showed statistically significant improvement in attendance rates across all three post-treatment times relative to the baseline year [$F_{(1, 37)}$= 6.07, p =.018]. The attendance rate increase for non-CIS comparison schools was evident only in the second post-implementation year. Overall, the net change between CIS high schools and their comparison sites in attendance rate was +0.3%.

Findings by Performance Level: Attendance

As in the case of promoting power and graduation rate, the relationship between service hours per student and higher and lower performing schools varies. For attendance rate, given the fact that higher and lower performers served similar percentages of students, higher performers tended to provide more Level 1 service hours and fewer Level 2 hours per student in most types of services, as with graduation rate.

TABLE 18: SERVICES BY PERFORMANCE LEVEL – ATTENDANCE RATE*

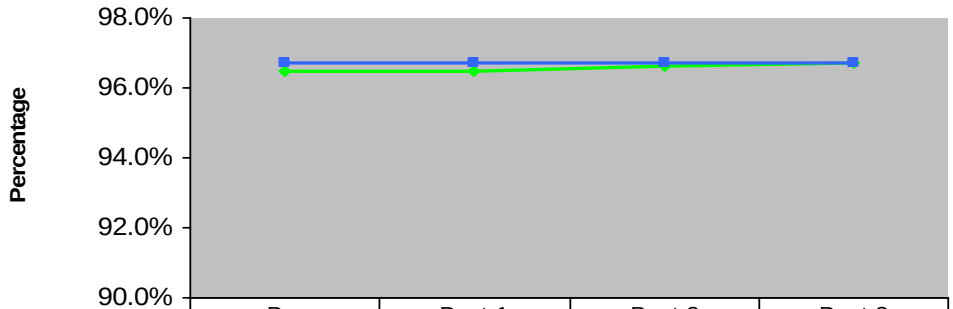
Items	Higher Performers (n=58)	Lower Performers (n=51)
Percent of students served in schools:		
Level 1 services	64.1%	61.2%
Level 2 services	35.1%	**42.3%**
Numbers of types of services provided:		
Level 1 services **	11	11
Level 2 services	13	13
Average service hours per student: maintaining family and peer relationships:		
Level 1 services	**1.7**	1.0
Level 2 services	95.9	**105.6**
Average service hours per student: academic services:		
Level 1 services	**1.6**	1.3
Level 2 services	79.1	**156.3**
Average service hours per student: case management:		
Level 1 services	**1.6**	1.2
Level 2 services	**184.8**	180.9
Average service hours per student: behavioral services:		
Level 1 services	**2.0**	1.9
Level 2 services	277.0	**323.4**
Average service hours per student: after school services:		
Level 1 services	1.1	**1.2**
Level 2 services	70.0	**117.3**
Average service hours per student: career services:		
Level 1 services	0.8	**0.9**
Level 2 services	53.0	**70.9**
Average service hours per student: services of providing public services:		
Level 1 services	**0.6**	0.4
Level 2 services	**33.1**	29.7
Average service hours per student: health services:		
Level 1 services	**2.2**	0.9
Level 2 services	**101.2**	92.2

Findings by Implementation Level: Attendance

The relationship between attendance rates and CIS implementation level is presented for elementary, middle, and high schools. Similar trends between high and partial implementers and their comparison schools were found through all three school levels. A ceiling effect on attendance rates of all schools resulted in differences of no more than 1% between CIS schools and their comparisons.

Exhibits 16 and 17 present results for elementary schools. In Exhibit 16, although the attendance rates are very similar between high implementers and their comparisons, there was a steady 0.1% increase across each post-implementation year, while the comparisons did not change. A repeated measures analysis detected statistical significance of the change in high implementers [$F_{(1, 40)}$= 3.41, $p < .05$]. The net change in elementary attendance rates for high implementers and partial implementers relative to their comparison sites was +0.2% and +0.1%, respectively[2].

Exhibit 16: High Implementers vs. Non-CIS Comparisons: Elementary School Attendance (n=41)



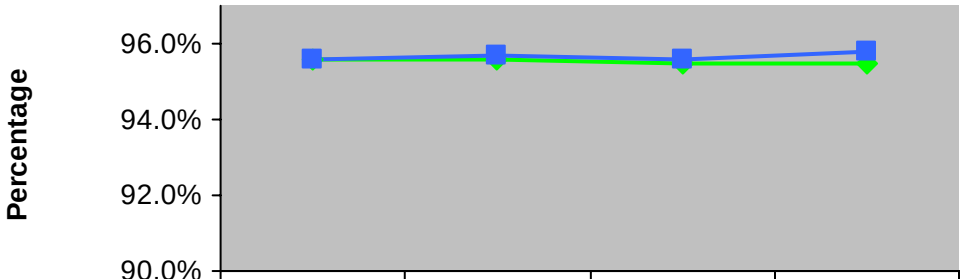
	Pre	Post 1	Post 2	Post 3
High Implementers *	96.5%	96.5%	96.6%	96.7%
Non-CIS Comparison Schools	96.7%	96.7%	96.7%	96.7%

* p <.05: Pre – Post2. Pre – Post3. Post1 – Post3

Dataset: finaldb_20080316; Variables: attrate_pre_all attrate_prec_all attrate_post1_all attrate_post1c_all attrate_post2_all attrate_post2c_all attrate_post3_all attrate_post3c_all high_implementers type_final

[2] Please note that our overall net change scores may differ from changes reported in trend plots due to differences in rounding.

Exhibit 17: Partial Implementers vs.Non-CIS Comparisons: Elementary School Attendance (n = 23)

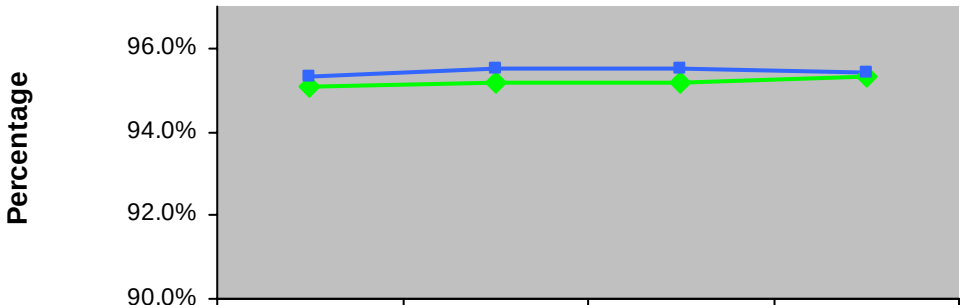


	Pre	Post 1	Post 2	Post 3
Partial Implementers	95.6%	95.6%	95.5%	95.5%
Non-CIS Comparison Schools	95.6%	95.7%	95.6%	95.8%

Dataset: finaldb_20080316; Variables: attrate_pre_all attrate_prec_all attrate_post1_all attrate_post1c_all attrate_post2_all attrate_post2c_all attrate_post3_all attrate_post3c_all high_implementers type_final

Exhibits 18 and 19 report attendance results for middle schools. For the analyses of both high and partial implementers, CIS sites and their non-CIS comparison schools maintained their attendance rates across three years of implementation, with a slight average fluctuation of no more than 0.2% per year. The net change in middle school attendance rates for both high implementers and partial implementers relative to their comparison sites was +0.1%.

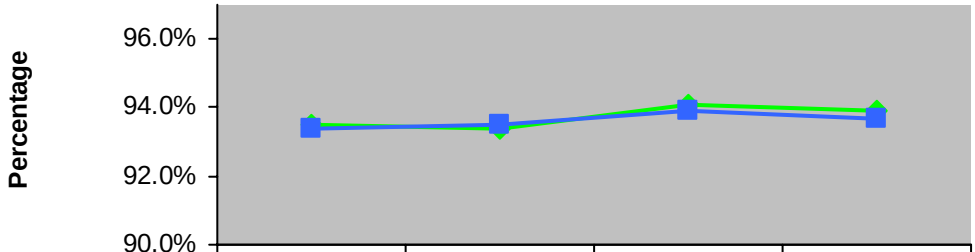
Exhibit 18: High Implementers vs. Non-CIS Comparisons: Middle School Attendance (n=21)



	Pre	Post 1	Post 2	Post 3
High Implementers	95.1%	95.2%	95.2%	95.3%
Non-CIS Comparison Schools	95.3%	95.5%	95.5%	95.4%

Dataset: finaldb_20080316; Variables: attrate_pre_all attrate_prec_all attrate_post1_all attrate_post1c_all attrate_post2_all attrate_post2c_all attrate_post3_all attrate_post3c_all high_implementers type_final

Exhibit 19: Partial Implementers vs. Non-CIS Comparisons: Middle School Attendance (n=18)

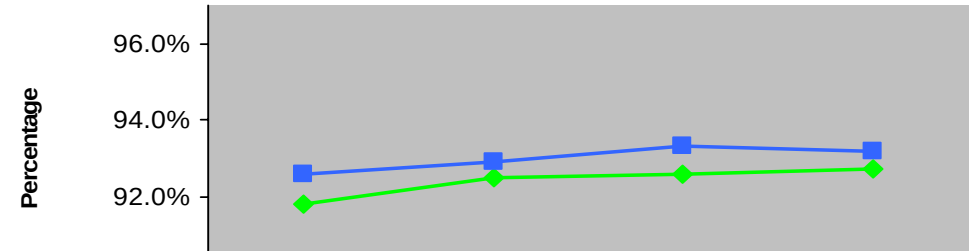


	Pre	Post 1	Post 2	Post 3
Partial Implementers	93.5%	93.4%	94.1%	93.9%
Non-CIS Comparison Schools	93.4%	93.5%	93.9%	93.7%

Dataset: finaldb_20080316; Variables: attrate_pre_all attrate_prec_all attrate_post1_all attrate_post1c_all attrate_post2_all attrate_post2c_all attrate_post3_all attrate_post3c_all high_implementers type_final

Exhibits 20 and 21 display attendance results for high schools. Both high and partial implementers had slightly lower attendance rates than their comparisons. Although the annual changes in attendance rates for high implementers were small, they were statistically significant [$F_{(1.23)}$= 7.11, p <..01]. The net changes in high school attendance rates for high implementers and partial implementers relative to their comparison sites were +0.3% and -0.2%, respectively.

Exhibit 20: High Implementers vs. Non-CIS Comparisons: High School Attendance (n = 24)

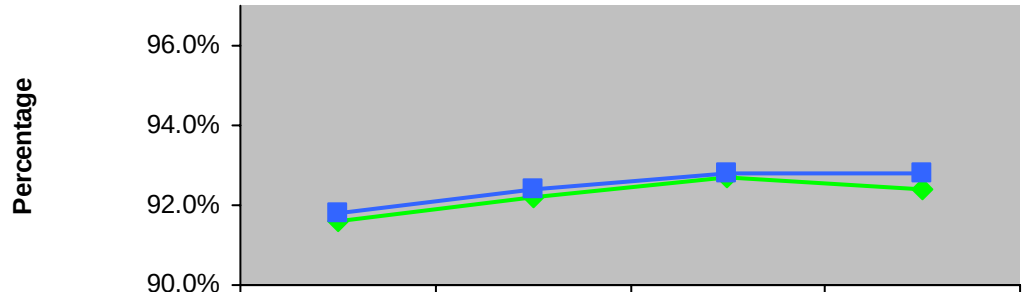


	Pre	Post 1	Post 2	Post 3
High Implementers	91.8%	92.5%	92.6%	92.7%
Non-CIS Comparison Schools	92.6%	92.9%	93.3%	93.2%

* p<.01: Pre – Post1, Pre – Post2, Pre – Post3

Dataset: finaldb_20080316; Variables: attrate_pre_all attrate_prec_all attrate_post1_all attrate_post1c_all attrate_post2_all attrate_post2c_all attrate_post3_all attrate_post3c_all high_implementers type_final

Exhibit 21: Partial Implementers vs. Non-CIS Comparisons: High School Attendance (n = 9)



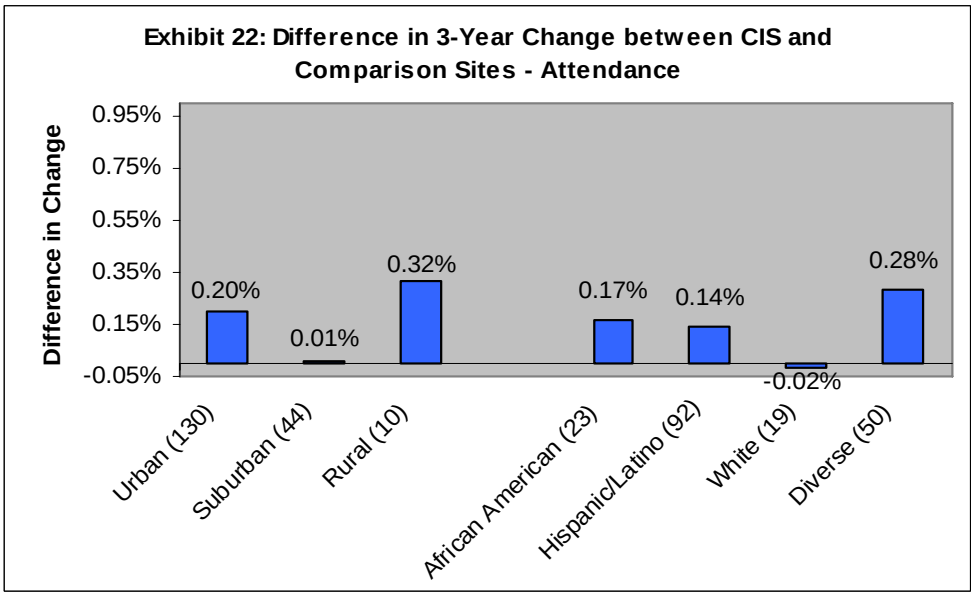
	Pre	Post 1	Post 2	Post 3
Partial Implementers	91.6%	92.2%	92.7%	92.4%
Non-CIS Comparison Schools	91.8%	92.4%	92.8%	92.8%

Dataset: finaldb_20080316; Variables: attrate_pre_all attrate_prec_all attrate_post1_all attrate_post1c_all attrate_post2_all attrate_post2c_all attrate_post3_all attrate_post3c_all high_implementers type_final

Findings by Locale and Race/ethnicity: Attendance

Exhibit 22 shows the difference in the three-year net change between CIS schools and their matched comparison sites for attendance. Seven subgroups are presented in Exhibit 22, including the breakdowns by Locale (Urban, Suburban, and Rural) and race/ethnicity (African American, Hispanic/Latino, White, and Diverse).

Exhibit 22: Difference in 3-Year Change between CIS and Comparison Sites - Attendance



Note: All differences in change are less than 1%
Dataset: mrg_final_jg; Variables: final_diff_attrate locale_final race_final

While the improvements in attendance over the comparison groups are almost entirely positive, they are small. CIS sites improved above and beyond their comparison sites in all cases except for primarily White schools, for which the decrease was very small.

Summary of Attendance Findings

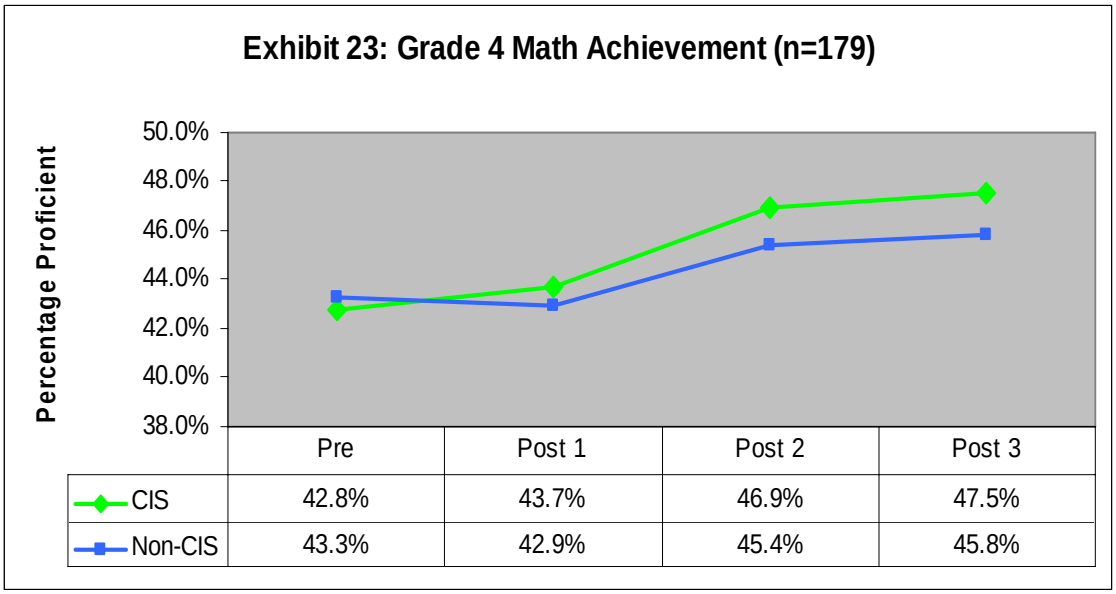
Though most schools initially reported attendance rates near 95% and higher, which allows little room for improvement, CIS was significantly correlated with improvements in elementary and high school attendance. High performing schools provided more Level 1 services and fewer Level 2 services. Implementation level seemed less important in attendance than in other variables, though high-implementing elementary schools had small increases above their comparisons. Diverse and Rural schools performed best above their comparison sites in attendance, but all subgroups except for primarily White schools had positive changes above their comparison sites.

3.4 Math Achievement

A word on achievement: Passing rates for standardized state tests were established for all schools in a given state for two subjects, Math and Reading, using each state's definition of passing or failing a test. Passing rates for all types of schools covered a time interval from 1998 to 2005. We then estimated z and NCE scores of the passing rates in each subject, and in different grade levels across states. Thus, schools' average passing rates are expressed as NCE scores in the following analyses.

Based on the available data we had for the seven states in the study for the years 1998 to 2005, four states had NCE scores for passing rates at fourth grade, four states had NCE scores for passing rates at eighth grade, and two states had NCE scores for passing rates at tenth grade. Thus, the elementary school academic comparisons were limited to four states with aligned NCE scores for grade four data. Similarly, the middle school academic comparisons were narrowed to four states with aligned NCE scores for grade eight data. Finally, for high schools it was only possible to align data from three states at tenth grade. Please note that as a result of rounding in the math and reading achievement results, some reported net change values differ slightly from the values generated by calculating net change from the trend plots.

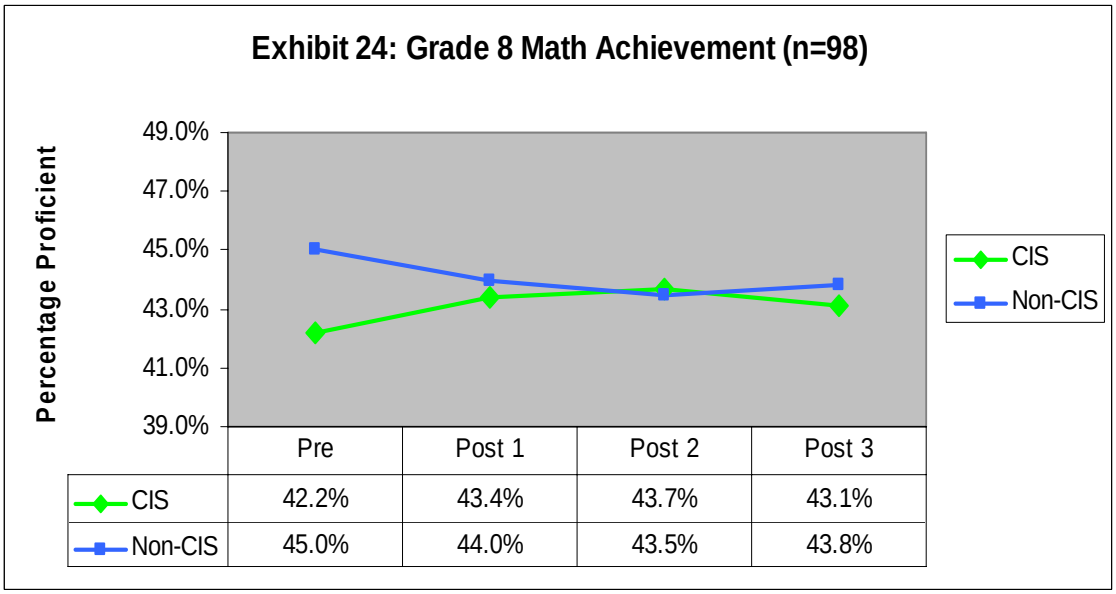
Main Results: Math Achievement



	Pre	Post 1	Post 2	Post 3
CIS	42.8%	43.7%	46.9%	47.5%
Non-CIS	43.3%	42.9%	45.4%	45.8%

Dataset: finaldb Variables: fnce_gr4m_pre fnce_gr4m_post1 fnce_gr4m_post2 fnce_gr4m_post3 fnce_gr4m_pre c fnce_gr4m_post1c fnce_gr4m_post2c fnce_gr4m_post3c

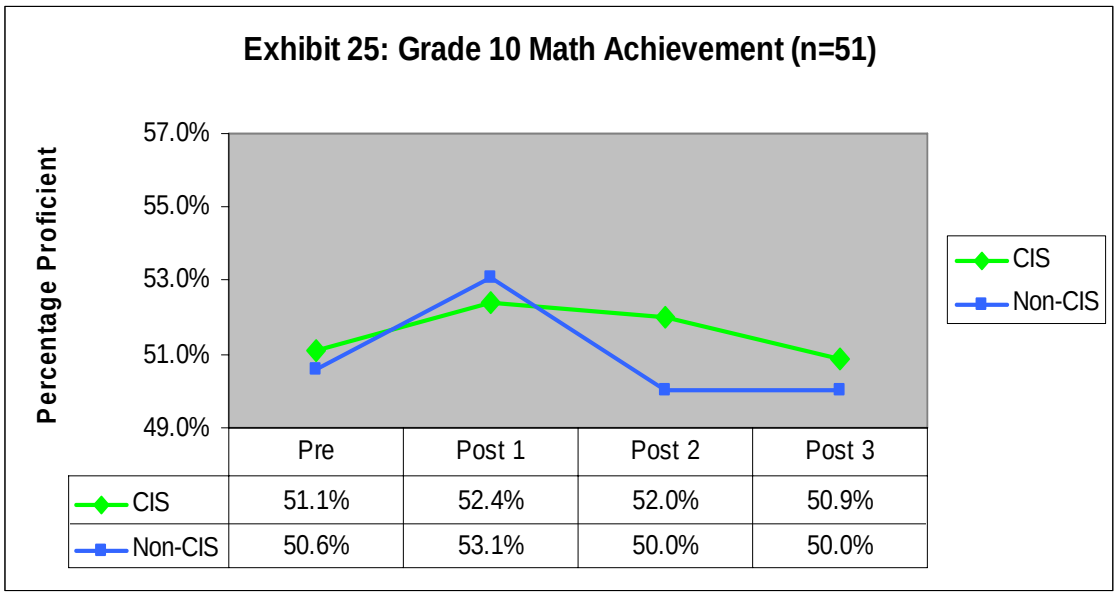
As depicted in Exhibit 23, passing rates for math achievement tests increased by 4.7% within three years at CIS elementary schools. Passing rates at comparison schools also increased within three years, but at a lesser rate of 2.5%, for a net change of +2.2%. The difference in change between CIS elementary schools and their comparisons was statistically significant [$F_{(1,178)} = 5.82$, $p < .017$].



	Pre	Post 1	Post 2	Post 3
CIS	42.2%	43.4%	43.7%	43.1%
Non-CIS	45.0%	44.0%	43.5%	43.8%

Dataset: finaldb Variables: fnce_gr8m_pre fnce_gr8m_post1 fnce_gr8m_post2 fnce_gr8m_post3 fnce_gr8m_pre c fnce_gr8m_post1c fnce_gr8m_post2c fnce_gr8m_post3c

As depicted in Exhibit 24, passing rates for math achievement increased slightly by 0.9% within three years at CIS middle schools, while passing rates at comparison schools decreased by 1.2%, for a net change of +2.0%.



Dataset: finaldb Variables: fnce_gr10m_pre fnce_gr10m_post1 fnce_gr10m_post2 fnce_gr10m_post3 fnce_gr10m_pre c fnce_gr10m_post1c fnce_gr10m_post2c fnce_gr10m_post3c

Passing rates for math achievement at CIS and comparison high schools alike did not increase after three years. As shown in Exhibit 25, scores increased in both groups after the first year, but non-CIS schools experienced a rapid and notable decrease in their passing rates after the second year. Overall, math passing rates for CIS high schools decreased less than in their comparison sites, for a net change of +0.4%.

Findings by Performance Level: Math Achievement

As shown in Table 19, higher and lower performing schools in math achievement served a similar percentage of students at both Levels 1 and 2.

TABLE 19: SERVICES BY PERFORMANCE LEVEL – MATH ACHIEVEMENT*

Items	Higher Performers (n=91)	Lower Performers (n=86)
Percent of students served in schools:		
Level 1 services	**50.5%**	49.8%
Level 2 services	**39.1%**	35.6%

Numbers of types of services provided:		
Level 1 services	10	**11**
Level 2 services	**10**	9
Average service hours per student: maintaining family and peer relationships:		
Level 1 services	**4.0**	3.6
Level 2 services	**102.8**	62.4
Average service hours per student: academic services:		
Level 1 services	**3.7**	3.6
Level 2 services	**114.0**	77.2
Average service hours per student: case management:		
Level 1 services	1.4	**1.5**
Level 2 services **	**160.3**	86.6
Average service hours per student: behavioral services:		
Level 1 services	**8.7**	8.0
Level 2 services	**251.8**	175.1
Average service hours per student: after school services:		
Level 1 services	**3.2**	2.7
Level 2 services	132.7	**134.6**
Average service hours per student: career services:		
Level 1 services	4.9	4.9
Level 2 services	**64.7**	34.9
Average service hours per student: services of providing public services:		
Level 1 services	0.4	0.4
Level 2 services	**25.3**	20.2
Average service hours per student: health services:		
Level 1 services	1.1	**1.2**
Level 2 services	**85.5**	60.8

*Larger numbers between higher and lower performer are in bold
**Statistically significant at the p<.05 level between higher and lower performers
Dataset: regression; Variables: Academic_M inten_relation1 inten_academic1 inten_case1 inten_behav1 inten_aftsch1 inten_career1 inten_public1 inten_health1 inten_relation2 inten_academic2 inten_case2 inten_behav2 inten_aftsch2 inten_career2 inten_public2 inten_health2 stper_l1 stper_l2 level1_type level2_type

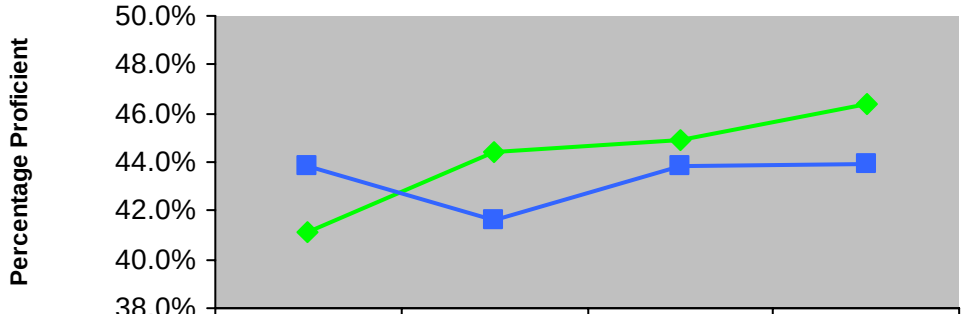
Level 1 service hours per student are similar as well between higher and lower performing schools. Higher performers tended to provide more Level 2 service hours than did lower performers, particularly in services targeted toward maintaining family and peer relationships, academic assistance, case management, behavioral services, career planning, and heath services.

Findings by Implementation Level: Math Achievement

For fourth grade math achievement, passing rates for high implementers increased by about 5.2% above their comparison sites across three years, as shown in Exhibit 26. A major increase in CIS

passing rates for math occurred in the first year (3.3%), while the comparison schools experienced a decrease of 2.2%. As depicted in Exhibit 27, math passing rates for both partial implementers and their comparisons increased, but the non-CIS schools increased by more and more quickly (5.6%) than the CIS schools (3.2%), for a net change of -2.3%.

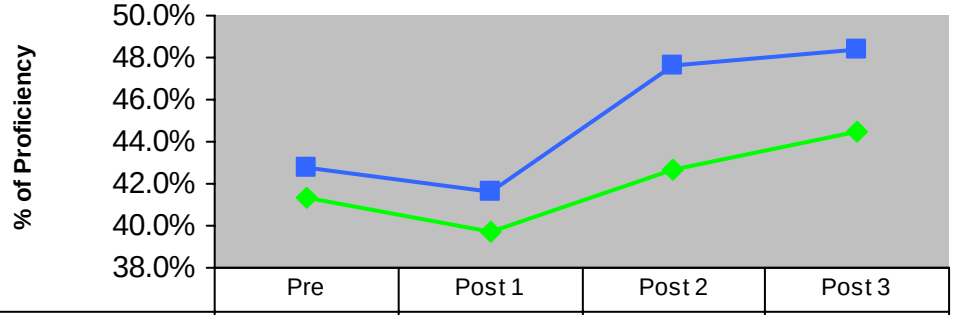
Exhibit 26: High Implementers vs. Non-CIS Comparisons: Grade 4 Math (n=57)



	Pre	Post 1	Post 2	Post 3
High Implementers	41.1%	44.4%	44.9%	46.4%
Non-CIS Comparison Schools	43.8%	41.6%	43.8%	43.9%

Dataset: finaldb_20080316; Variables: fnce_gr4m_pre fnce_gr4m_prec fnce_gr4m_post1 fnce_gr4m_post1c fnce_gr4m_post2 fnce_gr4m_post2c fnce_gr4m_post3 fnce_gr4m_post3c high_implementers

Exhibit 27: Partial Implementers vs. Non-CIS Comaprisons: Grade 4 Math (n=58)

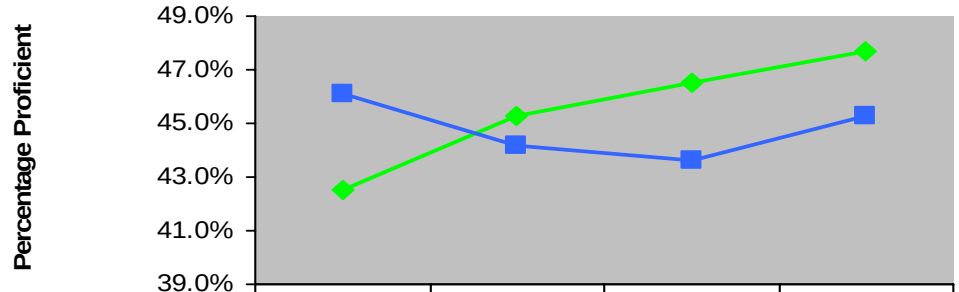


	Pre	Post 1	Post 2	Post 3
Partial Implementers	41.3%	39.7%	42.7%	44.5%
Non-CIS Comparison Schools	42.8%	41.6%	47.6%	48.4%

Dataset: finaldb_20080316; Variables: fnce_gr4m_pre fnce_gr4m_prec fnce_gr4m_post1 fnce_gr4m_post1c fnce_gr4m_post2 fnce_gr4m_post2c fnce_gr4m_post3 fnce_gr4m_post3c high_implementers

Exhibit 28 shows that while middle school math passing rates for non-CIS comparisons fluctuated and decreased about 0.8% overall, CIS high implementers increased steadily by 5.2% [$F_{(1,25)}$ =8.745, p<.01], for a total net change of +6.0%.

Exhibit 28: High Implementers vs. Non-CIS Comparisons: Grade 8 Math (n=26)



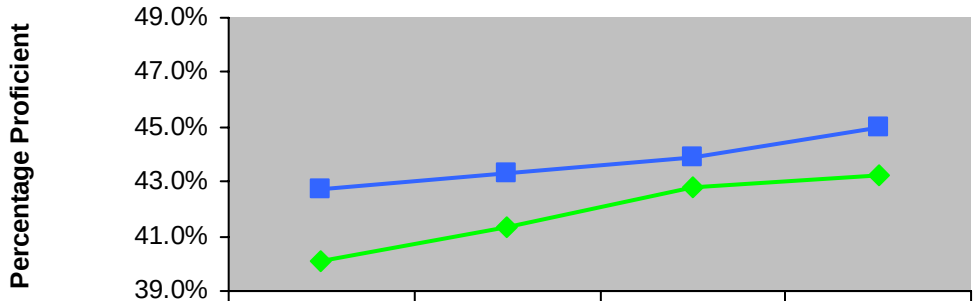
	Pre	Post 1	Post 2	Post 3
High Implementers *	42.5%	45.3%	46.5%	47.7%
Non-CIS Comparison Schools	46.1%	44.2%	43.6%	45.3%

* p < .05: Pre – Post3

Dataset: finaldb_20080316; Variables: fnce_gr8m_pre fnce_gr8m_prec fnce_gr8m_post1 fnce_gr8m_post1c fnce_gr8m_post2 fnce_gr8m_post2c fnce_gr8m_post3 fnce_gr8m_post3c high_implementers

The math passing rates of partial implementers were lower than those of their comparisons across three years, as depicted in Exhibit 29; however, the math passing rates for partial implementers of CIS increased by more than their comparison sites from baseline to three years post-implementation, for a net change of +0.7%.

Exhibit 29: Partial Implementers vs. Non-CIS Comparisons: Grade 8 Math (n =39)

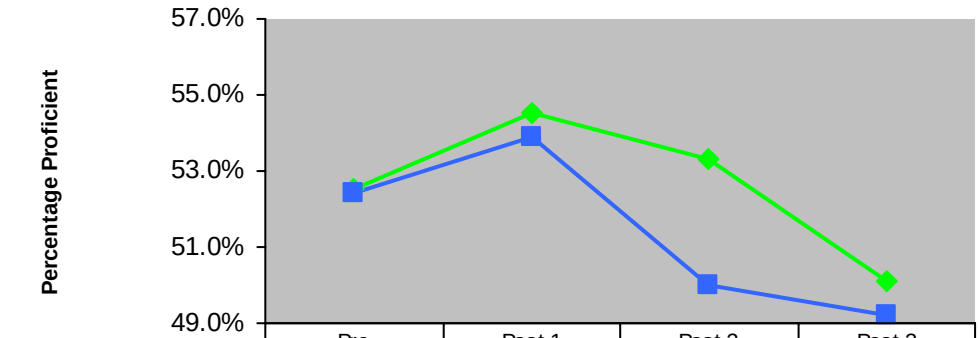


	Pre	Post 1	Post 2	Post 3
Partial Implementers	40.1%	41.3%	42.8%	43.2%
Non-CIS Comparison Schools	42.7%	43.3%	43.9%	45.0%

Dataset: finaldb_20080316; Variables: fnce_gr8m_pre fnce_gr8m_prec fnce_gr8m_post1 fnce_gr8m_post1c fnce_gr8m_post2 fnce_gr8m_post2c fnce_gr8m_post3 fnce_gr8m_post3c high_implementers

For grade 10 math results (Exhibits 30 & 31), although both high and partial implementers and their comparisons fluctuated dramatically over the three implementation years, a visible pattern of high implementers performing higher above their comparisons than partial implementers is still evident.

Exhibit 30: High Implementers vs. Non-CIS Comparisons: Grade 10 Math (n=34)



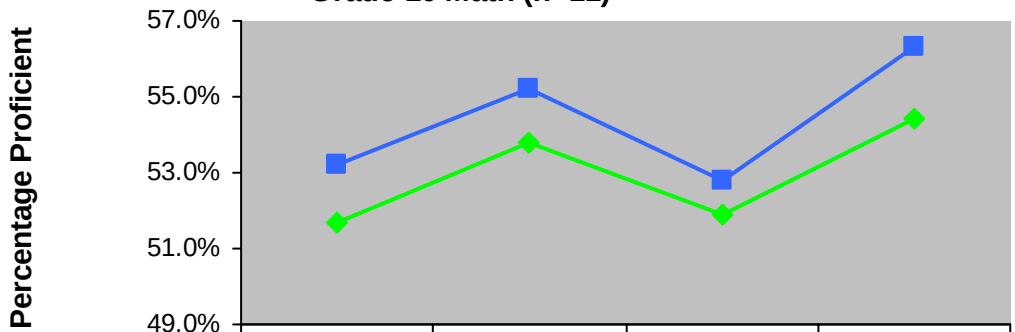
	Pre	Post 1	Post 2	Post 3
High Implementers	52.5%	54.5%	53.3%	50.1%
Non-CIS Comparison Schools	52.4%	53.9%	50.0%	49.2%

Dataset: finaldb_20080316; Variables: fnce_gr10m_pre fnce_gr10m_prec fnce_gr10m_post1 fnce_gr10m_post1c fnce_gr10m_post2 fnce_gr10m_post2c fnce_gr10m_post3 fnce_gr10m_post3c

The similar fluctuations in each graph, despite CIS implementation level, might indicate that other contextual factors have been influencing the schools and students to a similar degree and at the same

time. However, high implementation CIS sites still perform above their comparison sites, despite these potential external factors, for a net change of +0.8%. Partial CIS implementers slightly underperformed their comparison sites for a net change of -0.4%.

Exhibit 31: Partial Implementers vs. Non-CIS Comaprisons: Grade 10 Math (n=11)

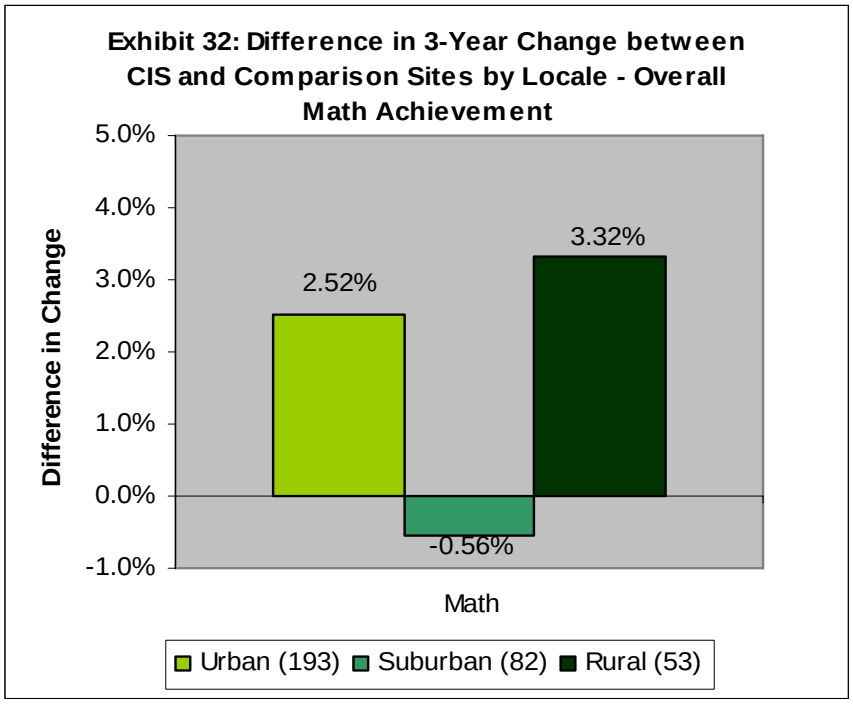


	Pre	Post 1	Post 2	Post 3
Partial Implementers	51.7%	53.8%	51.9%	54.4%
Non-CIS Comparison Schools	53.2%	55.2%	52.8%	56.3%

Dataset finaldb_20080316; Variables: fnce_gr10m_pre fnce_gr10m_prec fnce_gr10m_post1 fnce_gr10m_post1c fnce_gr10m_post2 fnce_gr10m_post2c fnce_gr10m_post3 fnce_gr10m_post3c high_implementers

Findings by Locale: Math Achievement

Exhibit 32 shows the difference in the three-year net change between CIS schools and their matched comparison sites by Locale (Urban, Suburban, and Rural) for math achievement. CIS sites in Urban and Rural locales improved more than their comparison sites in math, while Suburban sites fell slightly below their comparison sites in math.



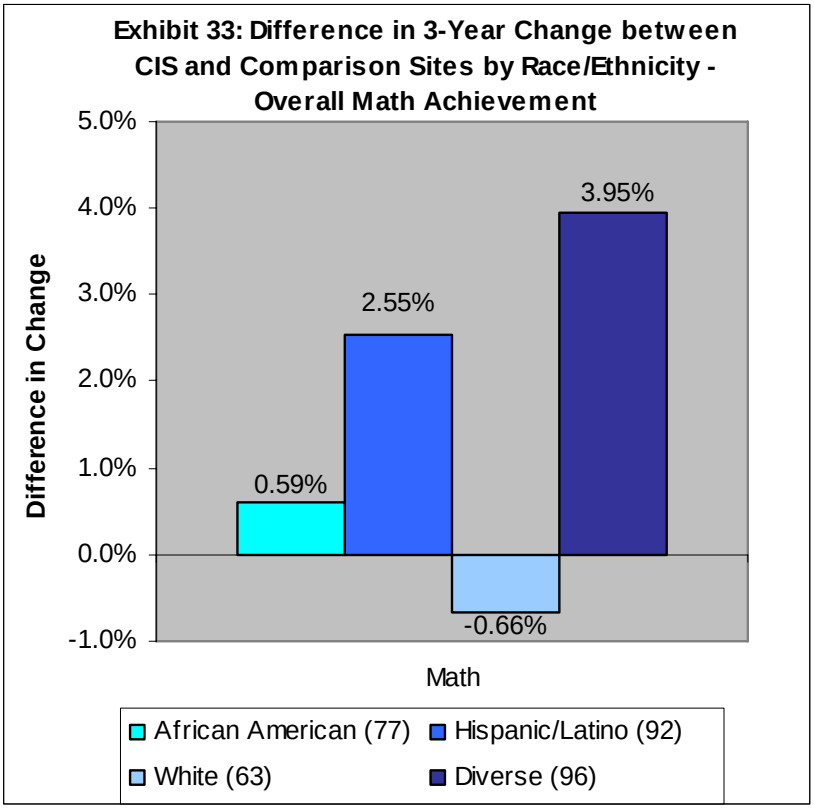
Dataset: mrg_final_jg; Variables: locale_final fnce_diff_math

As described above, Urban sites implemented the CIS model most fully, providing an explanation for their success in math achievement. For Rural sites, their success may be more attributable to their specific service delivery. As evidenced in the Locale profile in Appendix F, more Rural schools provide Level 2 academic services (75%) than do Urban (68%) or Suburban (63%) schools. Also, more Rural schools provide only Level 2 services (14.2%) than do Urban (8.5%) or Suburban (11.2%) schools. These findings suggest that Rural schools may be targeting specific students' academic issues and solving them on a personal level, resulting in improvements in their math achievement.

Another notable characteristic of the Rural schools is the amount of time students spend in CIS during their tenure at the school. At Urban and Suburban schools, it appears that the norm for students is to stay in CIS for as long as they are in school. This is true for 51.5 percent of Urban schools and 47.5 percent of Suburban schools. However, a student at a Rural school is equally as likely to stay in CIS for 2 years or less as she is to stay in CIS for as long as she is enrolled in school (41%). This finding might suggest that CIS achieves the goal of improving student math achievement in a shorter amount of time, and that CIS resources need not necessarily be spent for as long on one student in order to effect a positive change.

Findings by Race/ethnicity: Math Achievement

Exhibit 33 shows the difference in the three-year net change between CIS schools and their matched comparison sites by race/ethnicity (African American, Hispanic/Latino, White, and Diverse) for math achievement. CIS sites that are primarily African American, Hispanic/Latino, and Diverse performed better than their comparison sites in math achievement; primarily White CIS sites performed worse than their comparison sites in math achievement.



Dataset: mrg_final_jg; Variables: race_final fnce_diff_math

As noted earlier, the reason for the relative improvements of Diverse schools in math achievement compared with the relative decreases in performance of primarily White schools appears to result from the different extent of their implementation of the full CIS model.

This may also be the case for the contrast in the differences between the primarily African American schools and the primarily Hispanic/Latino schools. While only 44 percent of primarily African American CIS sites qualify as high implementers of CIS, 60 percent of primarily Hispanic/Latino

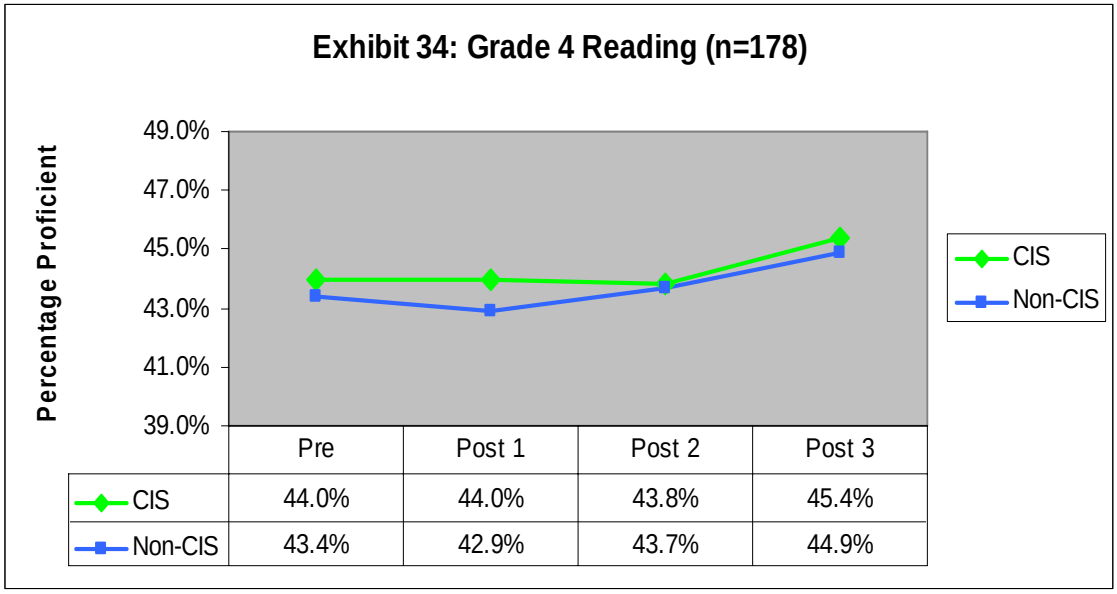
sites qualify as high CIS implementation sites. Seventy-eight percent of Hispanic schools' site coordinators spend at least three quarters of their time coordinating services at the school, compared with only 67 percent of African American schools' site coordinators. More Hispanic schools provide almost every type of service than do African American Schools. In addition, more Hispanic schools than African American schools prepare annual operations plans and especially individualized plans, conduct needs assessments more often, and offer both Level 1 and Level 2 services. These results suggest that full implementation of the CIS model may have implications for improving the math achievement of students in primarily minority schools.

Summary of Math Achievement Findings

Differences between CIS schools and their comparisons were statistically significant for elementary schools, and small but present for middle schools, but do not seem related to high school math achievement. Level of implementation was important for math achievement, particularly in elementary and middle schools; higher performing schools provided more Level 2 service hours. Full implementation of the CIS model, with an emphasis on Level 2 service provision, also seems important in the high performance of Urban and Rural schools in math achievement. And Diverse and primarily Hispanic schools, which are consistently the fullest implementers of the CIS model among the Race/ethnicity sub-grouping, performed above their comparison groups more than did the other subgroups. The CIS model appears particularly important for math achievement.

3.5 Reading Achievement

Main Results: Reading Achievement

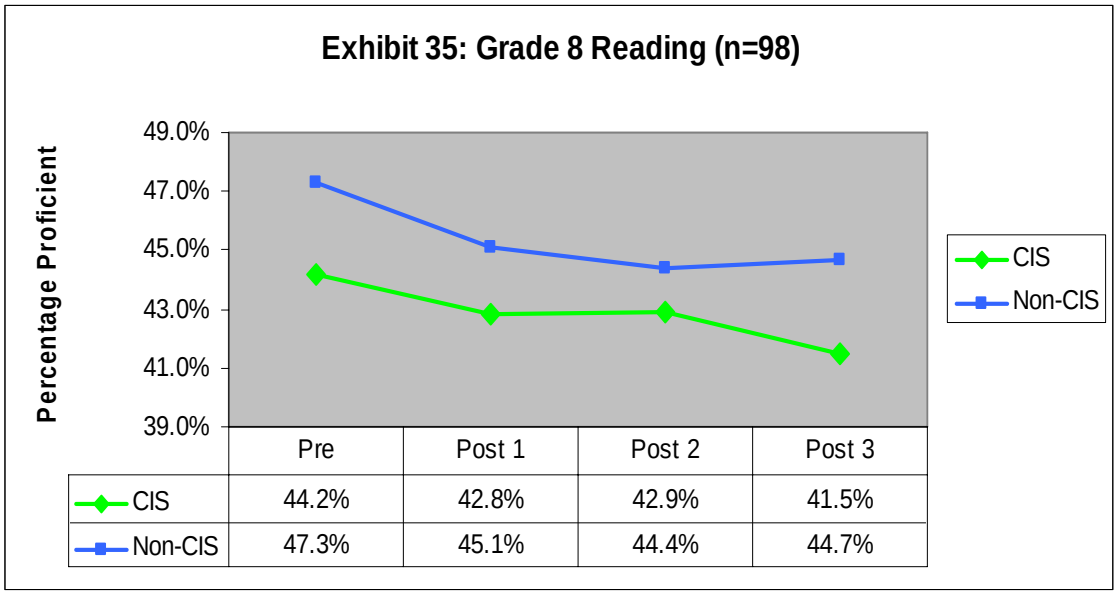


	Pre	Post 1	Post 2	Post 3
CIS	44.0%	44.0%	43.8%	45.4%
Non-CIS	43.4%	42.9%	43.7%	44.9%

Dataset: finaldb Variables: fnce_gr4r_pre fnce_gr4r_post1 fnce_gr4r_post2 fnce_gr4r_post3 fnce_gr4r_pre c fnce_gr4r_post1c fnce_gr4r_post2c fnce_gr4r_post3c

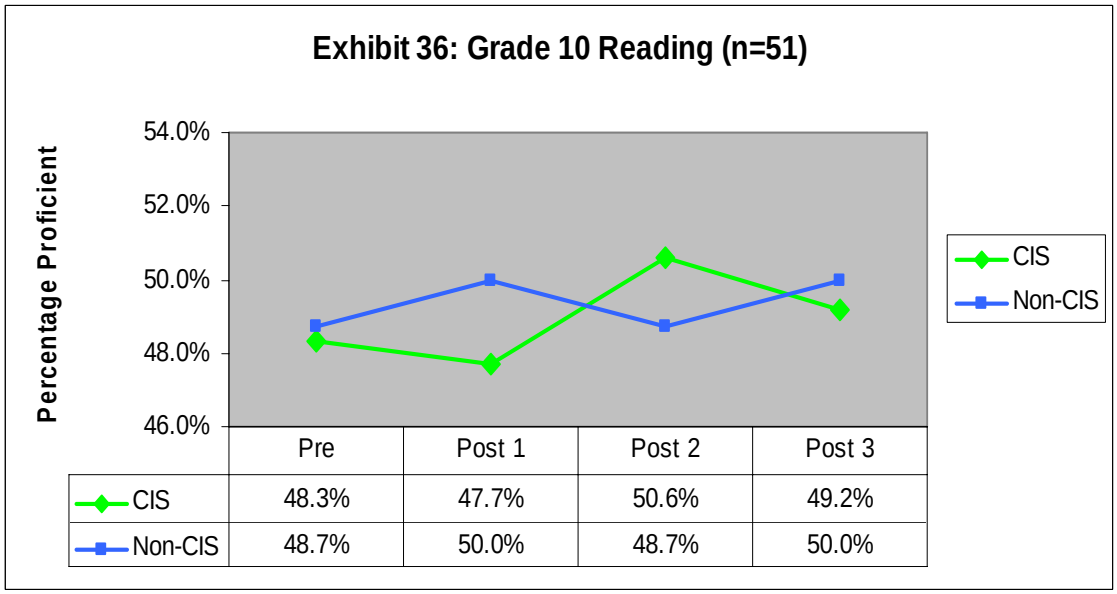
The percentage of students passing elementary reading achievement tests at both CIS and comparison schools increased over three years by 1.4% and 1.5%, respectively, but these differences were not statistically significant for either group (Exhibit 34). The total net change between CIS schools and their comparison sites for elementary reading achievement was -0.1%.

Exhibit 35 shows that the percentage of students passing middle school reading achievement tests at CIS and comparison schools decreased by 2.7%.and 2.6%, respectively, over three years, for a net change of -0.1%. For the non-CIS schools, this decrease was statistically significant across all three post treatment times [$F_{(1, 97)}$= 4.49, p =.037].



	Pre	Post 1	Post 2	Post 3
CIS	44.2%	42.8%	42.9%	41.5%
Non-CIS	47.3%	45.1%	44.4%	44.7%

Dataset: finaldb Variables: fnce_gr10r_pre fnce_gr10r_post1 fnce_gr10r_post2 fnce_gr10r_post3 fnce_gr10r_pre c fnce_gr10r_post1c fnce_gr10r_post2c fnce_gr10r_post3c



	Pre	Post 1	Post 2	Post 3
CIS	48.3%	47.7%	50.6%	49.2%
Non-CIS	48.7%	50.0%	48.7%	50.0%

Dataset: finaldb Variables: fnce_gr8r_pre fnce_gr8r_post1 fnce_gr8r_post2 fnce_gr8r_post3 fnce_gr8r_pre c fnce_gr8r_post1c fnce_gr8r_post2c fnce_gr8r_post3c

On the other hand, the passing rates for high school reading achievement tests increased by 0.9% over three years of CIS implementation and passing rates at comparison schools increased by 1.3%, for a net change of -0.3%. As evidenced in Exhibit 36, the patterns across three years indicate a temporal effect causing fluctuations in the reading passing rate every other year for both groups.

Findings by Performance Level: Reading Achievement

The service profile by performance level for reading achievement reveals patterns similar to those discussed above for graduation rate: higher performers serve a larger percentage of students in the schools and provide more Level 1 service hours but fewer Level 2 service hours per student. Corroborated with some other preliminary findings, this may suggest that Level 1 services are more important in effecting change for students than was originally believed.

TABLE 20: SERVICES BY PERFORMANCE LEVEL – READING ACHIEVEMENT*

Items	Higher Performers (n=91)	Lower Performers (n=86)
Percent of students served in schools:		
Level 1 services	**54.7%**	45.7%
Level 2 services	**40.8%**	34.4%
Numbers of types of services provided:		
Level 1 services**	10	**11**
Level 2 services	9	**10**
Average service hours per student: maintaining family and peer relationships:		
Level 1 services **	**5.7**	1.9
Level 2 services	**90.2**	77.2
Average service hours per student: academic services:		
Level 1 services **	**5.3**	2.0
Level 2 services	78.7	**114.2**
Average service hours per student: case management:		
Level 1 services	1.5	1.5
Level 2 services	110.2	**141.6**
Average service hours per student: behavioral services:		
Level 1 services **	**13.0**	3.4
Level 2 services	182.1	**251.0**
Average service hours per student: after school services:		
Level 1 services	3.8	2.1
Level 2 services	107.4	**164.2**
Average service hours per student: career services:		
Level 1 services **	**8.2**	1.5
Level 2 services	50.3	**51.9**
Average service hours per student: services of providing public services:		
Level 1 services	0.4	0.4

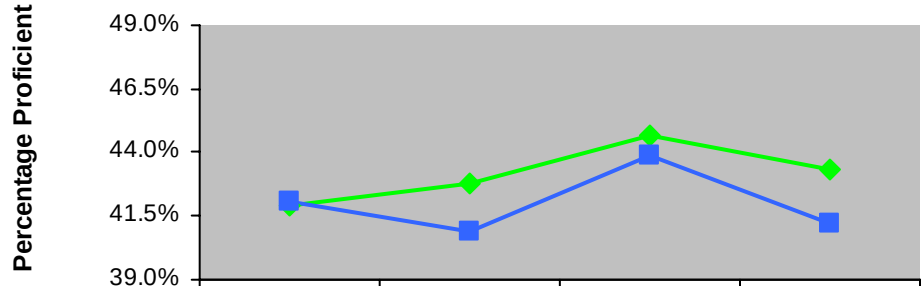
Items	Higher Performers (n=91)	Lower Performers (n=86)
Level 2 services	19.7	**27.6**
Average service hours per student: health services:		
Level 1 services	1.2	1.2
Level 2 services	55.1	**93.4**

*Larger numbers between higher and lower performer are in bold
** Statistically significant at the p<.05 level between higher and lower performers
Dataset: regression; Variables: Academic_R inten_relation1 inten_academic1 inten_case1 inten_behav1 inten_aftsch1 inten_career1 inten_public1 inten_health1 inten_relation2
inten_academic2 inten_case2 inten_behav2 inten_aftsch2 inten_career2 inten_public2
inten_health2 stper_l1 stper_l2 level1_type level2_type

Findings by Implementation Level: Reading Achievement

As seen below in Exhibit 37, the passing rates for elementary reading achievement tests in high implementing CIS schools increased by 1.4%, while the rates for the comparison schools decreased by 0.9%, for a net change of +2.3%. For partial implementation CIS schools (Exhibit 38), passing rates for elementary reading increased by 1.4% across three years, but passing rates increased dramatically (7.2%) for their comparison schools, for a net change of -5.8%.

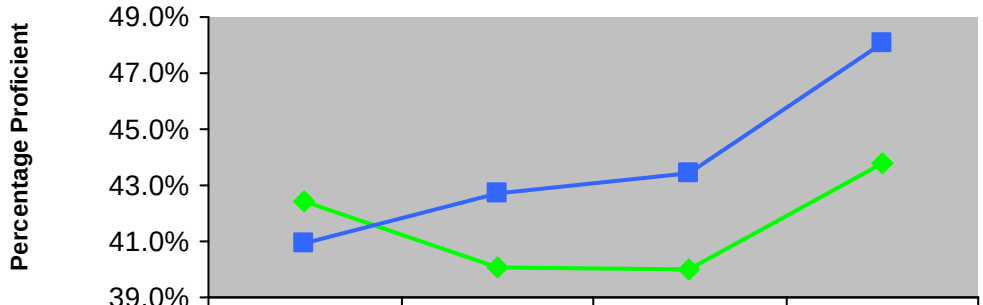
Exhibit 37: High Implementers vs. Non-CIS Comparisons: Grade 4 Reading (n=56)



	Pre	Post 1	Post 2	Post 3
High Implementers *	41.9%	42.8%	44.7%	43.3%
Non-CIS Comparison Schools	42.1%	40.9%	43.9%	41.2%

Dataset: finaldb_20080316; Variables: fnce_gr4r_pre fnce_gr4r_prec fnce_gr4r_post1 fnce_gr4r_post1c fnce_gr4r_post2 fnce_gr4r_post2c fnce_gr4r_post3 fnce_gr4r_post3c high_implementers

Exhibit 38: Partial Implementers vs. Non-CIS Comparisons: Grade 4 Reading (n=58)



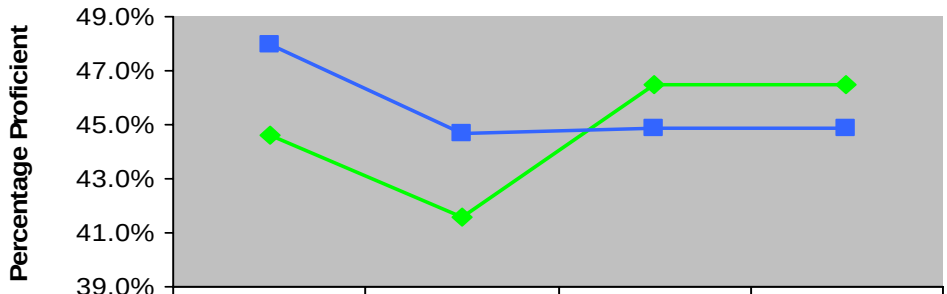
	Pre	Post 1	Post 2	Post 3
Partial Implementers	42.4%	40.1%	40.0%	43.8%
Non-CIS Comparison Schools	40.9%	42.7%	43.4%	48.1%

Dataset: finaldb_20080316; Variables: fnce_gr4r_pre fnce_gr4r_prec fnce_gr4r_post1 fnce_gr4r_post1c fnce_gr4r_post2 fnce_gr4r_post2c fnce_gr4r_post3 fnce_gr4r_post3c high_implementers

As represented by Exhibit 39, passing rates for eighth grade reading achievement decreased for both CIS and non-CIS schools after the first year of CIS implementation; however, scores for the high implementing CIS schools rose significantly afterwards [$F_{(1.25)}$= 3.183, $p < .05$], while the non-CIS comparisons maintained lower performance to year three. Across all three years, CIS high implementers increased their passing rates by 1.6% in eighth grade reading, while their non-CIS comparisons decreased by 3.1%, for a net change of +5.1%[3]. Passing rates for partial implementers and their comparison schools, as depicted in Exhibit 40, decreased, with CIS schools maintaining reading achievement scores of +0.3% above their comparisons.

[3] Please note that our overall net change scores may differ from changes reported in trend plots due to differences in rounding.

Exhibit 39: High Implementers vs. Non-CIS Comparisons: Grade 8 Reading (n =26)

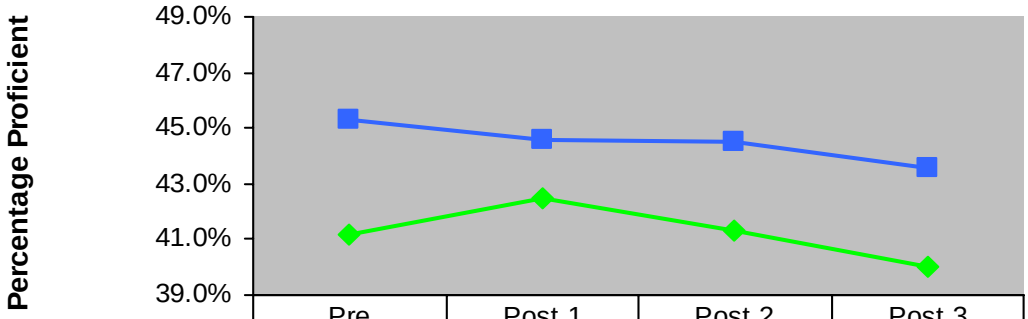


	Pre	Post 1	Post 2	Post 3
High Implementers *	44.6%	41.6%	46.5%	46.5%
Non-CIS Comparison Schools	48.0%	44.7%	44.9%	44.9%

* p< .05: Post1 – Post2, Post1 – Post3

Dataset: finaldb_20080316; Variables: fnce_gr8r_pre fnce_gr8r_prec fnce_gr8r_post1 fnce_gr8r_post1c fnce_gr8r_post2 fnce_gr8r_post2c fnce_gr8r_post3 fnce_gr8r_post3c high_implementers

Exhibit 40: Partial Implementers vs. Non-CIS Comparisons: Grade 8 Reading (n =39)

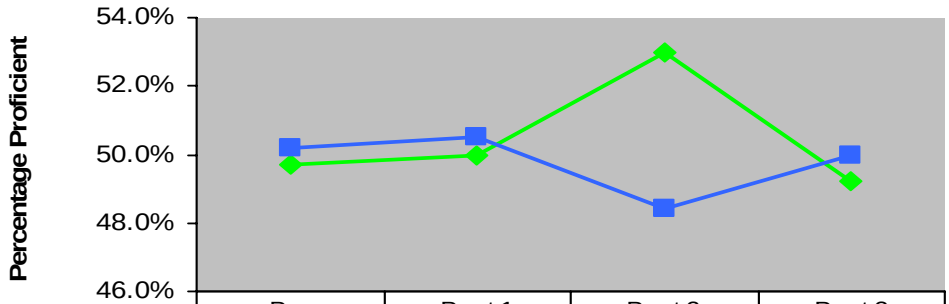


	Pre	Post 1	Post 2	Post 3
Partial Implementers	41.2%	42.5%	41.3%	40.0%
Non-CIS Comparison Schools	45.3%	44.6%	44.5%	43.6%

Dataset: finaldb_20080316; Variables: fnce_gr8r_pre fnce_gr8r_prec fnce_gr8r_post1 fnce_gr8r_post1c fnce_gr8r_post2 fnce_gr8r_post2c fnce_gr8r_post3 fnce_gr8r_post3c high_implementers

Exhibits 41 and 42 display the percentage of students passing reading achievement tests in high school for CIS high and partial implementers and their comparison schools. The net change in high school reading achievement for high implementing CIS schools compared to their comparison sites was -0.3%, while the net change for partial implementers above their comparisons was +2.5%.

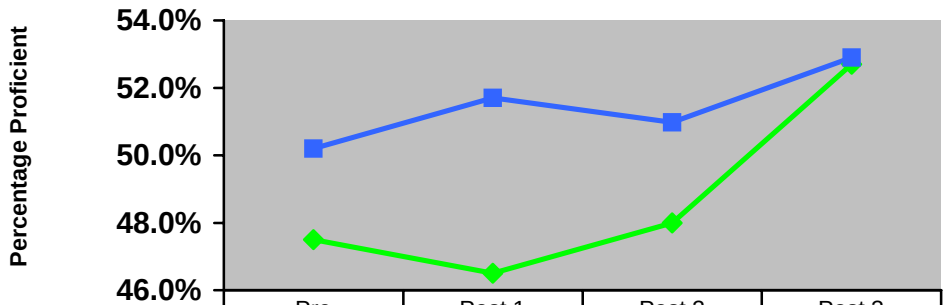
Exhibit 41: High Implementers vs. Non-CIS Comparisons: Grade 10 Reading (n =34)



	Pre	Post 1	Post 2	Post 3
High Implementers *	49.7%	50.0%	53.0%	49.2%
Non-CIS Comparison Schools	50.2%	50.5%	48.4%	50.0%

Dataset :finaldb_20080316; Variables: fnce_gr10r_pre fnce_gr10r_prec fnce_gr10r_post1 fnce_gr10r_post1c fnce_gr10r_post2 fnce_gr10r_post2c fnce_gr10r_post3 fnce_gr10r_post3c high_implementers

Exhibit 42: Partial Implementers vs. Non-CIS Comparisons: Grade 10 Reading (n=11)

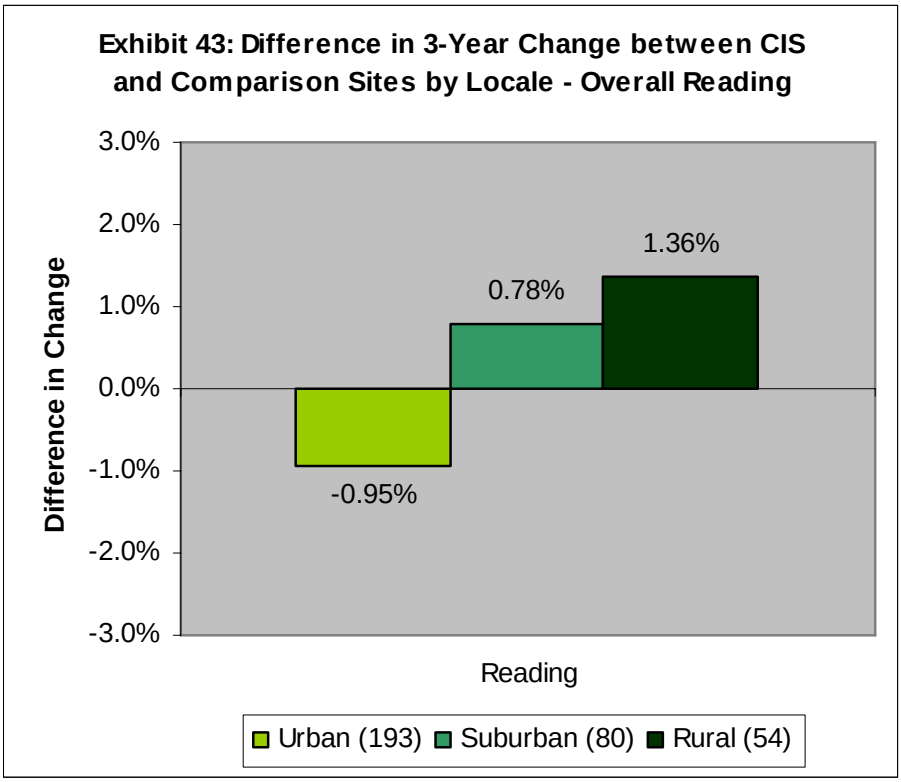


	Pre	Post 1	Post 2	Post 3
Partial Implementers	47.5%	46.5%	48.0%	52.7%
Non-CIS Comparison Schools	50.2%	51.7%	51.0%	52.9%

Dataset : finaldb_20080316; Variables: fnce_gr10r_pre fnce_gr10r_prec fnce_gr10r_post1 fnce_gr10r_post1c fnce_gr10r_post2 fnce_gr10r_post2c fnce_gr10r_post3 fnce_gr10r_post3c high_implementers

Findings by Locale: Reading Achievement

Exhibit 43 shows the difference in the three-year net change between CIS schools and their matched comparison sites by Locale (Urban, Suburban, and Rural) for reading achievement. CIS Rural sites showed the most improvement over their comparison sites in reading, followed by CIS Suburban sites. CIS Urban sites performed more poorly in reading than their comparison sites.

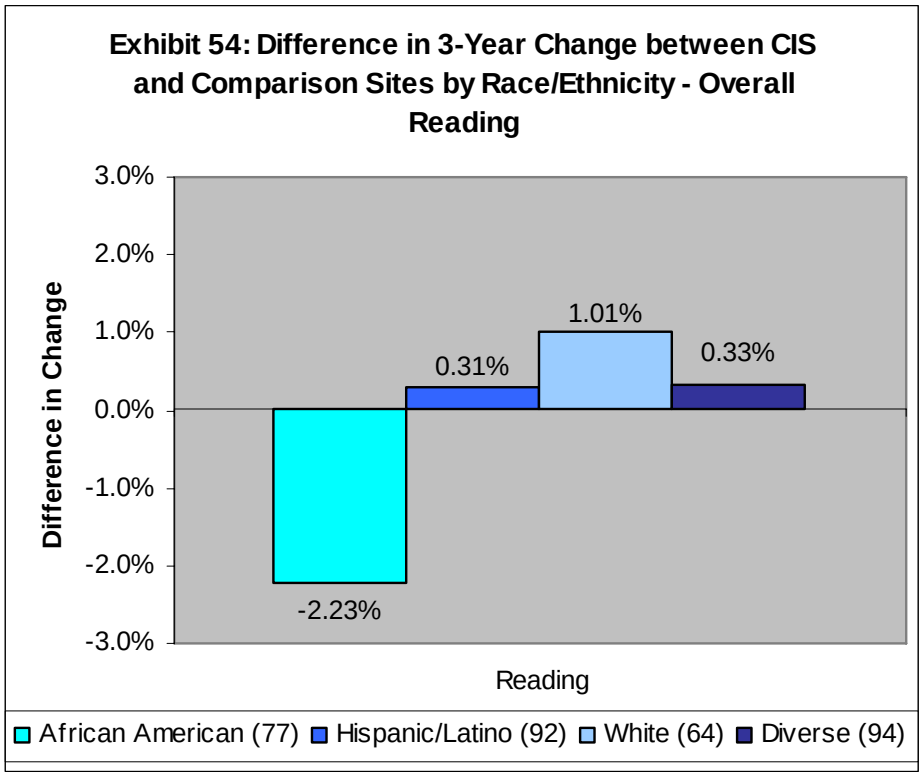


Dataset: mrg_final_jg; Variables: locale_final fnce_diff_read

The overall reading results by Locale follow a pattern opposite to both the graduation rate results and to the CIS process and implementation results (Appendix F). However, as with the overall math results by Locale, the reading results follow the same pattern as the results for Level 2 services only. Specifically, more Rural schools provide only Level 2 services (14.2%) than do Suburban (11.2%) or Urban (8.5%) schools. This difference suggests that Level 2 academic services may be linked to reading achievement, in addition to math achievement.

Findings by Race/ethnicity: Reading Achievement

Exhibit 54 shows the difference in the three-year net change between CIS schools and their matched comparison sites by race/ethnicity (African American, Hispanic/Latino, White, and Diverse) for reading achievement.



Dataset: mrg_final_jg; Variables: race_final fnce_diff_read

Primarily Hispanic/Latino, White, and Diverse CIS schools all outperformed their comparison sites, while CIS African American schools underperformed their comparison sites in reading achievement. At first glance, these results present a mixed response to the question of whether CIS helps to reduce the achievement gap, as the two predominantly minority categories have opposite results. Based on the difference between the way primarily African American and Hispanic/Latino sites participate in CIS, these achievement results suggest that high vs. partial implementation may have important ramifications in our nation's effort to close the achievement gap.

Summary of Reading Achievement Findings

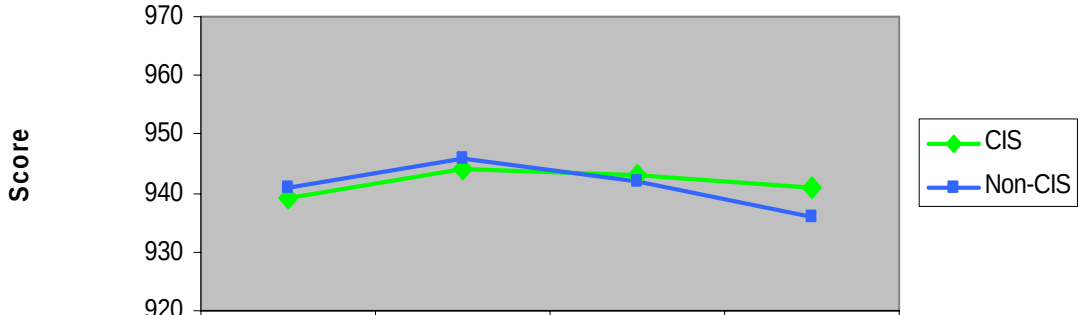
Overall increases in reading scores are not statistically significantly linked to CIS presence in schools, though decreases in reading scores occurring over the 3-year period in non-CIS comparison middle schools indicate that CIS may have served as a protective factor to prevent this decrease. Higher implementation of CIS appears very important for reading achievement, particularly in the case of middle schools where the differences were statistically significant; overall, higher performing CIS schools served more students with more Level 1 hours and fewer Level 2 hours. Reading achievement success followed a reverse pattern to full implementation of the CIS model within the Locale sub-grouping, but CIS Hispanic schools improved slightly over comparison sites while CIS African American sites saw a dramatic decrease, presumably due to their contrasting implementation of the CIS model.

3.6 SAT Scores and Participation

Main Results: SAT

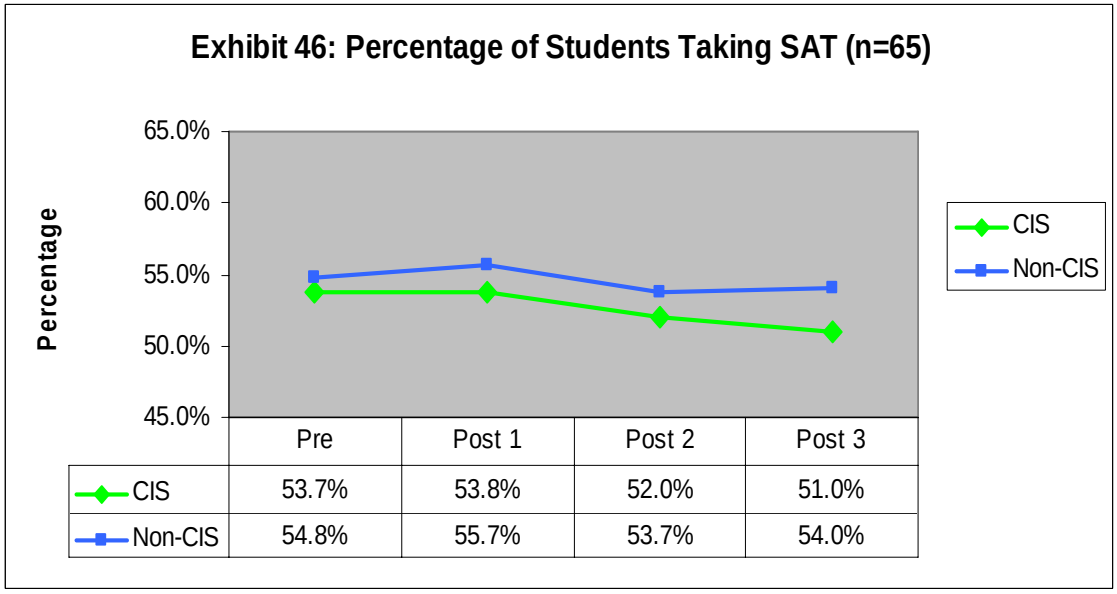
Five states provided average SAT scores and four states provided the number of students who took the SAT exam for college admission. The net change in mean SAT scores between CIS schools and their comparison sites was +7 points, but this difference was not statistically significant (Exhibit 45).

Exhibit 45: Average SAT scores (n=107)



	Pre	Post 1	Post 2	Post 3
CIS	939	944	943	941
Non-CIS	941	946	942	936

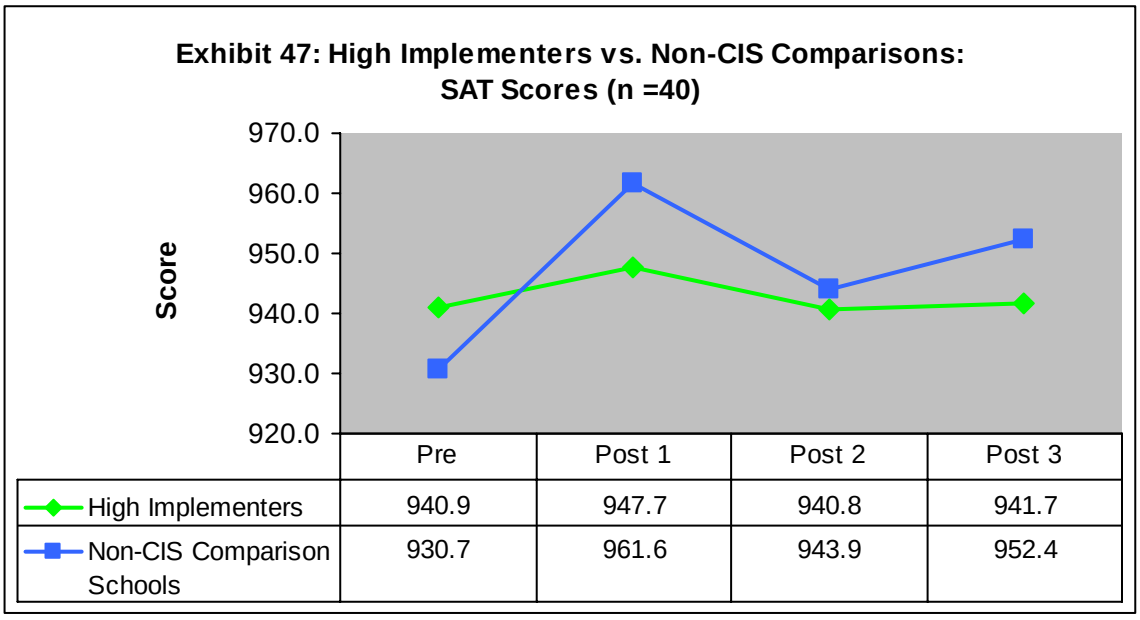
Dataset: SATmean Variables: satmean_pre_all satmean_prec_all satmean_post1_all satmean_post1c_all satmean_post2_all satmean_post2c_all satperc_post3_all satmean_post3c_all qed



Dataset: %SAT Variables: satperc_pre_all satperc_prec_all satperc_post1_all satperc_post1c_all satperc_post2_all satperc_post2c_all satperc_post3_all satperc_post3c_all qed

The decrease in the percentage of students taking the SAT at both CIS and non-CIS schools from the Post1 to Post2 years was statistically significant ($p<0.025$). Both CIS and comparison sites reported a loss in SAT examinees within the three years, with a net change of -1.9% for CIS schools relative to their comparisons.

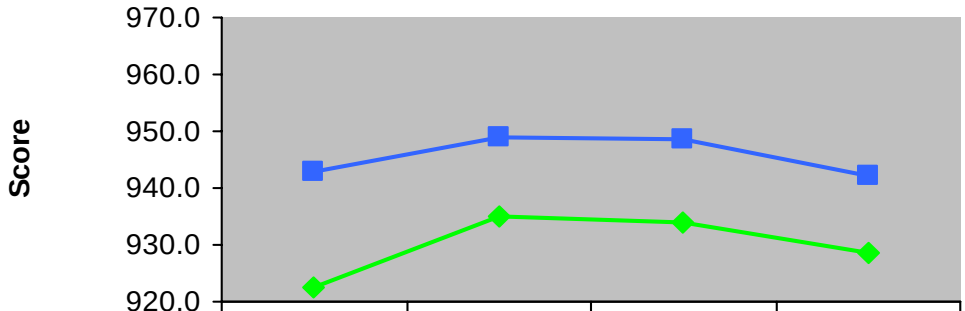
Findings by Implementation level: SAT



Dataset: finaldb_20080316; Variables: satmean_pre_all satmean_prec_all satmean_post1_all satmean_post1c_all satmean_post2_all satmean_post2c_all satperc_post3_all satmean_post3c_all high_implementers

SAT scores of both CIS and non-CIS schools were quite consistent and similar across three years of CIS implementation, during which time only slight changes occurred, as shown in Exhibits 47 & 48. The net change in SAT scores between CIS high implementers and comparison sites was -21 points, while the net change between partial implementers and their comparisons was about +7 points.

Exhibit 48: Partial Implementers vs. Non-CIS Comaprisons: SAT Scores (n =24)

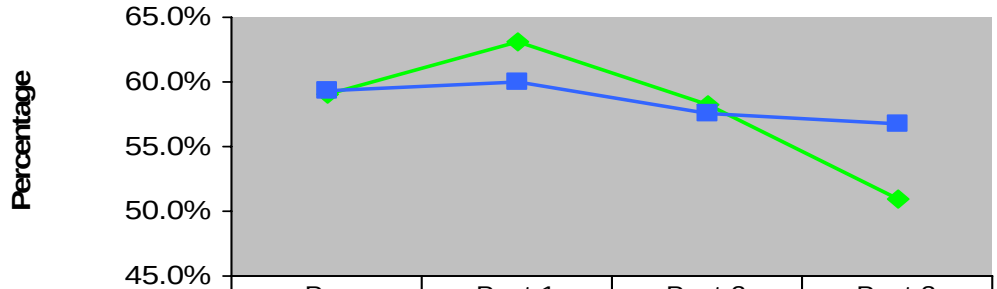


	Pre	Post 1	Post 2	Post 3
Partial Implementers	922.4	934.9	934.0	928.4
Non-CIS Comparison Schools	942.9	948.9	948.6	942.3

Dataset: finaldb_20080316; Variables: satmean_pre_all satmean_prec_all satmean_post1_all satmean_post1c_all satmean_post2_all satmean_post2c_all satperc_post3_all satmean_post3c_all high_implementers

Exhibit 49 shows that the percentage of SAT examinees at high implementing CIS sites decreased significantly by 8.1% [$F_{(1, 18)}$= 3.67, $p < .05$] over three years, while decreasing by only 2.5% at comparison sites, for a net change of -5.6%.

Exhibit 49: High Implementers vs. Non-CIS Comparisons: Percentage of Students Taking SAT (n =19)



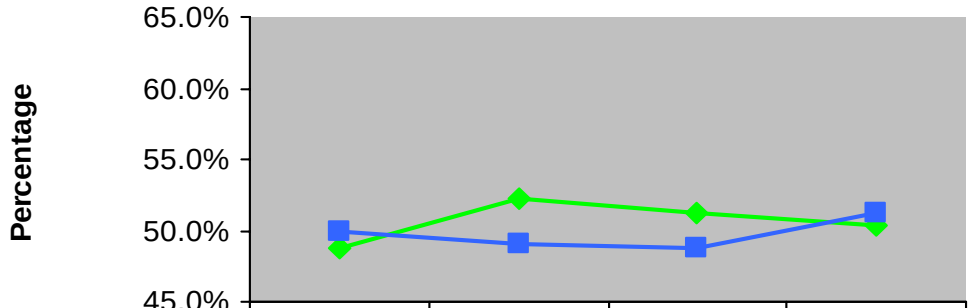
	Pre	Post 1	Post 2	Post 3
High Implementers *	59.0%	63.1%	58.3%	50.9%
Non-CIS Comparison Schools	59.3%	60.0%	57.6%	56.8%

* p < .05: Pre – Post1, Post1 – Post2, Post2 – Post3

Dataset: finaldb_20080316; Variables: satperc_pre_all satperc_prec_all satperc_post1_all satperc_post1c_all satperc_post2_all satperc_post2c_all satperc_post3_all satperc_post3c_all

For partial implementers and their comparisons, the percentage of SAT examinees increased from Pre-implementation to the Post3-implementation year by 1.7% and 1.3%, respectively, for a net change of +0.4%.

Exhibit 50: Partial Implementers vs. Non-CIS Comaprisons: Percentage of Students Taking SAT (n =16)



	Pre	Post 1	Post 2	Post 3
Partial Implementers	48.7%	52.2%	51.3%	50.4%
Non-CIS Comparison Schools	50.0%	49.0%	48.7%	51.3%

Dataset: finaldb_20080316; Variables: satperc_pre_all satperc_prec_all satperc_post1_all satperc_post1c_all satperc_post2_all satperc_post2c_all satperc_post3_all satperc_post3c_all high_implementers

Summary of SAT Findings

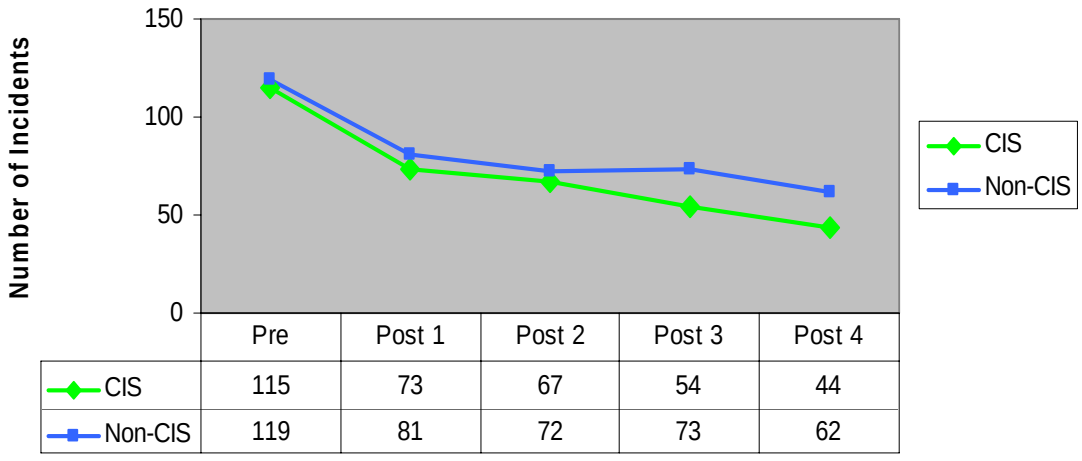
While CIS may be related to a slight increase in SAT scores, high implementing CIS schools do not seem to have an advantage. High implementers also experienced more of a decrease in the percentage of students taking the SAT than did partial implementers, indicating that CIS may be less effective in improving SAT-related variables than those regarding dropout, graduation, and academic achievement.

3.7 Behavioral Measures

Main Results: Behavioral Measures

Complete data from 1998-2005 regarding behavioral measures were available from only two states, including incidents of behavioral misconduct (violent acts, fights, drug and alcohol use, etc.) and the total number of fights reported each year. Results for States A and B are presented independently, as an additional year of data was available for State A (the 2005-2006 school year).

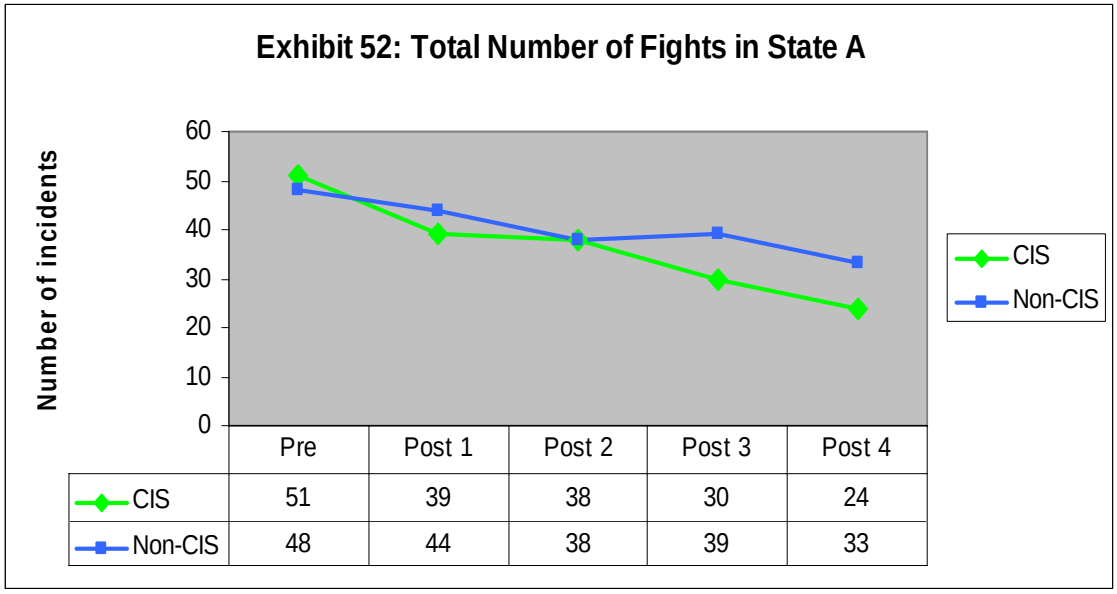
Exhibit 51: Number of Incidents in State A (n=70)



	Pre	Post 1	Post 2	Post 3	Post 4
CIS	115	73	67	54	44
Non-CIS	119	81	72	73	62

Dataset: incidents Variables: incidents6_pre incidents6_post1 incidents6_post2 incidents6_post3 incidents6_prec incidents6_post1c incidents6_post2c incidents6_post3c qed

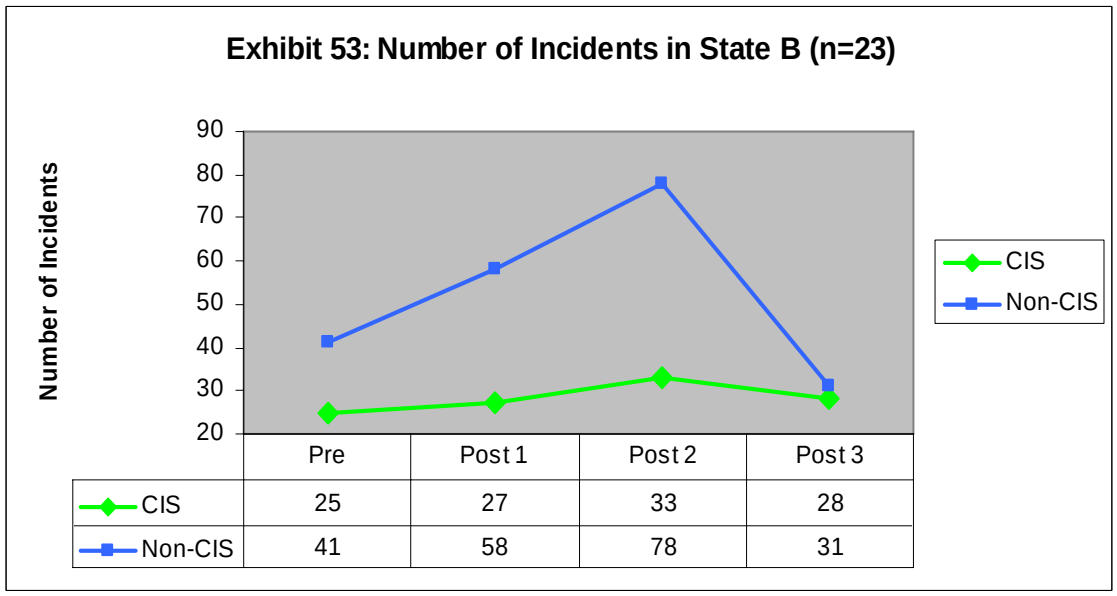
Overall, the total number of behavioral incidents decreased in CIS schools in State A, with statistically significant changes beginning with Year 2 [$F_{(1, 69)}$= 5.96, p =.017]. The decreases in the comparison schools were not found to be statistically significant. These results suggest that CIS may be effective in preventing incidents of student misconduct.



	Pre	Post 1	Post 2	Post 3	Post 4
CIS	51	39	38	30	24
Non-CIS	48	44	38	39	33

Dataset: alloutcome Variables: incidents3_pre incidents3_post1 incidents3_post2 incidents3_post3 incidents3_prec incidents3_post1c incidents3_post2c incidents3_post3c qed

The decrease in State A in the number of reported fights at CIS schools over four years was statistically significant, [$F_{(1, 69)} = 9.04$, $p < .001$]. The decrease in the non-CIS comparison schools was not statistically significant.



	Pre	Post 1	Post 2	Post 3
CIS	25	27	33	28
Non-CIS	41	58	78	31

Dataset: incidents Variables: incidents_pre_all incidents_post1_all incidents_post2_all incidents_post3_all incidents_prec_all incidents_post1c_all incidents_post2c_all incidents_post3c_all qed

The number of reported behavioral incidents in CIS schools in State B was consistently lower than in comparison schools, but did not decrease significantly at any point during the three years of CIS implementation.

Summary of Behavioral Findings

While results are mixed between the two states studied, occurrences of fights and behavioral misconduct decreased significantly in CIS schools in State A but did not change significantly in State B over the three year study period. More research is necessary to understand the relationship between CIS and behavioral change.

4. Findings and Conclusions

This report includes the first scientific evidence to date of CIS's impact on school-level outcomes. While many success stories have provided anecdotal evidence that CIS works, the CIS National Office wants to support this evidence with scientific results demonstrating the program's effect. By understanding not only the effects of CIS but also how it brings about these effects across the network, the National Office can engage in a process of continuous improvement to ensure that as many students are being served in the most effective manner possible.

Looking across results from the quasi-experimental study, the natural variation study, and the implementation study, the National Evaluation team has identified several core findings. These findings are described below.

Core Finding #1:
The CIS model provides a structure within which local need and local innovation drive common processes and outcomes (dropout rates, graduation rates, attendance rates, and academic achievement).

The CIS model is in transition—moving from a history of success as diverse, locally tailored drop-out prevention programs to a consistent model based on the program's Total Quality System (TQS) initiative. The TQS initiative outlines a series of core practices that constitute the CIS model, while maintaining flexibility to provide for local innovation.

At the core of TQS is a strategy for the delivery of community-based, integrated student services (CBISS). Community-based integrated student services are interventions that improve student achievement by connecting community resources with both the academic and social service needs of students. Such interventions focus programmatic energy, resources, and time on shared school and student goals.[4] The TQS and CBISS are mutually beneficial processes: one informs the other.

[4] Communities In Schools, Inc. (2007). A National Educational Imperative: Support For Community-Based, Integrated Student Services In The Reauthorization Of The Elementary And Secondary Education Act.

The CIS Network is, without a doubt, highly diverse – and this diversity has resulted in a long history of local adaptation and innovation. Over the course of conducting the three school-level studies, however, the National Evaluation team found that there were core consistencies that suggested a systematic approach is being taken to address needs. Highlights of these consistent practices follow.

- **Finding 1.1: Outcomes at the school level were not large, but they were positive and consistent.**

  Across a range of outcomes, CIS schools outperformed their comparison schools. These outcomes include dropout graduation variables (promoting power, graduation rate), attendance rates (for elementary, middle, and high schools), and academic achievement in both math and reading (for grades 4, 8, and 10). The quasi-experimental study investigated the difference between CIS schools and matched comparison schools over a four-year period, from the year prior to the beginning of the program in each school until three years post-implementation. Across all outcomes, except Grade 4 and Grade 10 reading achievement, CIS schools outperformed their comparison schools (Table 21). For example, on average, promoting power increased by 2.0 percent more in CIS schools than it did in non-CIS comparison schools.

  When interpreting these outcomes, the reader should consider that achieving school-level change is very difficult, particularly when many students in the school are being provided different services. This is the essence of the CIS model – services are tailored to identified needs. Viewed in this light, an average net increase of, for example, 2.8 percent in graduation rates represents a sizeable number of graduates, and a sizeable shift in direction.

  Most importantly, results from the quasi-experimental study were consistently in favor of CIS schools, suggesting that CIS was having a systematic, positive effect on multiple aspects of students' academic and social lives. This finding will be investigated further in the student-level experimental studies.

TABLE 21: SCHOOL-LEVEL OUTCOMES FROM THE QUASI-EXPERIMENTAL STUDY. NET CHANGE BETWEEN CIS SCHOOLS AND THEIR COMPARISON SCHOOLS OVER A FOUR-YEAR PERIOD

Outcome Type	Outcome	Net Change: CIS Over Comparison
Dropout/Graduation:	Dropout Rate (Promoting Power)	+2.0%
	Graduation Rate	+1.7%
Attendance Rates:	Attendance: Elementary	+0.1%
	Attendance: Middle	+0.3%
	Attendance: High	+0.3%
Elementary Achievement:	Grade 4 Math	+2.2%
	Grade 4 Reading	-0.1%
Middle School Achievement:	Grade 8 Math	+2.0%
	Grade 8 Reading	-0.1%
High School Achievement:	Grade 10 Math	+0.4%
	Grade 10 Reading	-0.3%

- **Finding 1.2: The nexus of services and the program model makes CIS powerful.**

CIS schools that fully implement the CIS model with a high level of integrity had more successful outcomes than those that did not (Table 22). This provides validation of the CIS model, and helps us understand the link between processes and outcomes.

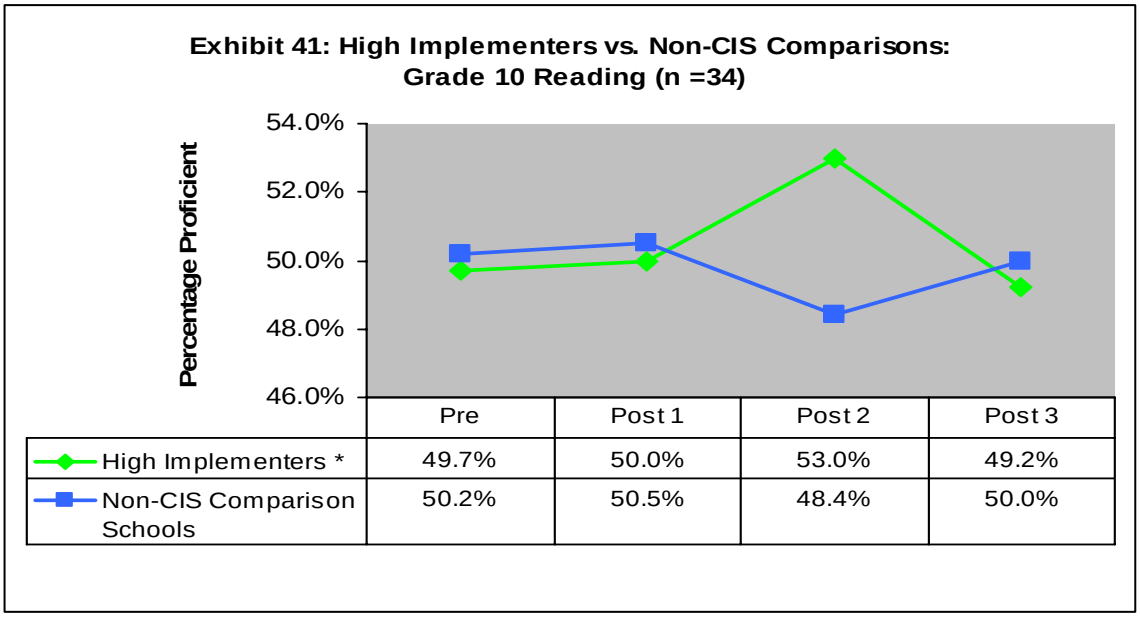
Since the "high implementers" were identified using a scoring system that was based on the Total Quality System (TQS), these findings also provide a validation of the TQS. We can see that positive outcomes appear more likely in schools following the CIS model.

TABLE 22: SCHOOL-LEVEL OUTCOMES FROM THE IMPLEMENTATION AND QUASI-EXPERIMENTAL STUDIES: HIGH VS. PARTIAL IMPLEMENTERS[5]
NET CHANGE BETWEEN CIS SCHOOLS AND THEIR COMPARISON SCHOOLS OVER A THREE-YEAR PERIOD

Outcome	Net Change: High Implementers Over Comparison	Net Change: Partial Implementers Over Comparison
Dropout Rate (Promoting Power)	+3.6%	+1.5%
Graduation Rate	+4.8%	+2.5%
Attendance: All Schools	+0.2%	-0.1%
Grade 4 Math	+5.2%	-2.3%
Grade 4 Reading	+2.3%	-5.8%
Grade 8 Math	+6.0%	0.7%
Grade 8 Reading	+5.1%	0.3%
Grade 10 Math	+0.8%	-0.4%
Grade 10 Reading	-0.3%	+2.5%

These results raise the question: What makes a high implementing CIS school successful? To answer this question, which gets to the heart of what makes the CIS model effective, we examined our data to see which types of activities had the strongest relationship to positive outcomes.

TABLE 23: CORRELATIONS BETWEEN IMPLEMENTATION DOMAINS AND OUTCOMES



[5] High Implementers are defined as CIS schools that scored 70% or higher in our implementation study, which assessed how thoroughly CIS sites employed the domains of planning, needs assessment, services, and monitoring and adjustment in their programs. High implementers are implementing the CIS model with a high degree of fidelity.

Implementation Domain	Correlation with Overall Average Effect Size
Whole Model (all domains)	0.16**
Needs Assessment	0.15*
Planning	0.20**
Service Provision	-0.06
Monitoring and Adjustment	0.05

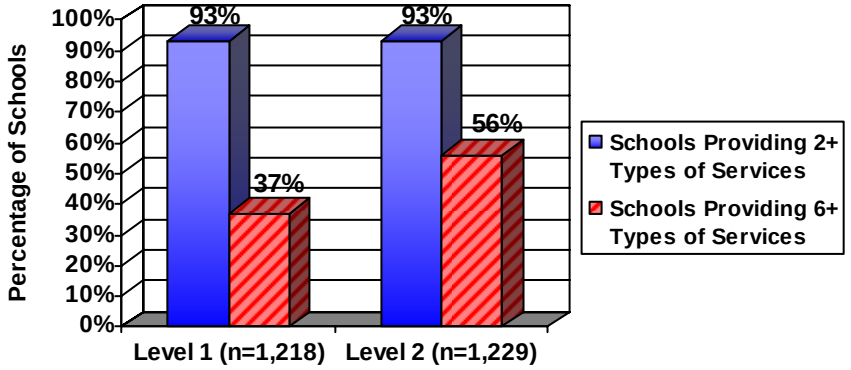
* Statistically significant at the p<.05 level
** Statistically significant at the p<.01 level

As shown in Table 23, the CIS sites implementing the entire model (processes plus service delivery) had stronger outcomes than CIS sites delivering services alone. This result indicates that the strength of the CIS model lies in the process of regularly identifying needs and connecting students to the right services.

- **Finding 1.3: A school-wide CIS strategy may involve focusing on a particular problem, but very few CIS schools address problems with a single service strategy.**

Given the wide range of programming offered by CIS schools, it is interesting that very few CIS schools offer only a single type of service (Exhibit 54). Only 7 percent of CIS schools offer a single type of service (e.g., tutoring, counseling), while 93 percent of CIS schools are offering multiple services.

Exhibit 54: Diversity of Services Offered by CIS Schools



When broken down by whole-school services (Level 1) and targeted, sustained services (Level 2), it is apparent that more intensively case managed students (i.e., Level 2 students) receive a larger number of interventions. If it is assumed that these services are being

delivered based on identified needs, we can conclude that CIS is serving the neediest students with a range of services.

By bringing together community resources to address needs, CIS is helping schools achieve consistent, measurable, and positive effects in students' academic lives.

Core Finding #2:
The adaptability of the CIS model is demonstrated when we look at its effectiveness across various settings (by locale, demographics, and school level).

As mentioned in Core Finding #1, the consistency of positive outcomes among all CIS schools – and especially high implementing schools – is striking. Taken a step further, it is apparent that consistently positive outcomes remain no matter the context or setting. CIS sites outperformed their comparison sites across urban, rural, and suburban locations; across elementary, middle, and high schools; and across the primary demographic make-up of the school (e.g., race/ethnicity). In other words, CIS appears to work no matter where it is located.

- **Finding 2.1: Urban and Suburban sites focused on different service models, which drove different outcomes.**

  As shown in Table 24, when we separate the outcomes of Urban, Suburban, and Rural sites, some interesting patterns emerge. Most importantly, CIS sites – regardless of their location – outperformed their comparison sites on most outcomes. However, we found that greatest improvement varied by setting across the outcomes of interest as follows:

  Suburban schools had the most success in lowering dropout rates, while Urban schools had the most success in improving graduation rates. Compared to their Rural counterparts, Urban and Suburban schools employed relatively more intensive site coordination, needs assessment processes, and monitoring of student progress.

Rural sites performed best on academic outcomes, which is not surprising considering that they offered more targeted and sustained academic assistance to students in need than did Urban and Suburban sites.

TABLE 24: QUASI-EXPERIMENTAL STUDY OUTCOMES: URBAN VS. SUBURBAN VS. RURAL. NET CHANGE BETWEEN CIS SCHOOLS AND THEIR COMPARISON SCHOOLS OVER A THREE-YEAR PERIOD

Outcome	Urban Schools: Net Change	Suburban Schools: Net Change	Rural Schools: Net Change
Dropout Rate (Promoting Power)	0.6%	4.9%	0.4%
Graduation Rate	2.8%	1.8%	-0.2%
Attendance	0.2%	0.0%	0.3%
Math (All Grades)	2.5%	-0.6%	3.3%
Reading (All Grades)	-1.0%	0.8%	1.4%

- **Finding 2.2: CIS schools that were predominantly Hispanic/Latino reported gains in academics, and these sites also were implementing the CIS model at a high level.**

The National Evaluation team broke down the results of the quasi-experimental study by the predominant race/ethnicity at a school. Using a 60 percent cutoff, we categorized each school. For example, if 62 percent of the students in the school were African-American, we categorized the school as "African-American".

The results of this analysis are presented in Table 25. Predominantly Hispanic/Latino and Diverse schools (i.e., schools without a 60 percent majority of any race/ethnicity) showed the most positive change in most outcomes. These schools also had the strongest implementation of the CIS model. Still, schools that were predominantly African-American posted gains in increasing graduation and reducing dropout. Schools that were predominantly White had, on average, the least positive change above their comparison sites.

TABLE 25: QUASI-EXPERIMENTAL STUDY OUTCOMES:
BY PREDOMINANT (60%+) RACE OF STUDENTS IN SCHOOL

NET CHANGE BETWEEN CIS SCHOOLS AND THEIR COMPARISON SCHOOLS
OVER A THREE-YEAR PERIOD

Outcome	African-American	Hispanic/ Latino	White	Diverse
Dropout Rate (Promoting Power)	1.8%	0.9%	1.7%	1.8%
Graduation Rate	2.1%	2.8%	-1.6%	4.6%
Attendance	0.2%	0.1%	0.0%	0.3%
Math (All Grades)	0.6%	2.6%	-0.7%	4.0%
Reading (All Grades)	-2.2%	0.3%	1.0%	0.3%

- **Finding 2.3: Elementary and middle schools reported gains in academic achievement, which underscores the importance of reaching students early.**

  Overall, CIS schools reported gains in math scores at the elementary, middle, and high school levels – but gains in reading were mixed (Table 26). Consider, however, what happens when schools fully implemented the CIS model with fidelity: academic improvements were strong, especially at the elementary and middle school levels. This finding underscores the importance of reaching students early to maximize their chances of future success.

  Further information from the case studies and randomized controlled trials will help to determine why academic performance lagged at the high school level. One possible explanation is that, since CIS is keeping more students in school, lower overall school averages in academic achievement may result simply because more students at lower performance levels are staying in school. By keeping students in school, CIS is giving them a better chance to succeed in life.

TABLE 26: SCHOOL-LEVEL OUTCOMES FROM THE QUASI-EXPERIMENTAL STUDY

NET CHANGE BETWEEN CIS SCHOOLS AND THEIR COMPARISON SCHOOLS OVER A FOUR-YEAR PERIOD

Outcome	Net Change: CIS Over Comparison	Net Change: CIS High Implementer Over Comparison
Elementary Schools		
Grade 4 Math	+2.2%	+5.2%
Grade 4 Reading	-0.1%	+2.3%
Attendance: Elementary	+0.1%	+0.2%
Middle Schools		
Grade 8 Math	+2.0%	+6.0%
Grade 8 Reading	-0.1%	+5.1%
Attendance: Middle	+0.3%	+0.1%
High Schools		
Grade 10 Math	+0.4%	+0.8%
Grade 10 Reading	-0.3%	-0.3%
Attendance: High	+0.3%	+0.3%
Dropout Rate (Promoting Power)	+2.0%	+3.6%
Graduation Rate	+1.7%	+4.8%

Core Finding #3:

Compared with other youth-serving organizations, CIS's performance on dropout prevention is particularly strong.

Compared with other large-scale or well-known dropout prevention programs, CIS reported very respectable reductions in dropout rates. CIS stood alone, however, in its impact on high school graduation. Details of these findings are presented below.

The National Evaluation team used outcomes reported by the U.S. Department of Education's What Works Clearinghouse to benchmark CIS against other large-scale or well-known dropout prevention programs.[6] Our results are summarized in Exhibit 55.

- **Finding 3.1: Among dropout prevention programs using scientifically-based evidence, CIS demonstrated the strongest impact on high school on-time graduation rates.**

  For the past several years, the What Works Clearinghouse has been engaged in a review of dropout prevention programs. One of the interesting findings from this review has been that, although many programs have been able to lower dropout rates, only a handful of programs have had an impact on high school completion. The What Works Clearinghouse review has not found any program that has had a marked impact on high school graduation rates. The only programs that have been proven to have an effect on high school completion did so by helping students earn their GEDs, not graduate from high school with a regular diploma, as CIS has done.

  This fact makes the findings in Exhibit 55 all the more compelling. Compared with large-scale or well-known dropout prevention programs reviewed by the What Works Clearinghouse, CIS had the strongest effect on students' on-time graduation rates.

  Results in Exhibit 55 are shown in terms of effect sizes.[7] CIS high implementers reported the highest effect sizes for graduation rates, compared to other large-scale dropout prevention programs. The effect sizes for CIS are conservative, considering that CIS's effect sizes are reported at the school level and the other What Works Clearinghouse reviews were done at the student level (i.e., the greater the aggregation of results, the more difficult it is to show impact). As the National Evaluation team obtains student-level results from the experimental

[6] National Evaluation staff have been engaged in the What Works Clearinghouse Dropout Review since 2003, and while CIS has not yet been reviewed, Caliber has staffed leadership positions for this review as well. Effect sizes for CIS outcomes in this report contain statistical conversions based on methods used in similar What Works Clearinghouse reviews.

[7] Effect sizes represent a standard measure to compare the magnitude of impacts between programs by comparing the net change between treatment and comparison groups in terms of pooled standard deviation units. CIS high implementers reported an effect size of .12 for graduation rates.

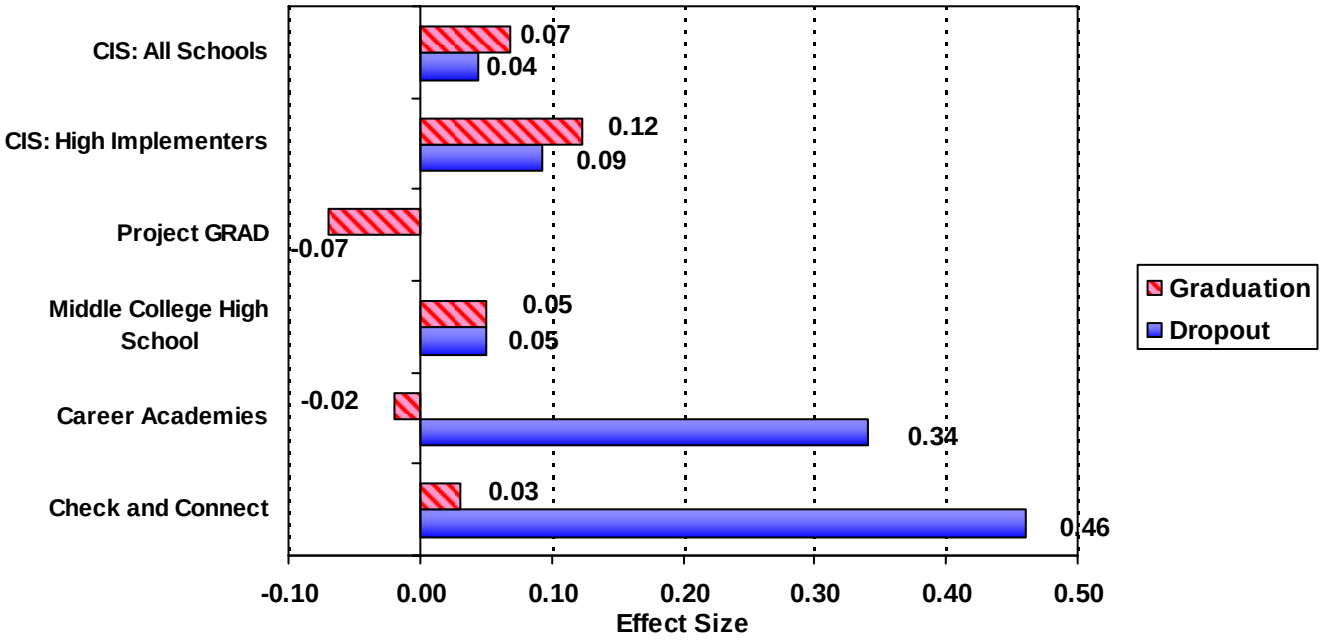
study (i.e., using students who received intensive, sustained case management), these effect sizes may very well expand.

Interestingly, the programs reviewed by the What Works Clearinghouse with the largest effects on high school completion demonstrated little or no effect on high school graduation rates. At the time of this writing, the three dropout prevention programs shown to have the greatest effect on high school completion were:

- *Talent Search*: Positive effects on high school completion (effect size: .43); however, no data were presented on high school graduation vs. GED completion.
- *JOBSTART*: Potentially positive effects on high school completion (effect size: .36), but a negative effect on high school graduation rates (effect size: -.36).
- *New Chance*: Potentially positive effects on high school completion (effect size: .20), but a negative effect on high school graduation rates (effect size: -.27).

Given that CIS has a measurable effect on high school graduation rates, the expectations for favorable findings are very promising.

Exhibit 55: Dropout and Graduation Effect Sizes -- CIS Compared to Other Large-Scale Dropout Programs



- **Finding 3.2: The reduction in dropout rates reported by CIS schools in this study is strong relative to other dropout prevention programs reviewed by the What Works Clearinghouse (US DOE).**

  Overall, CIS schools reported success in lowering dropout rates. CIS schools implementing the model with a high degree of fidelity (i.e., "high implementers" as defined in the implementation study) had considerably greater effects on reducing dropout rates than other CIS schools (i.e., "partial implementers"), suggesting that the CIS model is working.

  Although CIS was not the top performer in reducing dropout rates as shown in Exhibit 55, it should be noted that Check & Connect (the WWC's top performer in reducing dropout) uses a model similar to CIS. The program's components of "checking" with students to ensure that they are going to school and "connecting" the student with resources is quite similar to the core CIS model. However, Check & Connect, for all of its successes in reducing dropout rates, did not have as large an effect on completing high school as CIS.

When making any side-by-side comparisons between organizations and programs, it is helpful not only to identify the most successful programs, but also the most successful programs for the price. Table 27 compares CIS to other peer organizations included in the What Works Clearinghouse.

TABLE 27: PEER ORGANIZATION COMPARISON

Program	Cost Per Student	Number of Schools	Number of Students
CIS	<$200	3,400	1.2 million
Career Academies	$600	1,600 high schools	48,000-96,000+
Check and Connect	$1,400	2 currently	Not given

CIS offers services available to all students at the whole-school level (Level 1) as well as targeted, sustained services at the student level (Level 2). Career Academies and Check and Connect offer "Level 2" services, using CIS definitions. Consequently, the cost per student in Table 27 represents more cost-intensive services for the latter two programs than for CIS. The results of this report suggest that CIS's mix of low-touch, Level 1 services and concentrated, Level 2 services may be comparably as effective as the more cost-intensive Level 2-only service approach of other programs.

Conclusion

As results from the other studies that make up the National Evaluation of CIS become available, we will be able to build on these school-level findings. Currently, three student-level experimental studies are being conducted in Jacksonville, Florida, Austin, Texas, and Wichita, Kansas. These studies will provide an even higher standard of evidence for determining the effectiveness of the CIS model, and will help corroborate findings from the school-level studies.

Given that CIS is demonstrating impacts on entire schools – even when not all students are receiving intensive, case-managed CIS services – we anticipate that the student-level findings may be even more compelling. The experimental studies will allow us to say for the first time whether CIS *causes* impacts at the student level. By making this link between what CIS does and how it affects students, their families, and their schools, we will be able to determine the precise impacts of the program.

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Appendices

Appendix A: Quasi-Experimental Design Paper

Appendix B: Site Coordinator Survey

Appendix C: Typology Report

Appendix D: Data Alignment

Appendix E: Natural Variation Study Profiles

Appendix F: Locale Profiles

Appendix G: Race/Ethnicity Profiles

Appendix H: School Type Profiles

Appendix A: Quasi-Experimental Design Paper

Communities in Schools National Evaluation

Approach to the CIS Quasi-Experimental Design

Prepared by:

Caliber, An ICF Consulting Company
10530 Rosehaven Street
Suite 400
Fairfax, VA 22030-2840
Tel: (703) 385-3200
Fax: (703) 218-6930

April, 2006

APPROACH TO THE CIS QUASI-EXPERIMENTAL STUDY

I. OVERVIEW OF THE CIS NATIONAL EVALUATION

Communities in Schools, (CIS) Inc. is a nationwide initiative to connect needed community resources with schools to help students, particularly those identified as at-risk, successfully learn, stay in school, and prepare for life. The CIS philosophy fosters a comprehensive, asset-based approach to strengthening youth through its five basic principles about what every young person needs and deserves (a one-to-one relationship with a caring adult; a safe place to learn and grow; a healthy start in life; a marketable skill to use upon graduation; and a chance to give back to peers and community) and through targeted interventions around dropout risk factors.

A national evaluation of CIS was designed to accomplish the following objectives:

- Demonstrate effectiveness of the overall CIS model and specific model components;
- Understand how different aspects of the CIS model contribute to success and how they could be enhanced to strengthen effectiveness;
- Help the national office enhance its strategies for supporting state offices, local affiliates, and sites, and help state offices enhance their strategies for supporting local affiliates; and
- Assist national and state offices and local affiliates in sustaining evaluation and seeking program funding.

To accomplish these objectives, a comprehensive, multi-level, multi-phased evaluation was designed. The conceptual framework for the evaluation can be visualized (depicted in Figure 1) as a three-level pyramid with base, middle, and top levels. Within each level are distinct but complementary components of the entire evaluation design. While each component is intended to address primary research questions (see Table 1), the strength of the CIS evaluation is in the totality of the design. That is, each component adds to our body of knowledge regarding the effectiveness of CIS as an initiative that champions the connection of needed community resources with schools to help students successfully learn, stay in school, and prepare for life.

Figure 1. Conceptual Framework for the CIS National Evaluation

As you move up the pyramid, the number of CIS sites involved decreases, while the methodological rigor increases. The base level generates descriptive information on the CIS Network, covering all key constructs in the logic models. The next two levels allow us to make more concrete judgments about causation, with the middle level focusing on school-level outcomes, and the top level on student-level outcomes. However, the results from the middle and top levels are less easily generalizable to all of CIS. When all three levels are combined, a powerful and comprehensive set of information will be available about how and when CIS is effective and for whom.

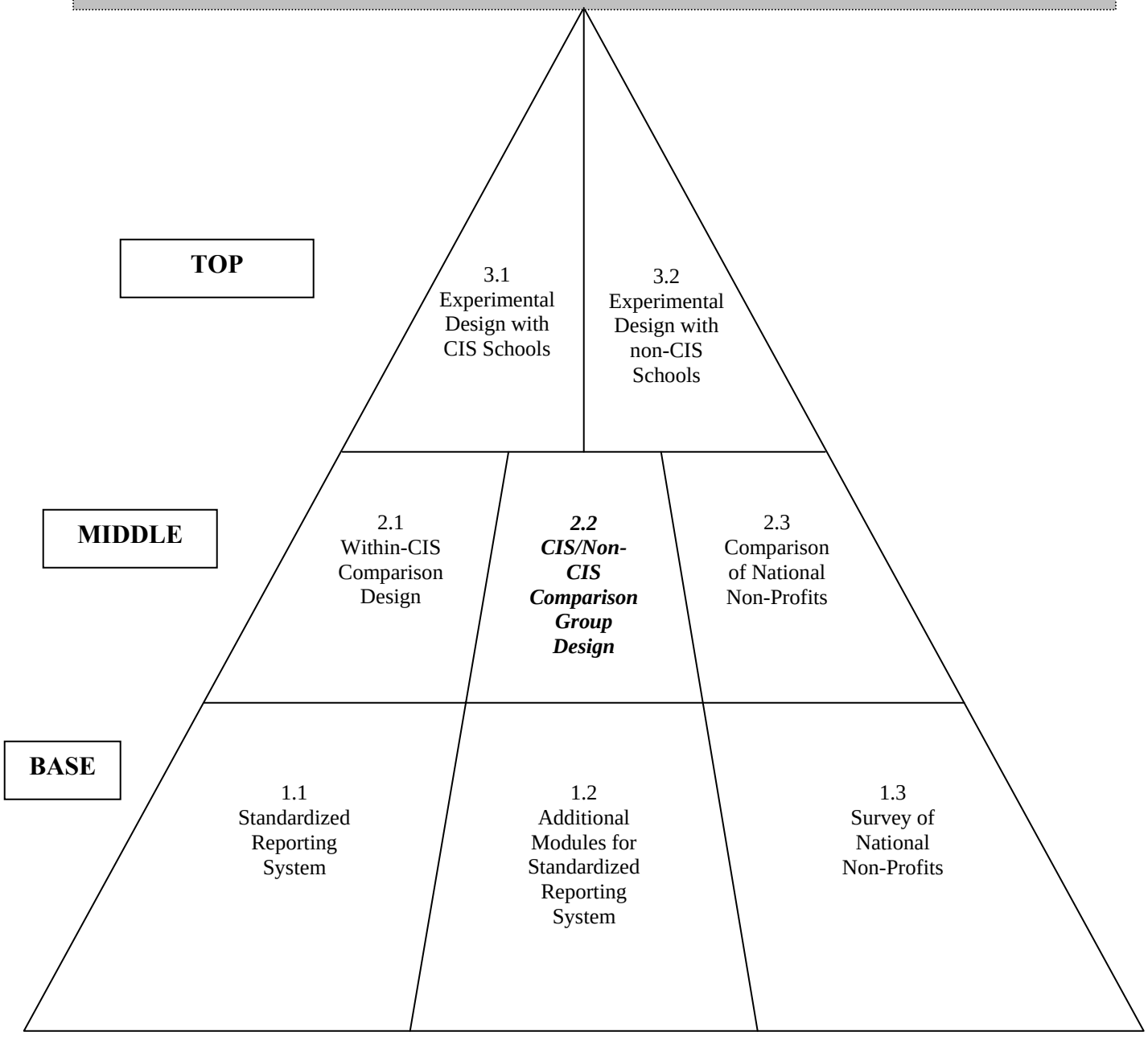


Table 1. Detailed Evaluation Questions to be Addressed by CIS Evaluation

	Base Level	Middle Level				Top Level
EVALUATION QUESTIONS	**Descriptive Study**	**Natural Variation Study: Within CIS Comparison***	***QED: CIS/Non-CIS Comparison Group Design***	**Case Studies of Sites Participating in the QED**	**External Comparison Study**	**RCT: Pilot Single CIS Site**
Domain #1: Strengthening the CIS Network at the State and National Level **What are the critical characteristics and relative contributions of the national office and state offices to CIS program operations? What are the implications of these findings for strengthening the operations of CIS at the national and state levels?**						
What is the need for support from national and state offices? To what extent are these needs being met currently?	×	☒		×	×	
How effective has the national office been in promoting new local affiliates (in locations without state offices) and new state offices?	☒	×		×	×	
How effective have the state offices been in promoting new local affiliates?	☒	×		×		
How effective have the national office and state offices been in conducting key network activities (e.g., developing partnerships and resources, monitoring, evaluation, reporting, marketing, and public relations)?	☒	×		×	×	×
How can these CIS mechanisms to carry out network activities be strengthened?		×		×	☒	×
Domain #2: Key Processes at the Affiliate and Site Levels **How successfully are CIS local affiliates and sites engaging in activities to maintain their operational health and more effectively serve students?**						
How successfully are CIS local affiliates engaging in long-term program improvement (such as the Q&S chartering process)?	×	☒				
How successfully are CIS local affiliates conducting marketing and public relations efforts? Do these efforts help affiliates establish partnerships, develop resources, and increase awareness of the local program?	×	☒		×		

Table 1. Detailed Evaluation Questions to be Addressed by CIS Evaluation

	Base Level	Middle Level				Top Level
EVALUATION QUESTIONS	**Descriptive Study**	**Natural Variation Study: Within CIS Comparison***	***QED: CIS/Non-CIS Comparison Group Design***	**Case Studies of Sites Participating in the QED**	**External Comparison Study**	**RCT: Pilot Single CIS Site**
How successfully are CIS local affiliates assessing the need for and receiving training and technical assistance?	☒			×		
How successfully are CIS local affiliates expanding services to more sites or to more students in existing sites?	×	☒		×		×
How successfully are CIS local affiliates involving local boards of directors in oversight and strategic planning?	×	×		☒		
To what extent is CIS bringing in the community (partners, resources) into the schools? How effective are these partnerships in addressing need and creating positive outcomes?	×	☒		×		×
To what extent does CIS presence enable school personnel (teachers, administrators) to spend more time and focus on academics, as compared to non-CIS schools?				×		☒
Can any conclusions be drawn about optimal proportions of Level 1 and Level 2 services in a site?		☒		×		×
How successfully are student needs assessed and resources coordinated to meet those needs?		×		☒		
What is the most effective strategy for coordinating services within a site (i.e., full-time site coordinator vs. other strategies)?		×		☒		
To what extent do interventions address risk and/or protective factors?	×	×	×	☒		
To what extent does CIS engage families of youth? In what forms does this engagement take place?		×		☒		×
Domain #3: Key Outcomes for CIS Students and Schools **What inferences can be drawn about CIS model effectiveness for served youth, schools, and communities? What are the implications of these findings for providing support at the national, state, and local levels that will improve student outcomes?**						

Table 1. Detailed Evaluation Questions to be Addressed by CIS Evaluation

	Base Level	Middle Level				Top Level
EVALUATION QUESTIONS	**Descriptive Study**	**Natural Variation Study: Within CIS Comparison***	***QED: CIS/Non-CIS Comparison Group Design***	**Case Studies of Sites Participating in the QED**	**External Comparison Study**	**RCT: Pilot Single CIS Site**
What are the rates of attendance, discipline, dropout, promotion, and graduation and the mean GPAs at CIS schools/sites?		×	☒			☒
• *How do these rates vary by location, funding levels, state office presence, or other factors?*		×	☒			
• *How do these rates compare to non-CIS schools, or to state or national averages?*	×	×	☒			
• *What are the ranges of rates of individual attendance, discipline, dropout, and promotion?*		×	☒			☒
• *How do these rates differ by type and frequency of services offered?*		×	☒			☒
• *How have these outcomes changed over time?*		×	☒			☒
What impact does CIS have on the overall school climate, including family involvement? How do these findings differ when comparing groups of students by level of involvement or by involvement/non-involvement in CIS?		×		×		☒
• What is the impact of school climate on student outcomes?		×		×		☒
• What site strategies and services are most effective in accomplishing these outcomes?		×		×		☒

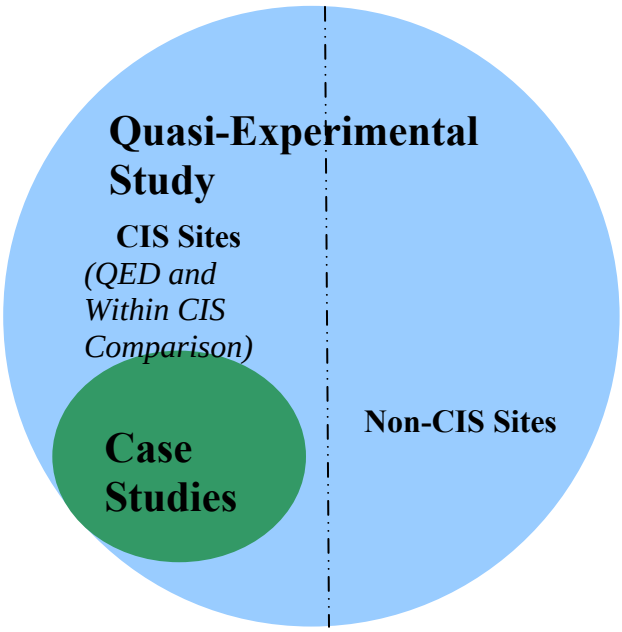
☒: Primary study that will answer this research question.
×: Secondary study that will add context to our findings on this question.

2. QUASI-EXPERIMENTAL STUDY

This document presents the approach to the quasi-experimental study or design component 2.2 of the evaluation pyramid shown in Figure 1, within the context of other mid-level pyramid activities. Details of additional design components are presented in other evaluation documents.

The mid level of the pyramid is designed to provide critical information and insights as to the operation and effectiveness of Communities In Schools at the site (school) level. Student level outcomes are addressed in the experimental design phase—the top level of the pyramid. Three essential components at the mid level of the pyramid combine to reflect the richness and complexity of CIS at the site level. Figure 2 demonstrates the interconnection among the three components.

Figure 2. Interconnection of Mid Level Components of the Evaluation Pyramid



At the center of the three strategies is the Quasi Experimental Design (QED) which is the focus of this paper. The QED is a comparative study of school level outcomes in CIS and matched, non-CIS sites. While the QED will identify differing outcomes in these two groups, it is not sufficient to make definitive statements about the CIS process and the relationship between this process and positive outcomes. The other two mid-level strategies provide that perspective. These include a within-CIS comparison study and case studies of select CIS sites. The within-CIS comparison will look closely at the impact of various CIS implementation strategies on key system, school, and student level outcomes. The case studies will provide a detailed analysis of the specific services, interventions, and contexts that led to results. The case studies will involve primary data collection through on-site observations, interviews, and focused surveys with key stakeholders (e.g., State offices, local affiliate personnel, CIS coordinators within schools,

principals, and teachers). More detailed information on these components intended to specifically supplement the quasi-experimental design are presented in Section 3 of this document.

This section of the document describes in detail the CIS quasi-experimental design, including the purpose of the design, description of the methodology used to match CIS and comparison or non-CIS sites, sample selection, and the statistical power that will be possible with the given design.

2.1 Purpose of the Quasi-Experimental Study

This quasi-experimental study will document the impact of CIS on important and relevant outcomes, including achievement, attendance, graduation rates, and suspensions and other behavioral outcomes. To estimate the program impact with the greatest possible precision, we would use a randomized experimental design, which would assign at random schools interested in implementing CIS to a "treatment" or "control group" condition. This type of design, however, is not possible to implement in the current context. Because there are other similar schools that are not being served by CIS, though, we may do the next best thing and use a sample of these similar schools as quasi-experimental controls (Cook & Campbell, 1979). By identifying similar non-participating comparison schools that are matched to the CIS schools on variables such as free-lunch participation rate, prior achievement levels, and other student background characteristics we will be in a good position to estimate the value-added effect of the initiative successfully. The question that the quasi-experimental study will seek to answer is:
How do CIS schools compare to non-CIS schools on school-level outcomes including, academic achievement, promotion, graduation, dropout, and discipline for elementary, middle, and high schools? It is important to note that the quasi-experimental design is focused on comparing school-level outcomes for CIS and comparison or non-CIS schools. The design does not attempt to address the relationship between processes and outcomes but instead focuses on the value-added of having CIS in a school. As discussed previously, associations between processes and outcomes will be examined through case studies of a subset of CIS schools participating in the quasi-experimental design and the within CIS comparisons or natural variation design (see Section 3 for more detail).

2.2 Methodology for Matching CIS and Comparison (Non-CIS) School Sites

CIS most directly targets students. Therefore, our criteria for matching will include important information about students and other general characteristics of their schools. The criteria we will use to match control schools to the CIS schools will be based on the following data from the school year prior to implementation of CIS:

- Aggregated school-wide reading and math achievement scores expressed as normal curve equivalent (NCE) scores;
- Percent of students at the school eligible for the free or reduced-price lunch program;
- Racial/ethnic composition of student body;
- School attendance rate;
- Percent special education students at the school;
- Drop out rate (or equivalent measure such as cumulative promotion index); and
- Total enrollment at the school.

CIS and comparison schools will be matched based on the same achievement, student background, and school information.

The matching of CIS and comparison schools will be done through a precise algorithm applied through a computer-based macro, called %match, written by Bergstralh, Kosanke, and Jacobsen (1996), following the work of Rosenbaum (1989). The procedure matches treatment cases (in this situation, CIS schools) to control cases to minimize the overall "distance" between the set of treatment cases and the set of control cases. "Distance" in this macro can be defined in a number of ways; we plan to use the absolute difference in values on the matching variables. The macro supports both the greedy and the optimal matching algorithms. In the greedy algorithm, each treatment case is matched with a control without replacement. What this means is that after a treatment and control case have been matched to each other, they are removed from further consideration. In contrast, the optimal algorithm will continue to consider the previously paired cases, re-pairing them if it is more efficient to do so.

The optimal algorithm is prohibitively computer-intensive for very large numbers of cases. However, in a situation such as ours, with a relatively small number of CIS and comparison schools to match, we will be able to perform the optimal matching algorithm efficiently and productively. This method is preferred, in that it improves the matching by 5 to 10% over the results produced by the greedy algorithm (Bergstralh et al. 1996; Rosenbaum, 1989).

We may explore a matching procedure to ensure the best possible matches on one critical criterion, for instance pre-implementation achievement, attendance rates, or dropout rates. In this application, we will match all CIS schools as closely as possible to the comparison schools on the reading or math scores, attendance rates, or cumulative promotion index scores. This method improves matching on these characteristics, but may cause poorer matching on the other criteria. A second method we will use will identify the best possible matches on all criteria. Therefore, the first matching procedure, in a way, will weight the math, reading, attendance, or drop out

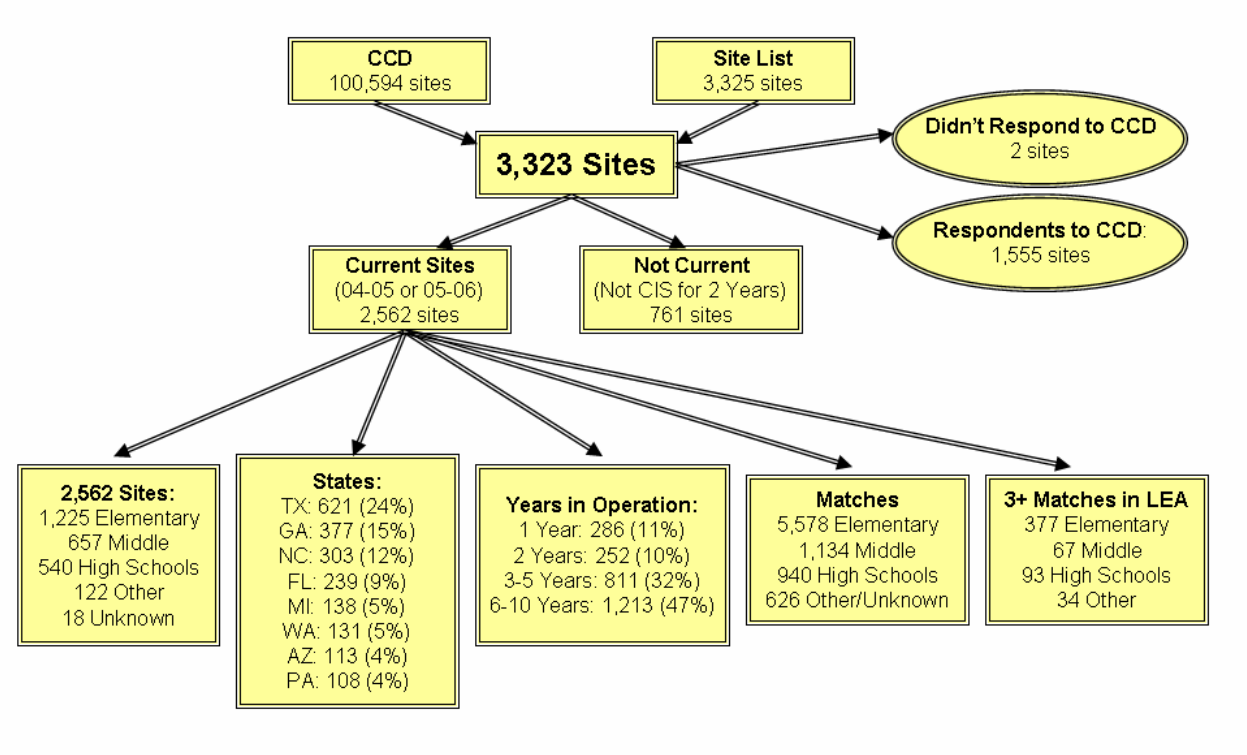
outcome more heavily than the other criteria and the second procedure will weight all criteria equally in the match.

The macro matches schools one on one and provides a distance score as a summary measure of the difference between the two schools that were matched. The distance measure for each pair of matched CIS and control schools is equal to the sum of their differences on all the matching criteria. Our matching criteria, though, will have very different values. For instance, it is not unusual for schools to have values on the enrollment variable in excess of 500 or 1000 and values on the attendance rate of 0.95. Therefore, before matching the schools, we will standardize each matching variable by subtracting its grand mean from each school's individual mean and dividing the result by the pooled within-group standard deviation. These z-scores express in a common metric the number of standard deviation units a school's score is from the overall mean. By transforming all matching variables to this same common z-score metric, we, in effect, weight each matching variable in a similar way. Without doing this, imprecise matches on variables with larger values, like enrollment, would produce much larger distance scores than would imprecise matches on variables with smaller values. As a result, matching based on the non-standardized variables would inappropriately weight the variables with larger values more than the variables with smaller values.

2.3 Study Sample Selection

Knowledge of the potential sample sizes for the study is needed to assess the statistical power of the study and the overall feasibility of the study design. A number of factors must be considered in defining the applicable sample. This process of defining the sample of interest is outlined in the flow chart displayed in Figure 3.

Figure 3. Sampling Frame Statistics for CIS National Quasi-Experimental Design



We begin with a group of 3,325 CIS sites obtained from the site lists. First, we must limit our sites to those for that have available pre-intervention data from the Common Core of Data (CCD) on which to match the CIS and comparison schools. Obviously, if these data are unavailable for CIS sites or potential comparison sites, we will not be able to consider them in the quasi-experimental study. Also, it is important to note that the CCD provides the necessary demographic and school characteristics on which to match the CIS and control schools, but other school-level achievement data will be necessary. These data will need to be obtained from state web sites in order to complete the pool of information needed to match schools. In Figure 3, we note that the availability of data from the national CCD is quite good and should not be a limiting factor in the selection of sites for the sample. The only potential challenge will be obtaining accurate information on "recent" implementers (i.e. CIS sites that implemented their programs within the last two years). Because the CCD is only currently available up to the 2003-2004 school year, we may have to use slightly dated information for matching purposes. However, we suspect that information in the CCD does not change dramatically from year to year and therefore, will have close approximations of the current demographics/socioeconomic makeup of the student body.

The availability of the various data from state web sites is provided in Table 2. In this table, the year during which data collection began for the outcome is displayed. There are missing data elements for a number of states and many states have not begun collecting important data we plan to use for matching, like achievement and attendance, until 2000 or later.
These limitations need to be considered in greater detail. One possibility is to eliminate pre-intervention matching on outcomes like achievement and attendance. However, the recent literature on quasi-experimental studies has suggested that bias is lower if pre-intervention measures of the outcomes under study are used to adjust for initial differences (Glazerman, Levy, & Myers, 2002). Thus, although more sites with missing data will be lost due to the inclusion of pre-intervention measures of outcomes such as attendance and achievement, it would be highly desirable in that it would allow us to obtain more precise matches.

Second, we have decided to limit our sample of CIS schools for the quasi-experiment to those that are currently implementing CIS. That is, we have included only those sites that reported implementing CIS during the 2004 - 2005 or 2005 - 2006 school year. This selection criteria is important to ensure the results of the quasi-experimental study are based on findings from schools that continue to implement CIS, regardless of their start dates, and are not based on schools that have since dissolved CIS for whatever reason. The results from these sites will be suggestive of outcomes from schools that have had the ability to sustain the CIS model over time.

Third, in addition to knowing about CIS sample sizes, we also need to know the numbers of available comparison schools within each affiliate. The recent literature on quasi-experimental studies is also clear in suggesting that bias is lower when the comparison group is locally matched to treatment or drawn from a control group of a similar or same program at a different site (Glazerman et al., 2002). Therefore, we will attempt to make within-district matches between CIS and comparison sites whenever possible. In order to produce high-quality matches between CIS and comparison schools, we need a considerably higher number (three times the number or higher would be best) of comparison schools than CIS schools within each district. This is necessary so that we have a number of potential comparison schools to choose from within each district in order to find the best possible match for the CIS schools. In instances where there are less than 3 potential comparison sites within the same district, then we will have to opt for finding comparison schools from adjoining districts, in some cases outside the local affiliate area. As shown in Figure 3, the 2,562 currently operating sites for which we have CCD information have a relatively large number of potential matches.

Table 2. District and School Outcome Data Available by State and Year

State	Dropout		Attend		Behavior		Suspensions		Achievement		Promotion		Graduation		Post-grad Placement		SAT scores	
	Dist	Schl	Dist	Schl	Dist	Schl	Dist	Schl	Dist	Schl	Dist	Schl	Dist	Schl	Dist	Schl	Dist	Schl
Alaska	1992	1992	1992	1992					1992	1992			1996	1996				
Arkansas	2000	2000	2000	2000	2000	2000			2000	2000	1999, 2002	1999, 2002	2000	2000			2000	2000
Arizona	**1995**	**1995**		**1997**		**1997**			**1997**	**1997**		**1997**	**1997**	**1997**				
California	1992	1992			2001	2001			2000	2000			1993	1993			2000	2000
Connecticut	1998		1996						2000	2000			2002	2002	1996		1999, 2003	1999, 2000, 2003
Delaware	1991	2003	1991	2003			2003	2003	2003	2003			2003	2003			2003	2003
Florida	**1997**						**1997**		**2001**	**2001**	**1997**		**1997**		**1997**			
Georgia	**2003**	**2003**	**2003**	**2003**					**2000**	**2000**	**2004**	**2004**	**2003**	**2003**	**2004**	**2004**	**2001**	**2001**
Iowa	1995								None	None			1995		2002			
Illinois	2002		2002		2002		2002						2001	2001			2001	1996
Indiana	1990	2000	1990	1996	2000	2000	2000	2000	2004	1999			2000	2000	2000	2000	2000	1997
Kansas	1993	1993	1994	1994	1994	1994	1994	1994	2001	2001			1993	1993				
Louisiana	2002	2002							2001		1998-2001						1999	1999
Maryland	1993	1993	1993	1993					2002	2002			1996	1996	2002	2002		
Michigan	**2004**	**2004**	**2004**	**2004**					**2004**	**2004**			**2004**	**2004**	**2004**	**2004**		
Mississippi			1996						1999	1999			1996				1999	1999
Nevada	2004	2004	2004	2004	2004	2004			2004	2004	2004	2004	2004	2004				
New Jersey	1995	1995	1995	1995			1995	1995	1995	1995			1995	1995	1995	1995	1995	1995
New York									1999	1999			1999	1999				
N. Carolina	**2000**	**2000**	**2002**	**2002**	**2003**	**2003**	**2003**	**2003**	**1997**	**2002**			**2002**	**2002**	**1999**	**1999**	**1996**	**1996**
Ohio			2003	2003	2001	2001	2001	2001	2003				2002	2002				
Oklahoma	1997	1997			1997	1997			1997	1997			1997	1997			1997	1997
Pennsylvnia	**1996**	**1996**	**1996**	**1996**	**2000**	**2000**	**2000**	**2000**	**1996**	**1996**			**2002**	**2002**	**1996**	**1996**	**2001**	**2001**
S. Carolina	2001	2001	2001	2001	1997	1997	2001	2001	1998	1998	2001	2001	2003	2003			2000	2000
Tennessee	1995	2000	1995	2000	1996	2000	1996	2000	1994	2000	1995	2000	2003	2003			1995	2000
Texas	**1991**	**1991**	**1991**	**1991**					**1991**	**1991**	**2004**	**2004**	**1991**	**1991**			**1991**	**1991**
Virginia	1997	2002	2000	2002	2001				1998	1998					1997			
Washington	**1993**	**1993**	**2003**	**2003**					**1997**	**1997**			**1993**	**1993**				
W. Virginia	1997	1998	1997	1998					198	1998							1997	1998

However, within any given district served by a local affiliate, there tends to be many more potential matches for elementary schools than for middle and high schools. Indeed, approximately 31% (or 377) of the 1,225 CIS elementary schools have 3 or more potential matches within their district. Only 10% of middle schools and only 17% of high schools have 3 or more potential matches. Therefore, the overall size of the pool of CIS and matched middle and high schools—and the degree to which it is representative of the larger CIS network—along with the quality of the quasi-experimental matches will be considerably lesser than the size and quality of the sample for the elementary school analysis.

Fourth, we must consider how we are operationalizing the CIS treatment in terms of both the number of years the initiative was implemented and over what historical period it was implemented. First, with respect to the number of years of implementation, Fullan (2001) suggested that implementation of school reform occurs developmentally over time. Significant change in the form of implementing specific innovations can be expected to take a minimum of two or three years. As the reform process unfolds, Fullan contended that successful schools typically experience "implementation dips" as they move forward. The implementation dip is literally a dip in performance and confidence as one encounters an innovation that requires new skills and new understandings.

Similarly, the meta-analysis of the comprehensive school reform evaluation literature by Borman, Hewes, Overman, & Brown (2003) suggested that effects of 29 widely used reform models were somewhat strong during the first year of implementation. During the second, third, and fourth years of implementation, though, the effects declined slightly but, essentially, remained the same. After the fifth year of implementation, the effects of school reform began to increase substantially. Schools that had implemented reform models for five years showed achievement advantages that were nearly twice those found across the overall sample of schools, and after seven years of implementation, the effects were more than two and half times the magnitude of the overall impact of $d = .15$. Though literature relating implementation of school reforms and achievement outcomes is limited, and not without some qualifications, it suggests the potential that reform efforts take some time to produce school-wide achievement effects and that many schools may experience performance lags during the early years of implementing innovations.

This previous literature suggests that implementation and effects are likely to be found after 3 to 5 years of implementation. Thus, we would suggest studying a similar definition of implementation across all schools involved in the quasi-experimental study so that we might gain a fair estimate of the effect of CIS after it has had a chance to be properly implemented and to achieve its intended impacts. Again, though, this will limit the number of school sites that are potentially eligible for the study. As Figure 3 indicates, a total of 811, or 32% of the 2,562 sites have implemented CIS for 3 to 5 years.

The inclusion of some schools from the group implementing from 6 to 10 years may also be possible, but there are at least two limitations to keep in mind regarding this group. First, is the other issue we raised initially regarding years of implementation; that is, the historical period in which CIS was implemented. The schools that began implementing 6 to 10 years ago started their programs under very different conditions than those that exist today at CIS National. Is it legitimate and informative to combine schools that started implementing CIS 10 years ago, for instance, with schools that adopted CIS only 3 years ago? Do we learn something by studying the relatively distant past of CIS, or are we better served by studying more recent implementations?

In addition to these concerns, we will have other notable problems related to schools that began implementing CIS many years ago. First, one fifth (20%) of the CIS schools eligible for the quasi-experimental study started implementing their program during some undetermined year before 1997-1998. At present, these schools have unknown pre-intervention years and would not be extremely useful if we employ the proposed pre-post design. While we could survey the approximately 513 sites to determine the specific year CIS implementation began, obtaining public use outcome data for pretest years would be difficult. As shown in Table 2, there are few states that have the needed outcome data, such as achievement and attendance that we would use for matching and statistical controls for the long-term implementers.

Further, performing matching on varying pools of comparison schools across multiple years would create some serious logistical problems that require attention. We would violate the statistical assumptions of independence of observations if, for instance, we matched a comparison school's data from 1997-1998 to the data for a CIS school that had implemented the year before in 1996-1997 but also found that the same control school's data from 1998-1999 was the best match for a CIS school that had begun implementation after that year. The comparison school would be duplicated in the analysis, which would violate the assumption of independence. The matching process would need to rely on a far more restrictive and sophisticated set of procedures to prevent problems such as this.

Based on the many complications related to the year of implementation, we suggest an approach that will yield more defensible, consistent, and interpretable results. That is, we suggest that we pool together relatively recent examples of CIS implementations that occurred across three-year spans from the following years:

- 1998-99 (pre) to 2001-02 (post);
- 1999-00 (pre) to 2002-03 (post);
- 2000-01 (pre) to 2003-04 (post); and
- 2001-02 (pre) to 2004-05 (post).

Outcomes for these CIS schools and their matched comparison schools would provide historically recent and relevant data to inform the network. The design would also define a common definition of CIS implementation, occurring across three years in the relatively recent history of CIS National. Any dissimilarities across these four "cohorts" of CIS schools could be easily accounted for using a series of three dummy codes in the analysis to represent, and hold constant, any differences across the four distinct years of implementation that may have influenced the outcomes. Finally, these years would be the ones in which the state data sources would be most productive for providing the necessary pre-intervention measures of the outcomes, which we noted earlier are key variables for producing the best possible quasi-experimental matches. Table 3 shows the number of CIS sites represented in each cohort.

At a meeting of the Evaluation Team and the National Evaluation Advisory Committee (NEAC), the possibility of limiting outcome data collection to a relatively small number of states that (1) contained the largest number of CIS sites and (2) collected similar and diverse outcome data related to key behavioral outcomes beyond achievement and graduation was discussed. As the results in Figure 3 illustrate, 79% of the 2,562 sites currently implementing CIS come from a total of eight states: Texas, Florida, North Carolina, Georgia, Michigan, Washington, Arizona, and Pennsylvania. Therefore, it is possible to choose a small number of states that have a large number of CIS sites. Forging relationships with officials from these states may be an effective means for obtaining the data we need in the format in which we need it.

The bolded states and outcomes in Table 2 indicate the years in which data collection began for the various outcomes we might consider. A range of outcome data is available across these states, but there are some limitations in terms of the years in which data collection began and the outcomes for which data are available. To reduce attrition in our sample size, additional follow-up with officials from these states will be conducted to determine the degree to which the data are comparable from state to state and available across the years demanded by the proposed design (i.e., 1998-99 through 2004-05). At minimum, we hope to obtain outcome data on the following outcomes: achievement, attendance, graduation or "promoting power" (for high schools), and behavioral and suspension data.[8] Because it may be difficult to obtain pre-intervention measures of all desired outcomes, an option to the study is to conduct post-test only comparisons for the behavioral measures. For this same reason, it may not be possible to match

[8] Promoting power compares the number of seniors enrolled in a high school to the number of freshmen four years earlier (or three years earlier in a 10-12 high school). It is currently the best available estimate of school-level graduation rates that can be used to compare high schools within and across states (Balfanz & Legters, 2004).

Table 3. Three-Year Implementation Cohort Sampling Frame

Cohort	Pretest School Year	Posttest School Year	Number of Sites: Total	Number of Sites: Eight Key States	Number of Sites: Still in Operation	Number of Sites Still in Operation: Eight Key States
1	1998-1999	2001-2002	286	227	240	192
2	1999-2000	2002-2003	263	204	203	162
3	2000-2001	2003-2004	230	200	199	173
4	2001-2002	2004-2005	307	214	307	214
TOTAL	**1998-1999**	**2004-2005**	**1,086**	**845**	**949**	**741**
School Level						
Elementary			546	426	470	359
Middle			288	212	252	195
High			185	148	173	140
Other			55	50	47	42
Unknown			12	9	7	5
TOTAL			**1,086**	**845**	**949**	**741**
State						
Alaska			4	0	4	0
Arizona			36	36	29	29
Florida			106	106	87	87
Georgia			219	219	199	199
Iowa			1	0	1	0
Illinois			16	0	16	0
Indiana			29	0	29	0
Kansas			19	0	17	0
Michigan			67	67	51	51
Mississippi			2	0	2	0
North Carolina			128	128	122	122
New Jersey			3	0	2	0
New York			43	0	42	0
Ohio			23	0	16	0
Oregon			2	0	2	0
Pennsylvania			30	30	28	30
South Carolina			87	0	65	0
Tennessee			2	0	2	0
Texas			226	226	194	194
Virginia			9	0	9	0
Washington			33	33	31	33
West Virginia			1	0	1	0
TOTAL			**1,086**	**845**	**949**	**741**

CIS and comparison schools on all pre-intervention measures of the outcomes. At a minimum, we believe that schools should be matched on widely accessible and available information including prior achievement, attendance, and "promoting power."

2.4 Statistical Power

The most basic statistical analysis that we will use for assessing the quasi-experimental effects of CIS is a one-way fixed effects analysis of covariance with 2 levels. Although CIS and comparison schools will be matched on many important variables, we also plan to statistically control for any remaining differences. We will use at least one covariate, pre-intervention achievement, to help account for some proportion of random variance. This will help produce greater precision for our impact estimates and will generate greater statistical power to detect the quasi-experimental treatment effects. Based on prior work with national and state data sets, we estimate very conservatively that a school-level achievement pretest will explain 50% of the variability on the measured outcomes.

Using the low estimate of 50% of the variability explained by pretest, we conducted our power analysis for a one-way fixed effects analysis of covariance. We assumed an effect size (f) of 0.20 and set the criterion for significance (alpha) at a *p*-value of .05. The analysis of variance was assumed non-directional (i.e., two-tailed). In Table 4, we provide the power table for the design. CIS status includes 2 levels, comparison and treatment, with a sample of 100 cases per level. Without a covariate, the design yields acceptable power of 0.80. By using analysis of covariance, the expected effect size of 0.20 is increased to an adjusted effect size of 0.28. We will have power equivalent to near certainty, 0.98, to detect this covariate-adjusted effect. In other words, if the CIS treatment has an impact on the outcomes that is equivalent to an effect size of 0.20 or greater, this design, comprised of 100 CIS and 100 control schools for each school level (elementary, middle, and high school), will almost certainly be capable of detecting it. Based on the information shown in Table 3, the potential CIS sample would include 359 elementary, 195 middle, and 140 high school sites with similar numbers for the comparison groups. While this is the desired sample size for the study, anticipated attrition due to missing data will likely reduce the sample size, in particular, for high schools, thus possibly decreasing the ability to detect an effect size of .20 or greater for some of the analysis. In these cases, we may be limited to correlational findings, that is results that identify strong relationships between CIS implementation in high schools and desired outcomes, such as reduction in drop out rates. These findings would be further explored through the within-CIS study, the case studies, and ultimately, the experimental study within a single or multiple CIS high school sites.

Table 4. Power Estimates for Quasi-Experimental Study Given a Projected Effect Size on the Outcomes of *d* = 0.20.*

Factor Name	Number of levels	Cases per level	Effect size f	Power	f Adjusted for covariates	Power adjusted for covariates
CIS/Comparison	Levels= 2	100	0.20	0.80	0.28	0.98

Within cell SD= 1.00, Variance= 1.00
Number covariates= 1, R-squared for covariates= 0.50
Cases per cell= 100, Total N of cases= 200
Alpha (2-tailed)= 0.05

Power computations: Non-central F

*Based on the power estimates, 100 CIS and 100 comparison schools will need to be selected for each of the three school levels—elementary, middle, and high school.

3. SUPPLEMENTS TO THE QUASI-EXPERIMENTAL DESIGN

In order to enhance our understanding of the impact of CIS on student-level outcomes, it is important to gather information on the CIS processes. While new data collection is not feasible with the anticipated 600 schools (300 CIS and 300 comparison) needed for the quasi-experimental design, additional design components will be implemented as part of the overall evaluation and specifically, the middle level of the evaluation pyramid (see Figure 1) to allow us to test the relationship between processes and outcomes. These include the within-CIS comparison design or natural variation design and the case studies. A brief description of each component is presented below to demonstrate how each will supplement the quasi-experimental study.

Within CIS Comparison (Natural Variation) Design

The middle level of the pyramid will allow us to understand what common strategies are in place at CIS sites, and more importantly, in what circumstances those strategies produce positive outcomes. Our challenge in this part of the evaluation is not to identify a single ideal strategy for CIS service delivery; rather, it is to identify best practices within those strategies. We recognize that the strength of the CIS model lies in its flexibility and that sites must have some latitude to fill the gaps in need in their communities. Throughout this evaluation, we hope to better inform the field about what strategies are working in given circumstances and ensure that best practices are replicated.

The within CIS comparison (Level 2.1 in the evaluation pyramid), is also called the "natural variation" design. The purpose of this design is to take advantage of the variation in sites' implementation of the CIS model and identify which service delivery models, typologies, or combinations of services lead to positive outcomes. The natural variation model will be much stronger if we have a deeper understanding of processes beyond the base level Critical Processes Survey (e.g., the CPS does not cover dosage of services). This natural variation study will therefore require additional data collection, and since we are trying to keep reporting burden to a minimum, we agreed to limit this survey to the sites participating in the quasi-experimental study. We believe that we have a sufficiently large sample in the quasi-experimental study to represent most variations in CIS service delivery models.

Once the additional processes survey is completed, we will be able to identify the relationship between context, processes, services/programs, and outcomes. The natural variation design will also serve as a complement to the quasi-experimental study and the case studies. Put simply, we can think of each one of these three components of the middle level of the pyramid as answering a different question:

- *Quasi-experimental study*: Where are CIS sites successful, compared to non-CIS sites?
- *Natural variation model*: What are we doing at these successful CIS sites?
- *Case studies*: How are we achieving success?

While the natural variation component provides us with information on the relationship between processes and outcomes, the results cannot be attributed outside the CIS Network. That is, we cannot attribute the differences in outcomes solely to CIS without a non-CIS comparison to rule out alternative hypotheses. This is where the quasi-experimental study described above will fill in the gap for the middle level of the evaluation framework. The case studies will serve to deepen our understanding of how particular processes lead to outcomes.

3.2 Case Studies

The case studies (a subset of both the quasi-experimental and within CIS comparison designs) will involve additional data collection regarding processes (e.g., service coordination/brokering, assessment, resource allocation, referrals and placements, training and technical assistance, etc.) and outcomes (e.g., assets) from a sample of CIS and non-CIS schools included in the quasi-experimental study. This information will be used to inform the interpretation of the overall findings from the quasi-experimental study. Additionally, the information will provide a greater understanding of how CIS works and what are the most effective strategies for achieving desired outcomes. The case studies will involve site visits to the selected CIS and non-CIS schools from

a sample of the eight states targeted for the quasi-experimental study. During the site visits, the Evaluation Team will conduct interviews with key CIS (e.g., representatives from the state offices, local affiliates, and school sites) and non-CIS (e.g., principals, teachers, service providers) stakeholders, focus groups with students, and administer targeted surveys (e.g., principal survey, teacher survey, service provider/coordinator survey, etc.). In addition to exploring answers to questions addressed by the quasi-experimental design (and the within CIS comparison design), the case studies will attempt to answer the following:

- How effective have the national office and state offices been in conducting activities to support local affiliates and local programming?
- What are the best strategies for a national organization, state office, and local affiliate to promote and support effective local programming?
- How do local CIS programs describe the CIS model? What are the processes and activities that characterize the CIS model as implemented at the local program level?
- What are best practices at the local program level for supporting effective programming intended to help youth learn, stay in school, and prepare for life?
- What are important lessons learned (what works, what doesn't work, and why) from local affiliates and local programs that can be shared with the field?
- What improvements are needed to the CIS Network at the national, State, and local-levels?

Together, the quasi-experimental study, the within CIS comparison design, and the case studies will provide the information necessary to understand the impact of CIS on school-level outcomes and the processes associated with positive changes in these outcomes over time.

3. NEXT STEPS

Once the quasi-experimental design is finalized, the immediate next step is to identifying the specific CIS and comparison schools within each of the eight states (name, location, etc.) for possible inclusion in the study. Once identified, comparison schools will need to be selected following the matching methodology described previously. The importance of matching CIS with comparison or non-CIS schools cannot be underestimated. The resulting matches are critical to the generalizability of the study findings. After specifying the study sample for each school level (elementary, middle, and high school), it will be necessary to work closely with the CIS state offices and local affiliates to begin accessing needed data not currently available through state web sites (see Table 2). Additionally, as the results of the quasi-experimental study begin to identify promising CIS sites, it will be important to work closely with the CIS state offices and

local affiliates to contact the local school districts and sample schools that will be targeted for the case studies in order to introduce them to the evaluation, obtain any necessary approvals for new data collection, and begin preparing for site visits.

Subsequent activities for the quasi-experimental study and supplemental components include continuing to retrieve public source data, select study sample, contact school districts/schools, develop new (modify existing) data collection instruments, conduct site visits, clean and analyze data, and prepare preliminary and final results. The anticipated timeline for the quasi-experimental study is shown in Table 5.

Table 5. Anticipated Quasi-Experimental Study Timeline

Activity	Month															
	2006									2007						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Complete retrieval of public source data																
Select school sites																
Notify districts/schools																
Develop new (modify existing) data collection instruments (case study sites only)																
Conduct site visits (case study sites only)																
Clean data																
Analyze data																
Report findings										△						▲

△ = Preliminary report

▲ = Final report

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Appendix B: Site Coordinator Survey
(Source of Data for Natural Variation Study and Typology of CIS Sites)

CIS SITE COORDINATOR SURVEY

The following survey is being conducted as part of the national evaluation of the CIS Network; it is a "new and improved" version of the Critical Processes Survey that was administered in January 2006. The results of this survey will help CIS National understand the types of sites in the Network, how the Network is changing, and how services delivered at your school are related to student outcomes.

The survey has three main sections:

> **Section 1** addresses short-term services that are widely accessible by all students in the school (i.e., Level 1 services).
>
> **Section 2** addresses targeted and sustained intervention services that are provided for students enrolled in specific CIS initiatives/programs (i.e., Level 2 services).
>
> **Section 3** includes general questions about school context.

The results of this survey will be presented in the aggregate, and **no one (including CIS National, your State Office, or your local Executive Director) will be able to see your responses.** Questions or comments about the survey can be sent to Allan Porowski (aporowski@icfi.com), project director of the CIS National Evaluation. We appreciate your answering each question to the best of your ability. Thank you for completing this survey!

1. Please indicate the school where you coordinate services, the name of your local CIS affiliate, and the state where your program is located.

   School: _____
   Affiliate: _____
   State: _____

2. Program name (optional): _____

Respondent Background

3. Name of Person Completing Survey and Email Address:

   Name: _____
   Email address: _____

4. Today's Date (mm/dd/yyyy): _____

5. Who is your employer?
   - ❑ CIS
   - ❑ School district
   - ❑ Another organization
   - ❑ Other (please specify) _____

6. What is your job title? _____

7. How many years have you been in this position? _____

8. How many years have you been employed by – or assigned to – CIS? _____

9. What percentage of time do you spend coordinating CIS services **at this site**?

- ❑ 0%
- ❑ 1% to 25%
- ❑ 26% to 50%
- ❑ 51% to 75%
- ❑ 76% to 100%

10. How would you **best** describe your role as site coordinator?
    - ❑ I am responsible for coordinating multiple initiatives and services at my school (e.g., after-school program, mentoring program, tutoring program, service learning project)
    - ❑ I am responsible for coordinating a single initiative or service at my school
    - ❑ I am a case manager and primarily responsible for a specific group of students
    - ❑ I am based in my affiliate office and responsible for coordinating services at multiple schools
    - ❑ None of the above (please specify): _____

SECTION 1: SCHOOL-WIDE NEEDS, PLANNING, AND SERVICES

NOTE: This section addresses short-term services that are widely accessible by all students in the school (i.e., Level 1 services).

11. Does your **school** conduct an assessment of overall student needs?
    - ❑ Yes
    - ❑ No
    - ❑ Unknown

12. Does **CIS** conduct an assessment of overall student needs at your school?
    - ❑ Yes
    - ❑ No (*skip to #15*)
    - ❑ Unknown

13. How often does CIS conduct an assessment of overall student needs at your school?
    - ❑ Less than once a year
    - ❑ Once a year
    - ❑ More than once a year
    - ❑ Unknown

14. What types of information are considered when CIS identifies overall student needs at your school? (*check all that apply*)
    - ❑ School or school district information (e.g., school needs assessments, graduation rates)
    - ❑ Community-level information (e.g., local crime data, U.S. Census data)
    - ❑ School staff surveys/discussions (e.g., with teachers, administrators)
    - ❑ Parent surveys
    - ❑ Student input
    - ❑ Other (please specify): _____

15. How does CIS prioritize overall needs to address at your school? (*check all that apply*)
    - ❑ Consultations with school administrators
    - ❑ Consultations with school district staff
    - ❑ Consultations with community partners
    - ❑ Consultations with funders
    - ❑ Feedback from parents
    - ❑ Other (please specify): _____

16. In your opinion, do CIS and the school's leadership work well together to prioritize overall needs?
    - ❑ Yes
    - ❑ No
    - ❑ No opinion/Unknown

17. **Based on your needs assessment**, how large of a priority was each of the following problems for your school, were these needs addressed, and how have these needs changed over the past school year?

Problem Identified Through Needs Assessment	Priority of Need	Was This Need Being Addressed?	Change in Needs Over the Past School Year
High dropout rate	❑ Not assessed ❑ Not a priority ❑ Low priority ❑ High priority	❑ No ❑ Yes, by CIS or partners ❑ Yes, by other providers ❑ Yes, by school only ❑ Unknown	❑ Not assessed ❑ Improved ❑ Stayed the same ❑ Worsened ❑ Unknown
High teen pregnancy rate			
High-risk social behavior			
Poor academic performance			
High retention rate			
Poor attendance			
Poor attitude			
Lack of effort/commitment to school			
Low educational expectations			
Behavior/discipline problems			
High family/student mobility			
Lack of parental involvement/support			
Family functioning/disruption			
Student/family health issues			
Lack of academic resources			
Lack of extracurricular activities			
Other			

18. If you indicated "Other" in the above question, please specify the school problem: _____

19. If you reported a change in the overall **school** needs over the past school year, what factors do you think have contributed the most to these changes?

    _____

    _____

    _____

20. Does CIS have an annual site operations plan to address overall student needs at your school?
    - ❑ Yes
    - ❑ No (*skip to #22*)
    - ❑ Unknown

21. If CIS has an annual site operations plan, what is included in that plan? (*check all that apply*)
    - ❑ Overall student needs to be addressed

- ❑ Measurable objectives related to each identified need
- ❑ A description of service strategies to be implemented
- ❑ A description of how services will be monitored
- ❑ A description of how services will be adjusted
- ❑ Other (please specify): _____

Delivery of School-Wide Services

22. Which of the following services are made available to all students? Please indicate who provided the service, number of students served in the past year, and number of hours the service was in the past year.

(Note: When entering hours provided, please base your answers on the length of time that the service was actually provided -- do not multiply the number of students served by the number of hours. For example, if you provided a career fair for two hours and 300 students participated, your response would be "1-10" hours.)

School-Wide Services	Service Provider	Students Served in Past Year	Hours Provided in Past Year
Mentoring	☐ Not provided ☐ Provided, by CIS ☐ Provided, through CIS ☐ Available, but not through CIS	☐ Whole school ☐ 0 ☐ 1-10 ☐ 11-20 ☐ 21-30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ 61-70 ☐ 71-80 ☐ 81-90 ☐ 91-100 ☐ 101-150 ☐ 151-200 ☐ 201-250 ☐ 251-300 ☐ 301-350 ☐ 351-400 ☐ 401-450 ☐ 451-500 ☐ 501-550 ☐ 551-600 ☐ 601-650 ☐ 651-700 ☐ 701-750 ☐ 751-800 ☐ 801-850 ☐ 851-900 ☐ 901-950 ☐ 951-1,000 ☐ 1,001+	☐ 0 ☐ 1-10 ☐ 11-20 ☐ 21-30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ 61-70 ☐ 71-80 ☐ 81-90 ☐ 91-100 ☐ 101-150 ☐ 151-200 ☐ 201-250 ☐ 251-300 ☐ 301+
Academic preparation/assistance			
Case management			
Anger management/conflict resolution			
Gang intervention/prevention			
Legal services			
Out of school time programs			
College exploration/ preparation			
Service learning			
Pregnancy prevention			
Teen parenting/child care			

School-Wide Services	Service Provider	Students Served in Past Year	Hours Provided in Past Year
Physical health screening/education			
Mental health services/counseling			
Substance abuse prevention/ intervention			
Social/life skills development			
Family strengthening/ engagement			
Parent/adult education			
Career development/training/ employment			
Leadership skills development/training			
Creative/performing arts activities			
Recreational/sports activities			
Truancy prevention			
Linkages to resources (food/clothing/financial)			
Other (specify):			

23. If you indicated "Other" in the above question, please specify the school-wide service:

_____

School-Wide Services: Frequency and Amount

24. Over the past three years:

	More Times Per Year	Less Times Per Year	Same Number of Times Per Year	Unknown
School-wide services *provided* by CIS have been delivered:	O	O	O	O
School-wide services *connected* by CIS have been delivered:	O	O	O	O

25. Over the past three years:

	More Hours Per Year	Less Hours Per Year	Same Number of Hours Per Year	Unknown
School-wide services *provided* by CIS have been delivered:	O	O	O	O
School-wide services *connected* by CIS have been delivered:	O	O	O	O
School-wide services *provided by an agency not connected to CIS* have been delivered:	O	O	O	O

26. Does CIS have a plan in place to monitor the delivery of school-wide services?
    - ❑ Yes
    - ❑ No
    - ❑ Unknown

27. How often does CIS monitor school-wide services?
    - ❑ Never/Less than once per year

- ❑ Once per year
- ❑ Once per semester
- ❑ Once per grading period
- ❑ Once per month
- ❑ After each service is delivered
- ❑ Other (please specify): _____

28. What information does CIS use to monitor school-wide services? (*check all that apply*)
    - ❑ Delivery dates
    - ❑ Providers
    - ❑ Estimated number of students served
    - ❑ Duration of services
    - ❑ Other (please specify): _____

29. How often does CIS review overall student progress to adjust school-wide services?
    - ❑ Never/Less than once per year
    - ❑ Once per year
    - ❑ Once per semester
    - ❑ Once per grading period
    - ❑ More than once per grading period
    - ❑ Other (please specify): _____

30. What have been some of the observable outcomes over the past school year for your students who have received school-wide services?

    _____

    _____

SECTION 2: TARGETED AND SUSTAINED INTERVENTION SERVICES

NOTE: This section addresses targeted and sustained intervention services that are provided for students enrolled in specific CIS initiatives/programs (i.e., Level 2 services).

31. How are students referred to CIS for targeted and sustained interventions? (*check all that apply*):
    - ❑ Referred by teachers
    - ❑ Referred by other school staff (e.g., principals, guidance counselors)
    - ❑ Referred by parents
    - ❑ Referred by CIS program administrators/service coordinators
    - ❑ Self-referral
    - ❑ Other (please specify): _____

32. Does your school have students who are in need of targeted and sustained services, but don't receive them?
    - ❑ Yes
    - ❑ No
    - ❑ Unknown

33. Does CIS have a wait list at your school?
    - ❑ Yes

- ❑ No
- ❑ Unknown

Identifying Individual Student Needs

34. Does your **school** conduct an assessment of individual student needs?
    - ❑ Yes
    - ❑ No
    - ❑ Unknown

35. Does **CIS** conduct an assessment of individual student needs when students are referred for services at your school?
    - ❑ Yes
    - ❑ No
    - ❑ Unknown

36. How often are individual student needs assessments conducted for CIS students?
    - ❑ Never/Less than once per year
    - ❑ Once a year
    - ❑ Once per semester
    - ❑ Once per grading period
    - ❑ More than once per grading period
    - ❑ Once per month
    - ❑ More than once per month
    - ❑ Unknown

37. What sources of information are considered when CIS conducts individual needs assessments at your school? (*check all that apply*)
    - ❑ Students
    - ❑ Teachers
    - ❑ Parents
    - ❑ School administrators
    - ❑ Other school faculty (e.g., guidance counselors)
    - ❑ Community service providers or government agencies (e.g., juvenile justice)
    - ❑ Other (please specify): _____

38. How does CIS prioritize individual student needs for your school? (*check all that apply*)
    - ❑ Consultations with school administrators
    - ❑ Consultations with school district staff
    - ❑ Consultations with community partners
    - ❑ Consultations with teachers
    - ❑ Feedback from parents
    - ❑ Other (please specify): _____

39. In your opinion, do CIS and the school's staff/faculty work well together to prioritize individual student needs?
    - ❑ Yes
    - ❑ No
    - ❑ No opinion/Unknown

40. **Based on your needs assessment**, how high of a priority was each of the following problems for CIS students, were these needs addressed, and how have these needs changed over the past school year?

Problem Identified Through Needs Assessment	Priority of Need	Was This Need Being Addressed?	Change in Needs Over the Past School Year
High dropout rate	❑ Not assessed ❑ Not a priority ❑ Low priority ❑ High priority	❑ No ❑ Yes, by CIS or partners ❑ Yes, by other provider ❑ Yes, by school only ❑ Unknown	❑ Not assessed ❑ Improved ❑ Stayed the same ❑ Worsened ❑ Unknown
High teen pregnancy rate			
High-risk social behavior			
Poor academic performance			
High retention rate			
Poor attendance			
Poor attitude			
Lack of effort/commitment to school			
Low educational expectations			
Behavior/discipline problems			
High family/student mobility			
Lack of parental involvement/support			
Family functioning/disruption			
Student/family health			
Lack of academic resources			
Lack of extracurricular activities			
Other			

41. If you indicated "Other" in the above question, please specify the school problem:

_____

42. If you reported a change in individual student needs over the past school year, what factors do you think have contributed the most to these changes?

_____

_____

_____

43. Does your program have individualized plans to address the needs of CIS students?
    - ❑ Yes
    - ❑ No (*skip to #45*)
    - ❑ Unknown

44. If CIS has individualized student plans, what is included in that plan? (*check all that apply*)
    - ❑ Basic demographic information
    - ❑ Assessed needs/risk factors
    - ❑ Individualized goals/objectives
    - ❑ Services and resources to be provided
    - ❑ Timeline for providing services or resources
    - ❑ Other (please specify): _____

Delivery of Individual Student Services:

45. Which of the following services are targeted to individual students? Please indicate who provided the service, number of students served in the past year, and number of hours the service was provided to the average student in the past year.

Individual Student Services	Service Provider	Students Served in Past Year	Hours Service Provided to the Average Student in Past Year
Mentoring	☐ Not provided ☐ Provided, by CIS ☐ Provided, through CIS ☐ Available, but not through CIS	☐ 0 ☐ 1-10 ☐ 11-20 ☐ 21-30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ 61-70 ☐ 71-80 ☐ 81-90 ☐ 91-100 ☐ 101-150 ☐ 151-200 ☐ 201-250 ☐ 251-300 ☐ 301-350 ☐ 351-400 ☐ 401-450 ☐ 451-500 ☐ 501-550 ☐ 551-600 ☐ 601-650 ☐ 651-700 ☐ 701-750 ☐ 751-800 ☐ 801-850 ☐ 851-900 ☐ 901-950 ☐ 951-1,000 ☐ 1,001+	☐ 0 ☐ 1-10 ☐ 11-20 ☐ 21-30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ 61-70 ☐ 71-80 ☐ 81-90 ☐ 91-100 ☐ 101-150 ☐ 151-200 ☐ 201-250 ☐ 251-300 ☐ 301-350 ☐ 351-400 ☐ 401-450 ☐ 451-500 ☐ 501-550 ☐ 551-600 ☐ 601-650 ☐ 651-700 ☐ 701-750 ☐ 751-800 ☐ 801-850 ☐ 851-900 ☐ 901-950 ☐ 951-1,000 ☐ 1,001+
Academic preparation/assistance			
Case management			
Anger management/conflict resolution			
Gang intervention/ prevention			
Legal services			
Out of school time programs			
College exploration/ preparation			
Service learning			
Pregnancy prevention			
Teen parenting/child care			
Physical health screening/ education			
Mental health services/ counseling			
Substance abuse prevention/ intervention			
Social/life skills development			
Family strengthening/ engagement			
Parent/adult education			
Career development/ training/employment			
Leadership skills development/training			
Creative/performing arts activities			
Recreational/sports activities			

Individual Student Services	Service Provider	Students Served in Past Year	Hours Service Provided to the Average Student in Past Year
Truancy prevention			
Linkages to resources (food/clothing/financial)			
Other			

46. If you indicated "Other" in the above question, please specify the individual student service:

_____

47. Over the past three years, has the number of types of CIS services available at your school increased, decreased, or remained the same?
    - ❑ Increased
    - ❑ Decreased
    - ❑ Remained the same
    - ❑ Unknown

48. Does CIS have a plan in place to monitor the delivery of individual student services?
    - ❑ Yes
    - ❑ No
    - ❑ Unknown

49. How often does CIS monitor individual student services?
    - ❑ Never/Less than once per year
    - ❑ Once per year
    - ❑ Once per semester
    - ❑ Once per grading period
    - ❑ Once per month
    - ❑ After each service is delivered
    - ❑ Other (please specify): _____

50. What information does CIS use to monitor individual student services? (*check all that apply*)
    - ❑ Delivery dates
    - ❑ Providers
    - ❑ Estimated number of students served
    - ❑ Progress toward completion of individual goals/objectives
    - ❑ Completion of goals/objectives
    - ❑ Duration of services
    - ❑ Other (please specify): _____

51. How often does CIS review student progress to adjust targeted services?
    - ❑ Never/Less than once per year
    - ❑ Once per year
    - ❑ Once per semester
    - ❑ Once per grading period
    - ❑ More than once per grading period
    - ❑ Other (please specify): _____

52. What have been some of the observable outcomes over the past school year for your students who have

received individual student services?

_____

_____

_____

SECTION 3: GENERAL SCHOOL CONTEXT

53. How long do students typically stay enrolled in CIS initiatives/programs?
- ☐ One semester
- ☐ One school year
- ☐ Two school years
- ☐ As long as the student is in school
- ☐ Other (please specify): _____

54. Over the past year, how involved have the following stakeholders been in CIS at your school, and has their involvement changed over the past three years?

	Involvement in the CIS Program	
Stakeholder	**In the Past Year**	**Change in Involvement Over Past 3 Years**
School board	☐ Not at all involved ☐ Somewhat involved ☐ Very much involved ☐ Unknown	☐ Increased ☐ Stayed the same ☐ Decreased ☐ Unknown
School principal(s)		
Teachers		
School counselor(s)		
Parents		
Community		
Service partners		
Students		

55. For those areas where you have seen an increase in the level of involvement, what has contributed to that change?

_____

_____

_____

Assessment of Local Affiliate

56. To what extent do you think your affiliate office's support is important in the following activities, and are you satisfied with the support that you currently receive?

Activity	Importance of Affiliate Support	Satisfaction with Current Affiliate Support
Provide/Broker Quality Youth Services	❑ Very important ❑ Important ❑ Moderately important ❑ Of little importance ❑ Unimportant ❑ No opinion	❑ Very satisfied ❑ Satisfied ❑ Neutral ❑ Dissatisfied ❑ Very dissatisfied ❑ Unknown/No basis for judgment
Provide Leadership/Strategic Direction		
Develop Community Partnerships		
Resource Development & Fund Raising		
Marketing & PR		
Managing/Expanding CIS Sites		
Data Collection/Reporting		

57. What part of your CIS program, in your opinion, produces the greatest impact on your CIS students?

_____

_____

_____

58. Other comments about your program:

_____

_____

_____

_____

_____

Appendix C: Typology Report

COMMUNITIES IN SCHOOLS NATIONAL EVALUATION:

DESIGN AND DEVELOPMENT OF A TYPOLOGY OF SITES IN THE NETWORK

Prepared by:

Caliber, an ICF International Company
10530 Rosehaven Street
Suite 400
Fairfax, VA 22030
Tel: (703) 385-3200
Fax: (703) 385-3206

Communities In Schools, Inc.
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COMMUNITIES IN SCHOOLS NATIONAL EVALUATION
DESIGN AND DEVELOPMENT OF A TYPOLOGY OF SITES IN THE NETWORK

Communities In Schools, (CIS) Inc. is a nationwide initiative to connect needed community resources with schools to help students, particularly those identified as at-risk, successfully learn, stay in school, and prepare for life. The CIS philosophy fosters a comprehensive, asset-based approach to strengthening youth through its five basic principles about what every young person needs and deserves (a one-to-one relationship with a caring adult; a safe place to learn and grow; a healthy start in life; a marketable skill to use upon graduation; and a chance to give back to peers and community) and through targeted interventions around dropout risk factors.

The CIS National Evaluation

The national evaluation of CIS was designed to accomplish the following objectives:

- Demonstrate effectiveness of the overall CIS model and specific model components;
- Understand how different aspects of the CIS model contribute to success and how they could be enhanced to strengthen effectiveness;
- Help the national office enhance its strategies for supporting state offices, local affiliates, and sites, and help state offices enhance their strategies for supporting local affiliates; and
- Assist national and state offices and local affiliates in sustaining evaluation and seeking program funding.

To accomplish these objectives, a comprehensive, multi-level, multi-phased evaluation was designed. The National Evaluation of CIS has three principal stages, beginning with a broad-based evaluation of the Network, continuing with a quasi-experimental study, and finally, an experimental study. Over time, the evaluation will focus on smaller samples but will involve higher levels of methodological rigor.

The Need for a Typology of Sites

The first stage of the evaluation involves a broad-based study of all CIS affiliates and sites. A major obstacle in such a large-scale study is the variation in program context and services delivered across CIS sites. This challenge was anticipated in August 2005, at the outset of the national evaluation. During a meeting of CIS's National Evaluation Advisory Committee (NEAC), all parties agreed that the development of a typology of

programs was necessary. This typology would provide a clearer understanding of CIS processes at the site level, and identify important covariates for the quasi-experimental study. By comparing program outcomes across typologies we can gain an understanding of which models work in given circumstances. The ultimate goal of the typology was not to determine the single best service delivery model; rather, it was to clarify how models work, and why they work in some circumstances and not others. In other words, the typology is one of the key elements of the natural variation study, as it will allow us to study the link between process and outcomes. Moreover, by simplifying a myriad of process into a set of typologies, the natural variation study design will become simple and elegant.

The *typology of CIS programs* was developed with these goals in mind:

- Address the relationships among program context, services, and outcomes.
- Provide structure to the quasi-experimental study sampling.
- Provide CIS with a way to define the types of sites in their network.

Various statistical and theoretical procedures for developing a typology were explored to create the most logical and accurate depiction of the CIS network that would complement the CIS site-level logic model.

In this report, we first describe the data and methods used to create the typology. Then a step by step overview of our methodology is described, followed by a summary of the lessons learned in developing a typology of CIS sites.

Typology Data

The primary data sources for development of a typology of programs are the Critical Processes Survey (CPS) and the Site Coordinator Survey (SCS). The Critical Processes Survey was administered to every site in the CIS network in January 2006, and was developed to fill a critical gap in data on processes at the site level. It was designed to gain a broad and general understanding of site-level processes, in order for the Evaluation Team – and CIS National – to gain additional knowledge about the diversity in programming that is central to the CIS model. In order to encourage the highest response rate possible, this survey was intended to require only 20-minutes to complete. The survey was a success, generating information on 1,894 sites in the CIS network.

The Site Coordinator Survey was administered in May 2007 for an entirely different purpose. This survey was intended to be the centerpiece of data collection for the Natural

Variation Study, which was designed to gain an understanding in the differentiators between high-performing sites and other sites. The survey was administered to all 604 sites in the Network that were selected to be part of the quasi-experimental study, and 368 valid responses were obtained. In addition to providing valuable data for the natural variation study, this survey was critical for the development of an improved typology of sites.

Typology Methods

Two methods to develop a typology of sites were investigated: cluster analysis and threshold analysis. One of the most common and effective methods for developing typologies is cluster analysis (Bailey, 1994; Ketchen & Shook, 1996; Fenske, Keller, & Irwin, 1999). The National Evaluation Team began developing a typology of sites using this method, which identifies clusters of sites using statistical methods (i.e., by maximizing between cluster variation and minimizing within-cluster variation). However, the clusters developed using this method were unstable. For example, when we changed one variable of seven in the cluster analysis, group membership underwent a wholesale change. Since cluster analysis is an exploratory method – and since its utility is dependent upon our ability to explain why clusters existed in the first place – the National Evaluation team dropped this method from consideration.

Alternative methods for creating typologies were investigated and discussed by National Evaluation staff. The most appropriate alternative method identified was threshold analysis, which is often used in the medical field (Holtgrave & Qualls, 1995; Kanou & Shimozawa, 1984) and has recently been applied successfully in another Caliber program evaluation. A short description of each method is provided in Exhibit 1.

Exhibit 1:
Methods of Creating a Typology

Method	Description	Issues
Cluster Analysis	An exploratory data analysis procedure that partitions a set of objects into mutually exclusive groups in order to best represent distinct sets of objects within the sample of objects.	No metric to confirm the validity of the resulting groups
Threshold Analysis	Answers the question of "is an object meeting a set criteria?" by rating the object based on whether they score above or below a pre-established threshold	Need an "ideal" model benchmark on which to base thresholds

Threshold Analysis

Threshold Analysis tries to answer the questions of "How good is good enough?" and "How do we know whether sites are moving toward an idealized CIS model of service delivery?" The method is simple. By scoring a number of elements of the CIS process using a simple rubric – which is based on the identification of "tipping points" in expected performance – we are able to add up those scores and arrive at a composite figure for how well each site approximates the ideal CIS model. Of course, the prerequisite to employing this methodology is knowledge of what constitutes ideal CIS processes. Two recent developments have allowed us to gain particularly high confidence in our rubric:

- The CIS Total Quality System (TQS) was released in 2007. This set of integrated standards and policies provided the Evaluation Team with a solid set of ideals by which the model could be ascertained.

- The original typology rubric was vetted to CIS National and the Implementation Task Force, which ensured that the scoring system was based on both National Office priorities and grounded in practice.

To take our hypothesis a step further, it would stand to reason that if CIS sites follow ideal processes, they would be in a better position to affect student-level outcomes. If we are able to use the typology to make this critical link between process and outcome, it will become the linchpin of numerous analyses and will solidify the external validity (i.e., generalizability) of results.

Elements of the Typology: Defining an Ideal

When hypothesizing about the drivers of success at the site level – that is, when determining what elements should be considered in a typology of sites – numerous factors come to mind:

- Services provided
- Needs assessment processes
- Brokered vs. direct service provision
- Locality (urban vs. rural vs. suburban)
- Level 1 vs. Level 2 service mix
- Years in operation
- School type (elementary, middle, high school)

It became apparent in our initial thinking about a typology that some factors listed above describe a setting (e.g., school type, locality) and some describe processes (e.g., services provided). In order to make the typology a true performance-measurement system, we would first have to isolate the factors that remain within a CIS site's control. We therefore used the typology to focus on processes only, and plan to use settings as covariates in further analyses. This plan allows us to focus on idealized processes and provides additional information about the settings that are most amenable to CIS processes.

Level of Services Provided

The most fundamental characteristic of a CIS site is whether it offers Level 1 services, Level 2 services, or a combination of the two. Programs providing only Level 1 services can be roughly described as primary prevention programs ("universal" programs, as described in the prevention literature). Level 2 services, by contrast, can be roughly described as intervention programs ("selected" or "indicated" programs). Therefore, the breakdown of Level 1 and Level 2 services is an indication of whether the CIS program is a prevention program, an intervention program, or both. Ideally, CIS programs should offer a comprehensive range of services to both the whole school (Level 1) and on a targeted, sustained basis (Level 2).

Laying Out the Process

CIS is best described as a "process" of engaging schools and students, and filling gaps in need. Because the CIS model is intended to fill gaps in need, the program may take on a variety of forms in different locations, depending on the circumstances of the school or community. It is therefore important to delineate core functions of the process. Based on our knowledge of the CIS program, our understanding of the TQS, and on our discussions with front-line staff, we developed five domains that capture the essence of the CIS process:

- Needs Assessment
- Planning
- Referral
- Service Provision
- Monitoring and Adjustment

Each of the questions from the Critical Processes Survey and Site Coordinator Survey that were considered in the development of the typology were put into one of these five domains. Since the Critical Processes Survey did not focus on Planning, sites that responded only to this survey do not have a score on this domain. The general domains outlined above correspond to the process for any youth prevention and intervention program.

Scoring the Process

Each of the steps in the CIS process was covered by multiple questions from the Critical Processes Survey and the Site Coordinator Survey. Most, if not all, of these questions, could be linked to value judgments regarding what is congruent with the "ideal" CIS model. Where possible, we deleted questions that may not have clear implications. For example, we disregarded the number of types of services CIS offers at a site because this could be indicative of two completely different situations: (1) a wide range of services provided could indicate that the program was effectively bringing in services to serve students, or (2) if there was not demonstrated need for particular services, the provision of additional services may be detracting from current service offerings. By focusing on questions that have unequivocal implications, we aimed to produce a rubric that had the most direct interpretation possible.

By scoring the CIS process from start to finish, we can develop a common metric to describe adherence to the model. In order to capture this process accurately, however, thought must be given to (1) what elements of the process are more important than others, and (2) what the thresholds are for performance. The determination of these critical "tipping points" was greatly facilitated by extensive discussions with CIS National staff, as well as a review of the TQS. Exhibit 2 presents the typology scoring rubric, which includes a review of the Site Coordinator Survey question, its corresponding question from the Critical Processes Survey, and notes on the TQS standard (if applicable) that covers each question.

Exhibit 2 Typology Scoring Rubric			
Needs Assessment Domain			
SCS Question	**CPS Question**	**Scoring**	**Notes**
Q11&12: Does CIS conduct an assessment (L1)	Q20	Yes: 5 pts. No: 0 pts.	
Q13: How often are needs assessments conducted? (L1)	Q20	More than once a year: 5 pts. Once a year: 3 pts. Less than once a year: 1 pt.	TQS Site Operations Standard II.3
Q14: Types of information for identifying needs (L1)	Q21	5 types of info: 5 pts. 4 types of info: 4 pts. 3 types of info: 3 pts. 2 types of info: 2 pts. 1 type of info: 1 pt. 0 types of info: 0 pts.	
Q15: Types of information for prioritizing overall needs (L1)	Q23	Student and external factors: 5 pts. Student needs only: 3 pts. External factors only: 2 pts. No needs assessment: 0 pts.	
Q34 & Q35: Does CIS conduct a needs assessment? (L2)	Q31	Yes: 5 pts. No: 0 pts.	
Q36: How often does CIS conduct a needs assessment? (L2)	Q31	More than once a year: 5 pts. Once a year: 3 pts. Less than once a year: 1 pt.	
Q37: Types of information for identifying needs (L2)	Q32	5 types of info: 5 pts. 4 types of info: 4 pts. 3 types of info: 3 pts. 2 types of info: 2 pts. 1 type of info: 1 pt. 0 types of info: 0 pts.	
Q38: Types of information for prioritizing overall needs (L2)	Q34	Student and external factors: 5 pts. Student needs only: 3 pts. External factors only: 2 pts. No needs assessment: 0 pts.	
Planning Domain			
SCS Question	**CPS Question**	**Scoring**	**Notes**
Q20: Does CIS have an annual operations plan (L1)	None	Yes: 5 pts. No: 0 pts.	TQS Site Operations Standard I.2
Q21: What is included in that plan (L1)	None	5 types of info: 5 pts. 4 types of info: 4 pts. 3 types of info: 3 pts. 2 types of info: 2 pts. 1 type of info: 1 pt. 0 types of info: 0 pts.	TQS Site Operations Standard II.3
Q43: Does CIS have an annual operations plan (L2)	None	Yes: 5 pts. No: 0 pts.	TQS Site Operations Standard II.3

Exhibit 2 Typology Scoring Rubric			
Q44: What is included in that plan (L2)	None	5 types of info: 5 pts. 4 types of info: 4 pts. 3 types of info: 3 pts. 2 types of info: 2 pts. 1 type of info: 1 pt. 0 types of info: 0 pts.	TQS Site Operations Standard I.2
Referrals Domain			
SCS Question	**CPS Question**	**Scoring**	**Notes**
Q31: How are students referred to CIS for targeted and sustained interventions? (L2)	Q30	Internal, external, and self: 5 pts. 2 of 3 sources used: 3 pts. 1 source used: 2 pts. No referrals: 0 pts.	
Services Domain			
SCS Question	**CPS Question**	**Scoring**	**Notes**
Q22 & Q45: How many of the 5 basic needs do they address (L1 & L2 combined)	Q24 & Q36	5 basics covered: 5 pts. 4 basics covered: 4 pts. 3 basics covered: 3 pts. 2 basics covered: 2 pts. 1 basic covered: 1 pt.	
Q22: Percentage of students in school served by CIS (L1)	Q10	Above 75%: 5 pts. 50% to 75%: 3 pts. 25% to 49%: 2 pts. 1% to 24%: 1 pt. 0%: 0 pts.	TQS Site Operations Standard III.1
Q45: Percentage of students in school served by CIS (L2)	Q12	Above 5%: 5 pts. 1% to 5%: 3 pts. 0%: 0 pts.	TQS Site Operations Standard IV.1
Q9: How much time site coordinator spends coordinating CIS services	Q8	100%: 5 pts. 76-99%: 4 pts. 50-75%: 3 pts. 26-50%: 2 pts. 1-25%: 1 pt. 0%: 0 pts.	TQS Site Operations Standard I.3
Monitoring and Adjusting Domain			
SCS Question	**CPS Question**	**Scoring**	**Notes**
Q29: How often does CIS review student progress (L1)	None	More than once/grading period: 5 Once per grading period: 3.5 pts. Once per semester: 2.5 pts. Once per year: 1 pt. Never/less than once/yr: 0 pts.	TQS Site Operations Standard III.3
Q51: How often does CIS review student progress (L2)	Q41	More than once/grading period: 5 Once per grading period: 3.5 pts. Once per semester: 2.5 pts. Once per year: 1 pt. Never/less than once/yr: 0 pts.	TQS Site Operations Standard IV.5

Weighting Domains

Since there were different numbers of questions available from the Critical Processes Survey and Site Coordinator Surveys for each domain, we needed to weight the typology scores to ensure that the Needs Assessment domain, for example, did not receive extra weight by virtue of the survey design. Each domain was weighted to total 20 points, which resulted in an intuitive total possible typology score of 100.

Where possible, Site Coordinator Survey data were used for typology development, since these data are more recent than Critical Processes Survey data. When Critical Processes Survey data were employed, we had to weight each domain to total 25 points, since Planning domain questions were not included in this survey.

Typology Results

Results from the typology development process are presented in Exhibit 3. Altogether, slightly over half of CIS sites were partial implementers (defined as scoring less than 70 out of 100 possible points) and slightly less than half were high implementers (weighted score of 70 or above). Separate weights were not derived for sites that offer Level 1 only services or Level 2 only services, since these models do not represent the CIS "ideal". As a result, very few Level 1 only or Level 2 only programs were designated as high implementers.

EXHIBIT 3
NUMBER OF SITES (AND % OF TOTAL) IN EACH TYPOLOGY CATEGORY

	Partial Implementer	High Implementer
Level 1 Only	195 (13%)	
Level 2 Only	148 (9.8%)	
Comprehensive (Level 1 & Level 2)	453 (29.8%)	713 (47.0%)
TOTAL	796 (52.4%)	722 (47.6%)

In order to link CIS processes to outcomes, we compared partial and high implementers on net change scores from the quasi experimental study. Net change scores are defined as the relative difference between CIS sites and their comparison sites from pretest to 3-years after program implementation. For example, if a CIS site reported an increase in promoting power from 10% pretest to 15% after 3 years of implementation – and its

comparison site reported an increase in promoting power from 11% to 12% during the same period – then the net change would be +4% [(+5% change CIS) – (+1% change Comparison)].

In general, the typology designation of partial vs. high implementer differentiated CIS sites on outcomes, with high implementers generally reporting more positive findings. Notably, there was a 3.2% net difference among high implementers and partial implementers on promoting power, and a 5.6% net difference on graduation rates. High school academics were the only outcomes that clearly favored partial implementers. More work will be done to determine why this is the case.

EXHIBIT 4
AVERAGE NET CHANGE SCORES ON OUTCOMES BETWEEN PARTIAL AND HIGH IMPLEMENTERS

	Partial Implementers	High Implementers
Promoting Power	-0.1%	+2.5%
Graduation Rate	0.0%	+5.1%
Grade 4 Reading	-4.8%	+1.8%
Grade 4 Math	-3.0%	+4.8%
Grade 8 Reading	+0.7%	+4.8%
Grade 8 Math	+0.3%	+6.0%
Grade 10 Reading	+5.5%	-0.5%
Grade 10 Math	+1.7%	+0.6%
Attendance: High School	+0.1%	+0.2%
Attendance: Middle School	+0.2%	+0.1%
Attendance: Elementary***	-0.5%	+0.2%

*** Difference between partial implementers and high implementers statistically significant at the p<.01 level

Non-Response Analysis

We conducted a non-response analysis to determine whether quasi-experimental sites without typology designations differed in any substantive way from sites that have been categorized. The results of this non-response analysis are presented in Exhibit 5. We found that, among quasi-experimental study sites, solid representation has been established at the elementary, middle, and high school levels; however, sites without typology designations were less urbanized and had fewer Hispanic/Latino students.

Exhibit 5 Quasi-Experimental Sites With and Without Typology Data		
	Sites with Typology Data Available	**Sites without Typology Data Available**
Total Number of Cases	339	266
School Level		
Elementary	50.2%	52.5%
Middle	27.9%	26.2%
High	21.9%	19.0%
Locality		
Urban	62.2%	44.5%
Suburban	19.9%	25.1%
Rural	17.9%	28.5%
Average Number of Students in the School	828	780
Average Number of Years in Operation	5.4	4.8
Race/Ethnicity of School Population		
White	29.6%	40.4%
African-American	28.9%	39.2%
Hispanic	30.3%	18.1%
Asian / Pacific Islander	2.5%	1.7%
Native American	0.2%	1.0%

Conclusions

The development of a comprehensive typology of CIS sites was largely successful. This has resulted in a framework that will provide CIS National and the National Evaluation Team with several distinct advantages:

- We have captured detail on the full range of the implementation process
- Setting variables can be used as covariates to determine where the CIS process works best
- The typology provides CIS National a yardstick for performance measurement
- The typology itself can be used as a tool in the analysis of data
- It provides a degree of recognition that some schools may have different goals, and that school performance should be measured based on outcomes most proximal to their missions
- It provides a framework for CIS National to wrap their finger around the diversity of programs in the Network
- Results are intuitive

By capturing the essence of the CIS model, and encapsulating it into a rubric that is intuitive, the typology will provide CIS with a fresh perspective on the sheer diversity that characterizes the Network. As the National Evaluation proceeds forward, this framework will provide the keystone to link processes to outcomes.

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Appendix D: Data Alignment

Alignment of Definitions

Data alignment among the states included in the quasi-experimental study has proven to be a difficult and challenging task. The initial intent of the QED was to document the overall impact of CIS on important school-level outcomes, including achievement, attendance, graduation rates, and various behavioral outcomes. However, incomplete data sets along with differences in how these outcomes were measured and defined have made large scale alignment of outcomes across all states extremely complicated. The following is an outline of the data alignment that has been conducted by outcomes, thus far.

Achievement

Achievement data indicate the academic performance of schools and individual students, which is one of the most important criteria for judging a school's overall performance. One of the most common and important academic indicators are state standard test. Six out of 7 states, Florida, Georgia, Michigan, Pennsylvania, Texas, and Washington, provided their state standard scores or percentage of students in different performance levels in three core subjects, Reading, Mathematics, and Writing, for aligning. Data were available in grades 3-10 in most states expect for Georgia, which was lack of data in grades 9 and 10. For the years in which the achievement data were available, most states except Georgia had data from 1999 to 2005. Exhibit 1 illustrates the available achievement data.

Exhibit 1
Achievement Data

State	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
MI				√	√	√	√	√	√	√
PA		√	√	√	√	√	√	√	√	√
TX	√	√	√	√	√	√	√	√	√	
WA		√	√	√	√	√	√	√	√	√
FL			√	√	√	√	√	√	√	
GA		√	√	√	√	√				

Alignment of achievement data was further complicated by different performance levels of the state standard tests. There were large gaps in how states set up their achievement performance levels and how they define each level. For example, 5 levels exist for differentiating students' academic performance in Florida, while there is only 1 passing standard in Texas. Some states have same levels but definitions of standard levels still vary; such as Michigan, Pennsylvania, and Washington. Exhibit 2 demonstrates the available grades and subject for each state assessment and the manner in which they differentiate students.

Exhibit 2 Achievement data				
State	Name of the Standard Assessment	Available Grades	Available Subjects	Standard Levels
Florida	FCAT (The Florida Comprehensive Assessment Test)	Grades 3-10	Reading, Writing, Mathematics	Level 1(lowest) to Level 5 (highest)
Georgia	CRCT (Criterion-Reference Competency Tests)	Grades 1-8	Reading, Writing, Mathematics	Level (Do Not Meet Standard), Level 2 (Meets Standard) and Level 3 (scores at or above Exceeds Standard)
Michigan	MEAP (Michigan Educational Assessment Program)	Grades 3-11	Reading, Writing, Mathematics	Level 1(Apprentice), Level 2(At basic level, Level 3 (Met MI standards), Level 4 (Exceeded MI standards)
Pennsylvania	PSSA (Pennsylvania System of Schools Assessment)	Grades 3-10	Reading, Writing, Mathematics	Advanced, Proficient, Basic and Below Basic
Texas	TAAS (Texas Assessment of Academic Skills) After 2002/2003, it changed to TAKS (Texas Assessment of Knowledge and Skills)	Grades 3-10	Reading, Writing, Mathematics	Passed
Washington	WASL (Washington Assessment of Student Learning) & ITBS (Iowa Test of Basic Skills)	Grades4, 7, 8,10 in WASL Grades 3, 6, 9 in ITBS	Reading, Writing, Mathematics	Level 1 to Level 4

Despite the different performance standards across states and the transition of tests in Texas, the passing rates of the state standard tests were calculable for all states. In the states having more than one performance level, such as Florida, Georgia, Michigan, and Pennsylvania, it was possible to find the level that indicated passed or fail from their definitions. After figuring out the passing standard for each state, we were able to compare the percentage of passed students in overall school level, different grade levels, and different subjects across states.

Attendance

Out of the 7 states selected for the quasi-experimental study, 6 provide attendance data that can be aligned across states; Florida, Michigan, North Carolina, Pennsylvania, Texas, and Washington. With the exception of reporting the number of students absent above a certain threshold (typically presented as x or more days) from 2003 to 2005 and 1997 to 2006 Georgia and Florida, respectively, did not provide any attendance information that could be aligned. North Carolina, and Pennsylvania (1997-2001) provided attendance

data in the form of average daily attendance (ADA); while Michigan, Pennsylvania (2001-2006), and Texas provided student attendance rates in percentages. Washington, on the other hand, provided the number of unexcused absence and absence rates rather than attendance. In addition Pennsylvania, Texas, and Washington provided attendance data by the following breakouts; race, economically disadvantaged, special education, and English language learners. Exhibit 3 presents the years for which we had attendance data or attendance data could be calculated for each of these states from 1996 to 2006. As illustrated in Exhibit 3, statewide comparisons were complicated by the limited data provided consistently between states in a given year.

Exhibit 3
Attendance Data

State	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
MI								√	√	√
NC		√	√	√	√					
PA		√	√	√	√	√	√	√	√	√
TX	√	√	√	√	√	√	√	√	√	
WA								√	√	

Data alignment was further complicated by the multiple methods in which each of the states defined and collected attendance data. For example, as already noted, North Carolina reported ADA, Michigan and Texas reported attendance rates, and Washington reported the number of absences rather than attendance data. Furthermore, while states may have collected similar data, they often defined it very differently. For example, Texas measures attendance rates by dividing the aggregate yearly attendance by the aggregate yearly membership, while Pennsylvania measures attendance rate by dividing the ADA by the average daily membership (ADM). Recalculation of Pennsylvania attendance rates entailed dividing the reported ADA by ADM for each school, providing an estimated attendance rate. In short, after some recalculation attendance data from Pennsylvania, Texas and Pennsylvania were compared with a fair degree of certainty.

Behavioral Measures

As CIS is particularly targeted at at-risk youth it is expected that some of the programs greatest impacts will be found on behavioral measures; such as violent acts, aggressive behavior, substance abuse, and property damage. Florida, North Carolina, Pennsylvania, and Michigan were the only states to provide such information. Exhibit 4 presents the years for which behavioral data was available.

Exhibit 4
Behavioral Measures Data

State	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
FL			√	√	√	√	√	√		
NC					√*		√*	√*		
PA				√	√	√	√	√	√	
MI					√	√	√	√	√	√

*Only provided at the District Level

While each of these states provides data on behavioral measures the manner in which they are reported and number of incident types vary. Florida reports the number of incident by school for 7 incident types; North Carolina reports individual incidents by school district for 26 incident types; Pennsylvania reports incident tallies by school for 29 incident types; while Michigan reports number of incidents by school for 24 incident types in addition to reporting a low, medium, and high ranking for 11 separate categories. Exhibit 5 provides a complete listing of each incident type reported by each State.

Exhibit 5
Alignment of Behavioral Measures

FLORIDA (7 incident types)	NORTH CAROLINA (26 incident types)	PENNSYLVANIA (29 incident types)	MICHIGAN (24 incident types)
Violent Acts Against Persons	Assault w/ Weapon Assault resulting in Injury Assault on School Personnel Homicide Kidnapping Rape Robbery Robbery w/ Dangerous Weapon Sexual Assault Sexual Offense Indecent Liberties w/ minor	Assault on Student Assault on School Employee Sexual Offense Kidnapping Reckless Endangering Attempted Homicide/Murder Robbery Suicide	Physical Assault Sexual Assaults Hostage Robbery/Extortion Suicide Attempt
Alcohol Tobacco and Other Drugs	Substance Abuse Possession of Controlled Substance Distributing a Controlled Substance	Possession/Use of Controlled Substance Sale/Dist. of a Controlled Substance Sale/Possession/Use of Alcohol Possession/Use/Sale of Tobacco	Illegal Drug Use/Overdose Minor in Possession
Property	Property Damage	Burglary	Vandalism

Exhibit 5 Alignment of Behavioral Measures			
FLORIDA (7 incident types)	NORTH CAROLINA (26 incident types)	PENNSYLVANIA (29 incident types)	MICHIGAN (24 incident types)
	Theft	Arson Vandalism Theft	Cost of Property Damage Explosion Arson Larceny/Theft
Fighting and Harassment	Aggressive Behavior Deemed a serious threat to self/others	Racial/Ethnic Intimidation Other Harassment/Intimidation Fighting Bullying Threatening School Official or Student	Gang Relate Activity Verbal Assaults Death or Homicide Drive by Shooting
Weapons Possession	Possession of a Firearm Possession of a Weapon Possession of Harmful Object	Possession of a Firearm Possession of a Knife Possession of other Weapon	Illegal Possession Suspected Armed Suspect Weapons on School Property
Other Non-Violent / Disorderly Conduct	Truancy Undisciplined Health Immunizations Rule Violation Other	Riot Disorderly Conduct Bomb Threat(s) Terrorist Threat(s) Other Misconduct	Trespassers/Intruders Bomb Threat Unauthorized Removal of Student Threat of Suicide Bus Incident/Accident
Total	(can be calculated)	(can be calculated)	(Can be calculated)

All four States provided number of behavioral incidents rather than percentages. Incident types were thus grouped together to create a similar basis for comparison. As Exhibit 5 shows, each states incident types were group together to facilitate data alignment. Florida, with only seven incident types, was used as the basis in which all other states were aligned. North Carolina was not included as they did not provide school level data. However it is important to note, a slight Hawthorne Effect[9] may increase the total number of incidents reported for Pennsylvania and Michigan due to the increased number of incident types that they report.

Dropout

[9] Increased attention to specific incident types may increase the total overall number of incidents reported, in comparison to States with fewer incident types.

By federal definition, a dropout is a student who leaves school for any reason, except death, before completing school with a regular diploma and does not transfer to another school - in other words all students who attended school during all or part of the previous school year who fails to register for school by October 1 of the current school year. States are therefore required to calculate the annual dropout rate using the October 1 headcount as the denominator and the total number of dropout students less the number of students that transferred out of the district/school as the numerator.
Not all states participating in the QED study used this formula to calculate dropout rates. Further, states reported dropout data in different formats. Five of the states (PA, WA, TX, NC and GA) reported the dropout rate (%) as well as the number of students who dropped out for the given year. MI and FL reported dropout rates only. See Exhibit 6.

Exhibit 6
Dropout Data

State	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
MI*				√*	√*	√*	√*	√*	√*	
NC			√	√	√	√	√	√		
PA		√	√	√	√	√*	√	√	√	
TX		√	√	√	√	√	√	√	√	
WA					√	√	√	√	√	
FL		√*	√*	√*	√*	√*	√*	√*		
GA		√	√	√	√					

* Only Report Drop Out Rates.

An added complication to the alignment of dropout data occurred in cases where states defined and calculated the dropout rates differently- See Exhibit 7. Texas calculated the annual dropout rate as the number of dropouts during the school year (numerator) divided by the total number of students served during the school year (Attendance) -the denominator included every student who enrolled at the school throughout the school year to neutralize the effects of mobility. Florida included students coded as DNEs (i.e. students who were expected to enroll but did not enroll) in the total enrollment figure (denominator) when calculating dropout rates. Washington calculated the dropout rate as the number of dropouts for that year divided by the number from the October headcount of the previous year. The dropout rate calculation for Georgia was based on the number of dropouts divided by the number of students that attended the school. The number of students that attended the school was based on any student reported in the Student Record and excluded no-shows. Michigan defined dropout rate as the percentage of uncounted-for students at the secondary level for a school year. This rate was derived by subtracting the total secondary level retention rate from 100 percent. The retention rate was the percentage of students who were accounted for within a graduating class determined by taking the fall enrollment for the selected year (i.e. 2006) and dividing it by the fall enrollment for the previous year (i.e. 2005), after all the transfers had been processed. Pennsylvania calculated the dropout rate as the proportion of students enrolled who

dropped out during a single school year. This number –total number of dropouts for the school year was divided by the fall enrollment for the same year to provide the dropout rate. North Carolina used a somewhat elaborate method in determining the denominator for calculating the dropout rate. The numerator consisted of all cases of reported dropouts (grades 7-12). To calculate the denominator, the following formula was used: include the twentieth day membership for reporting (previous year; from this membership, subtract the number of initial enrollees present on day 20 (FM20s) and add the current year's twentieth day membership; divide the sum by two to average; then add the numerator to this average. The dropout rate is then calculated by dividing the numerator by the denominator and rounding off to the nearest hundredth.

Exhibit 7
Dropout Rate Definitions by State

State	Definition
MI	The percentage of uncounted-for students at the secondary level for a school year. This rate was derived by subtracting the total secondary level retention rate from 100 percent. The retention rate was the percentage of students who were accounted for within a graduating class determined by taking the fall enrollment for the selected year (i.e. 2006) and dividing it by the fall enrollment for the previous year (i.e. 2005), after all the transfers had been processed.
NC	North Carolina used a somewhat elaborate method in determining the denominator for calculating the dropout rate. The numerator consisted of all cases of reported dropouts (grades 7-12). To calculate the denominator, the following formula was used: include the twentieth day membership for reporting (previous year; from this membership, subtract the number of initial enrollees present on day 20 (FM20s) and add the current year's twentieth day membership; divide the sum by two to average; then add the numerator to this average. The dropout rate is then calculated by dividing the numerator by the denominator and rounding off to the nearest hundredth.
PA	The proportion of students enrolled who dropped out during a single school year. This number –total number of dropouts for the school year was divided by the fall enrollment for the same year to provide the dropout rate.
TX	Annual dropout rate is calculated as the number of dropouts during the school year (numerator) divided by the total number of students served during the school year (Attendance) -the denominator included every student who enrolled at the school throughout the school year to neutralize the effects of mobility.
WA	The number of dropouts for that year divided by the number from the October headcount of the previous year.
FL	Similar to Texas but included students coded as DNEs (i.e. students who were expected to enroll but did not enroll) in the total enrollment figure (denominator) when calculating dropout rates
GA	Based on the number of dropouts divided by the number of students that attended the school. The number of students that attended the school was based on any student reported in the Student Record and excluded no-shows.

A second complication with alignment of data across states stems from states that reported data for some years and not others. All states did not have data for 1996-1997 and 2005-2006. In addition, Washington had no data for 1997-1998 through to 1999-2000, while Georgia had no data for 2001-2002 through to 2004-2005 and North Carolina had no data for 1997-1998 and 2004-2005. Under those circumstances, as an alternative

measure of dropouts we used promoting power to compare the number of 12th-graders in a high school to the number of 9th-graders three years earlier; these enrollment numbers were taken from the U.S. Department of Education's Common Core of Data reported by school districts every fall. Thus, promoting power was essentially used as a documentation of student movement showing the extent to which students in a high school succeed in making it from 9th to 12th grade within 4 years with their classmates.

Graduation

Georgia, Florida, Michigan, Pennsylvania, Texas, and Washington all provided graduation data. Exhibit 8 shows the data available for alignment for each state from 1996 to 2006. Florida, Georgia (from 2003-2005), Michigan (provided estimated graduation rates form 1998-2005), and Pennsylvania (from 2001-2002) provided graduation rates (i.e., the percent of student graduating). In addition Georgia (from 1998-2004), Michigan (from 2002-2005), Pennsylvania (from 1997-1998, and 1999-2004), Texas, and Washington provided the number of students graduating.
In addition there were several important differences in how each state reports and defines graduation. Florida, Georgia, and Texas implement a cohort-based method for calculating graduation rates, which is designed to account for students who transfer as well as dropout. In contrast Michigan, Pennsylvania, and Washington report the percentage/number of students who graduate. In addition, prior to 2002, Georgia graduation calculations have included the inclusion of students receiving certificates of performance or special education diplomas. This severely complicates alignment of Georgia data as the number of graduates may appear to decrease following the 2002 school year.

Exhibit 8
Graduation Data

State	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
GA			√	√	√	√	√	√	√	
FL		√	√	√	√	√	√	√		
MI			√*	√*	√*	√*	√	√	√	
PA		√		√	√	√	√	√		
TX	√	√	√	√	√	√	√	√	√	
WA	√	√	√	√	√	√	√	√	√	

*Estimated graduation rates only.

Given the data provided, the number of graduates was used for most states as a common denominator on which to run an analysis. With the exception of Florida, the remaining states were aligned. High school graduation rates were calculated using a measure called the Cumulative Promotion Index or CPI. Paired with data from the U.S. Department of Education's Common Core of Data, we are able to compute graduation rates for those states we had information on the number of students graduated.

Appendix E: Natural Variation Profile Tables

Graduation Rates [1]		
Items	**Higher Performers (n = 31)**	**Lower Performers (n=19)**
Locality		
Urban	14	10
Suburban	11	6
Rural	3	6
% of time that site coordinators spent in coordinating CIS services		
0%	3.2%	5.3%
1% to 25%	9.7%	15.8%
26% to 50%	35.5%	21.1%
51% to 75%	9.7%	15.8%
76% to 100%	42.9%	42.1%
How often does CIS conduct an assessment of overall student needs at your school?		
Less than once a year	0	0
Once a year	25.8%	36.8%
More than once a year	64.5%	47.4%
Have an annual site operations plan to address overall student needs	93.5%	94.7%
How often does CIS monitor school-wide services?		
Never/Less than once a year	3.2%	3%
Once a year	3.2%	5.3%
Once per semester	16.1%	15.8%
Once per grading period	6.5%	5.3%
Once per month	9.7%	26.3%
After each service is delivered	19.4%	15.8%
How often does CIS review overall student progress to adjust school-wide services?		
Never/Less than once a year	6.5%	0
Once a year	9.7%	10.5%
Once per semester	12.9%	31.6%
Once per grading period	19.4%	21.1%
More than once per grading period	6.5%	26.3%
How often does CIS conduct an assessment of individual student needs at your school?		
Never/Less than once a year	3.2%	0
Once a year	6.5%	31.6%
Once per semester	35.5%	21.1%
Once per grading period	12.9%	21.1%
More than once per grading period	19.4%	10.5%
Once per month	0	0
More than once per month	6.5%	10.5%
Have individualized plans to address the needs of CIS students	80.6%	89.5%

Graduation Rates [1]		
Items	**Higher Performers (n = 31)**	**Lower Performers (n=19)**
How often does CIS monitor individual student services?		
Never/Less than once a year	0	0
Once a year	0	10.5%
Once per semester	12.9%	10.5%
Once per grading period	22.6%	15.8%
Once per month	9.7%	26.3%
After each service is delivered	35.5%	26.3%
How often does CIS review student progress to adjust targeted services?		
Never/Less than once a year	0	0
Once a year	0	0
Once per semester	42.9%	31.6%
Once per grading period	29.0%	42.1%
More than once per grading period	16.1%	15.8%
How long do students typically stay enrolled in CIS programs?		
One semester	0	0
One school year	16.1%	5.3%
Two school years	3.2%	0
As long as the student is in school	61.3%	52.6%
% of students served in schools		
L1 services	35.7%	17.0%
L2 services	25.6%	16.9%
Numbers of types of services provided		
L1 services	10	12
L2 services	7	10
Average service hours per student: maintaining family and peer relationship		
L1 services *	10.8	3.1
L2 services *	34.8	105.0
Average service hours per student: academic services		
L1 services	10.5	3.5
L2 services	63.4	164.3
Average service hours per student: case management		
L1 services	2.5	1.7
L2 services	84.5	230.1
Average service hours per student: behavioral services		
L1 services	29.1	6.3
L2 services	135.6	358.7
Average service hours per student: after school services		
L1 services	4.7	4.9
L2 services	45.8	99.2

Graduation Rates [1]		
Items	**Higher Performers (n = 31)**	**Lower Performers (n=19)**
Average service hours per student: career services		
L1 services	18.5	4.8
L2 services	58.9	122.4
Average service hours per student: services of providing public services		
L1 services *	0.1	1
L2 services	21.0	38.7
Average service hours per student: health services		
L1 services	1.1	1.8
L2 services	77.1	147.4

* Statistically significant at the p<.05 level between higher and lower performers

1. Dataset: regression; Variables: gradrate_group inten_relation1 inten_academic1 inten_case1 inten_behav1 inten_aftsch1 inten_career1 inten_public1 inten_health1 inten_relation2 inten_academic2 inten_case2 inten_behav2 inten_aftsch2 inten_career2 inten_public2 inten_health2 stper_l1 stper_l2 level1_type level2_type

Promoting Power [1]		
Items	**Higher Performers (n = 25)**	**Lower Performers (n=10)**
Locality		
Urban	11	6
Suburban	8	2
Rural	6	2
% of time that site coordinators spent in coordinating CIS services		
0%	0	10.0%
1% to 25%	8.0%	20.0%
26% to 50%	40.0%	10.0%
51% to 75%	12.0%	10.0%
76% to 100%	40.0%	50.0%
How often does CIS conduct an assessment of overall student needs at your school?		
Less than once a year	0	0
Once a year	32.0%	30.0%
More than once a year	52.0%	50.0%
Have an annual site operations plan to address overall student needs	100.0%	90.0%
How often does CIS monitor school-wide services?		
Never/Less than once a year	12.0%	0
Once a year	16.0%	10.0%
Once per semester	12.0%	30.0%
Once per grading period	4.0%	0
Once per month	20.0%	10.0%
After each service is delivered	16.0%	20.0%

Promoting Power [1]		
Items	**Higher Performers (n = 25)**	**Lower Performers (n=10)**
How often does CIS review overall student progress to adjust school-wide services?		
Never/Less than once a year	8.0%	10.0%
Once a year	12.0%	30.0%
Once per semester	28.0%	10.0%
Once per grading period	16.0%	10.0%
More than once per grading period	20.0%	20.0%
How often does CIS conduct an assessment of individual student needs at your school?		
Never/Less than once a year	0	10.0%
Once a year	24.0%	10.0%
Once per semester	28.0%	20.0%
Once per grading period	16.0%	0
More than once per grading period	20.0%	10.0%
Once per month	0	0
More than once per month	0	30.0%
Have individualized plans to address the needs of CIS students	80.0%	60.0%
How often does CIS monitor individual student services?		
Never/Less than once a year	0	0
Once a year	8.0%	10.0%
Once per semester	8.0%	20.0%
Once per grading period	20.0%	20.0%
Once per month	20.0%	0
After each service is delivered	32.0%	30.0%
How often does CIS review student progress to adjust targeted services?		
Never/Less than once a year	0	0
Once a year	0	0
Once per semester	24.0%	30.05
Once per grading period	32.0%	30.05
More than once per grading period	32.0%	20.0%
How long do students typically stay enrolled in CIS programs?		
One semester	0	0
One school year	20.05	30.0%
Two school years	0	0
As long as the student is in school	60.0%	40.0%
% of students served in schools		
L1 services	23.7%	42.6%
L2 services	19.7%	34.7%
Numbers of types of services provided		
L1 services*	13	8
L2 services	10	9

Promoting Power [1]		
Items	**Higher Performers (n = 25)**	**Lower Performers (n=10)**
Average service hours per student: maintaining family and peer relationship		
L1 services	8.1	1.1
L2 services	77.8	27.0
Average service hours per student: academic services		
L1 services *	8.3	0.7
L2 services	51.4	111.5
Average service hours per student: case management		
L1 services *	2.7	0.9
L2 services *	128.2	39.5
Average service hours per student: behavioral services		
L1 services*	19.8	1.3
L2 services *	244.8	50.5
Average service hours per student: after school services		
L1 services *	1.1	0.1
L2 services *	54.6	5.5
Average service hours per student: career services		
L1 services*	14.4	0.6
L2 services*	53.8	15.5
Average service hours per student: services of providing public services		
L1 services *	1.0	0
L2 services *	40.2	1.5
Average service hours per student: health services		
L1 services	1.6	1.8
L2 services	117.4	143.6

* Statistically significant at the p<.05 level between higher and lower performers

1. Dataset: regression; Variables: pp_group inten_relation1 inten_academic1 inten_case1 inten_behav1 inten_aftsch1 inten_career1 inten_public1 inten_health1 inten_relation2 inten_academic2 inten_case2 inten_behav2 inten_aftsch2 inten_career2 inten_public2 inten_health2 stper_l1 stper_l2 level1_type level2_type

Attendance Rate [1]		
Items	**Higher Performers (n = 58)**	**Lower Performers (n=51)**
Locality		
Urban	41	32
Suburban	11	17
Rural	6	2
% of time that site coordinators spent in coordinating CIS services		
0%	3.4%	0
1% to 25%	0	5.9%
26% to 50%	13.8%	11.8%
51% to 75%	8.6%	15.7%
76% to 100%	74.1%	64.7%
How often does CIS conduct an assessment of overall student needs at your school?		
Less than once a year	0	0
Once a year	55.2%	45.1%
More than once a year	36.2%	31.4%
Have an annual site operations plan to address overall student needs	91.4%	74.5%
How often does CIS monitor school-wide services?		
Never/Less than once a year	0	2.0%
Once a year	20.7%	17.6%
Once per semester	22.4%	9.8%
Once per grading period	3.4%	7.8%
Once per month	25.9%	11.8%
After each service is delivered	17.2%	35.3%
How often does CIS review overall student progress to adjust school-wide services?		
Never/Less than once a year	6.9%	0
Once a year	12.1%	11.8%
Once per semester	19.0%	17.6%
Once per grading period	32.8%	43.1%
More than once per grading period	15.5%	9.8%
How often does CIS conduct an assessment of individual student needs at your school?		
Never/Less than once a year	1.7%	0
Once a year	15.5%	21.6%
Once per semester	20.7%	9.8%
Once per grading period	39.7%	49.0%
More than once per grading period	13.8%	9.8%
Once per month	0	0
More than once per month	5.2%	3.9%
Have individualized plans to address the needs of CIS students	93.1%	92.2%

Attendance Rate [1]		
Items	**Higher Performers (n = 58)**	**Lower Performers (n=51)**
How often does CIS monitor individual student services?		
Never/Less than once a year	1.7%	0
Once a year	93.1%	0
Once per semester	8.6%	9.8%
Once per grading period	43.1%	43.1%
Once per month	17.2%	9.8%
After each service is delivered	12.1%	29.4%
How often does CIS review student progress to adjust targeted services?		
Never/Less than once a year	1.7%	0
Once a year	1.7%	2.0%
Once per semester	12.1%	7.8%
Once per grading period	56.9%	68.6%
More than once per grading period	15.5%	13.7%
How long do students typically stay enrolled in CIS programs?		
One semester	0	0
One school year	32.8%	37.3%
Two school years	34.5%	0
As long as the student is in school	32.8%	41.25
% of students served in schools		
L1 services	64.1%	61.2%
L2 services	35.1%	42.3%
Numbers of types of services provided		
L1 services*	11	11
L2 services	13	13
Average service hours per student: maintaining family and peer relationship		
L1 services	1.7	1.0
L2 services	95.9	105.6
Average service hours per student: academic services		
L1 services	1.6	1.3
L2 services	79.1	156.3
Average service hours per student: case management		
L1 services	1.6	1.2
L2 services	184.8	180.9
Average service hours per student: behavioral services		
L1 services	2.0	1.9
L2 services	277.0	323.4
Average service hours per student: after school services		
L1 services	1.1	1.2
L2 services	70.0	117.3

Attendance Rate [1]		
Items	**Higher Performers (n = 58)**	**Lower Performers (n=51)**
Average service hours per student: career services		
L1 services	0.8	0.9
L2 services	53.0	70.9
Average service hours per student: services of providing public services		
L1 services	0.6	0.4
L2 services	33.1	29.7
Average service hours per student: health services		
L1 services	2.2	0.9
L2 services	101.2	92.2

* Statistically significant at the p<.05 level between higher and lower performers

1. Dataset: regression; Variables: attrate_group inten_relation1 inten_academic1 inten_case1 inten_behav1 inten_aftsch1 inten_career1 inten_public1 inten_health1 inten_relation2 inten_academic2 inten_case2 inten_behav2 inten_aftsch2 inten_career2 inten_public2 inten_health2 stper_l1 stper_l2 level1_type level2_type

Academic: Math [1]		
Items	**Higher Performers (n = 91)**	**Lower Performers (n=86)**
Locality		
Urban	59	53
Suburban	22	25
Rural	10	8
% of time that site coordinators spent in coordinating CIS services		
0%	1.1%	2.3%
1% to 25%	19.8%	19.8%
26% to 50%	13.2%	17.4%
51% to 75%	7.7%	12.8%
76% to 100%	57.1%	46.5%
How often does CIS conduct an assessment of overall student needs at your school?		
Less than once a year	0	0
Once a year	53.8%	48.8%
More than once a year	35.2%	31.4%
Have an annual site operations plan to address overall student needs	85.7%	82.6%
How often does CIS monitor school-wide services?		
Never/Less than once a year	2.2%	4.7%
Once a year	16.5%	29.1%
Once per semester	14.3%	16.3%
Once per grading period	4.4%	7.0%
Once per month **	26.4%	8.1%
After each service is delivered	17.6%	18.6%

Academic: Math [1]		
Items	**Higher Performers (n = 91)**	**Lower Performers (n=86)**
How often does CIS review overall student progress to adjust school-wide services?		
Never/Less than once a year	7.7%	9.3%
Once a year	12.1%	19.8%
Once per semester	27.5%	20.9%
Once per grading period	26.4%	25.6%
More than once per grading period	8.8%	8.1%
How often does CIS conduct an assessment of individual student needs at your school?		
Never/Less than once a year	4.4%	4.7%
Once a year	22.0%	11.6%
Once per semester	22.0%	22.1%
Once per grading period	26.4%	38.4%
More than once per grading period	5.5%	10.5%
Once per month	2.2%	2.3%
More than once per month	6.6%	2.3%
Have individualized plans to address the needs of CIS students	76.9%	73.3%
How often does CIS monitor individual student services?		
Never/Less than once a year	2.2%	3.5%
Once a year	4.4%	69.8%
Once per semester	13.2%	10.5%
Once per grading period	25.3%	32.6%
Once per month	16.5%	10.5%
After each service is delivered	27.5%	19.8%
How often does CIS review student progress to adjust targeted services?		
Never/Less than once a year	2.2%	5.8%
Once a year	4.4%	8.1%
Once per semester	34.1%	24.4%
Once per grading period	38.5%	38.4%
More than once per grading period	8.8%	9.3%
How long do students typically stay enrolled in CIS programs?		
One semester	1.1%	4.7%
One school year	29.7%	27.9%
Two school years	4.4%	3.5%
As long as the student is in school	47.3%	43.0%
% of students served in schools		
L1 services	50.5%	49.8%
L2 services	39.1%	35.6%
Numbers of types of services provided		
L1 services*	10	11
L2 services	10	9

Academic: Math [1]		
Items	**Higher Performers (n = 91)**	**Lower Performers (n=86)**
Average service hours per student: maintaining family and peer relationship		
L1 services	4.0	3.6
L2 services	102.8	62.4
Average service hours per student: academic services		
L1 services	3.7	3.6
L2 services	114.0	77.2
Average service hours per student: case management		
L1 services	1.4	1.5
L2 services *	160.3	86.6
Average service hours per student: behavioral services		
L1 services	8.7	8.0
L2 services	251.8	175.1
Average service hours per student: after school services		
L1 services	3.2	2.7
L2 services	132.7	134.6
Average service hours per student: career services		
L1 services	4.9	4.9
L2 services	64.7	34.9
Average service hours per student: services of providing public services		
L1 services	0.4	0.4
L2 services	25.3	20.2
Average service hours per student: health services		
L1 services	1.1	1.2
L2 services	85.5	60.8

* Statistically significant at the p<.05 level between higher and lower performers

1. Dataset: regression; Variables: Academic_M inten_relation1 inten_academic1 inten_case1 inten_behav1 inten_aftsch1 inten_career1 inten_public1 inten_health1 inten_relation2 inten_academic2 inten_case2 inten_behav2 inten_aftsch2 inten_career2 inten_public2 inten_health2 stper_l1 stper_l2 level1_type level2_type

Academic: Reading [1]		
Items	**Higher Performers (n = 91)**	**Lower Performers (n=86)**
Locality		
Urban	52	60
Suburban	28	18
Rural	11	8
% of time that site coordinators spent in coordinating CIS services		
0%	1.1%	2.3%
1% to 25%	20.9%	18.6%
26% to 50%	15.4%	15.1%
51% to 75%	6.6%	12.8%
76% to 100%	53.8%	51.1%
How often does CIS conduct an assessment of overall student needs at your school?		
Less than once a year	0	0
Once a year	47.3%	53.5%
More than once a year	39.6%	29.1%
Have an annual site operations plan to address overall student needs	94.6%	83.7%
How often does CIS monitor school-wide services?		
Never/Less than once a year	3.3%	3.5%
Once a year	19.8%	25.6%
Once per semester	13.2%	17.4%
Once per grading period	5.5%	4.7%
Once per month	14.3%	20.9%
After each service is delivered	20.9%	16.3%
How often does CIS review overall student progress to adjust school-wide services?		
Never/Less than once a year	4.4%	12.8%
Once a year	17.6%	14.0%
Once per semester	20.9%	26.7%
Once per grading period	27.0%	25.6%
More than once per grading period	7.7%	9.3%
How often does CIS conduct an assessment of individual student needs at your school?		
Never/Less than once a year	5.5%	3.5%
Once a year	14.3%	18.6%
Once per semester	25.3%	18.6%
Once per grading period	30.8%	32.6%
More than once per grading period	5.5%	12.8%
Once per month	3.3%	1.2%
More than once per month	5.5%	3.5%
Have individualized plans to address the needs of CIS students	76.9%	73.3%

Academic: Reading [1]		
Items	**Higher Performers (n = 91)**	**Lower Performers (n=86)**
How often does CIS monitor individual student services?		
Never/Less than once a year	4.4%	1.2%
Once a year	4.4%	7.0%
Once per semester	14.3%	9.3%
Once per grading period	31.9%	24.4%
Once per month	9.9%	17.4%
After each service is delivered	23.1%	25.6%
How often does CIS review student progress to adjust targeted services?		
Never/Less than once a year	3.3%	4.7%
Once a year	5.5%	8.0%
Once per semester	33.0%	25.6%
Once per grading period	37.4%	38.4%
More than once per grading period	7.7%	11.6%
How long do students typically stay enrolled in CIS programs?		
One semester	3.3%	2.3%
One school year *	19.8%	38.4%
Two school years	4.4%	3.5%
As long as the student is in school	49.5%	40.7%
% of students served in schools		
L1 services	54.7%	45.7%
L2 services	40.8%	34.4%
Numbers of types of services provided		
L1 services*	10	11
L2 services	9	10
Average service hours per student: maintaining family and peer relationship		
L1 services **	5.7	1.9
L2 services	90.2	77.2
Average service hours per student: academic services		
L1 services **	5.3	2.0
L2 services	78.7	114.2
Average service hours per student: case management		
L1 services	1.5	1.5
L2 services	110.2	141.6
Average service hours per student: behavioral services		
L1 services **	13.0	3.4
L2 services	182.1	251.0
Average service hours per student: after school services		
L1 services	3.8	2.1
L2 services	107.4	164.2

Academic: Reading [1]		
Items	**Higher Performers (n = 91)**	**Lower Performers (n=86)**
Average service hours per student: career services		
L1 services **	8.2	1.5
L2 services	50.3	51.9
Average service hours per student: services of providing public services		
L1 services	0.4	0.4
L2 services	19.7	27.6
Average service hours per student: health services		
L1 services	1.2	1.2
L2 services	55.1	93.4

* Statistically significant at the p<.05 level between higher and lower performers

1. Dataset: regression; Variables: Academic_R inten_relation1 inten_academic1 inten_case1 inten_behav1 inten_aftsch1 inten_career1 inten_public1 inten_health1 inten_relation2 inten_academic2 inten_case2 inten_behav2 inten_aftsch2 inten_career2 inten_public2 inten_health2 stper_l1 stper_l2 level1_type level2_type

Appendix F: Locale Profile
A comparison between
Urban, Suburban, and Rural CIS schools

Locale Profile

This profile provides a view of the differences and similarities between locale subgroups within the main sample. When used in conjunction with outcome data, the demographic and process information provided in this profile can help create a fuller understanding of how CIS looks and works at Urban, Suburban, and Rural schools.

Placement into locale groups was determined based on the National Center for Education Statistics (NCES) Common Core of Data (CCD). NCES created school locale codes from 1 through 8 from school addresses in CCD files using Census data. To consolidate these categories into three groups, we combined the locale codes into Urban, Suburban, and Rural as follows:

Urban

1 = Large City: A central city of a Core Based Statistical Area (CBSA) or Consolidated Statistical Area (CSA), with the city having a population greater than or equal to 250,000.

2 = Mid-size City: A central city of a CBSA or CSA, with the city having a population less than 250,000.

Suburban

3 = Urban Fringe of a Large City: Any incorporated place, Census designated place, or non-place territory within a CBSA or CSA of a Large City and defined as urban by the Census Bureau.

4 = Urban Fringe of a Mid-size City: Any incorporated place, Census designated place, or non-place territory within a CBSA or CSA of a Mid-size City and defined as urban by the Census Bureau.

5 = Large Town: An incorporated place or Census designated place with a population greater than or equal to 25,000 and located outside a CBSA or CSA.

Rural

6 = Small Town: An incorporated place or Census designated place with population less than 25,000 and greater than or equal to 2,500 and located outside a CBSA or CSA.

7 = Rural, outside CBSA: Any incorporated place, Census designated place, or non-place territory not within a CBSA or CSA of a Large or Mid-size City and defined as rural by the Census Bureau.

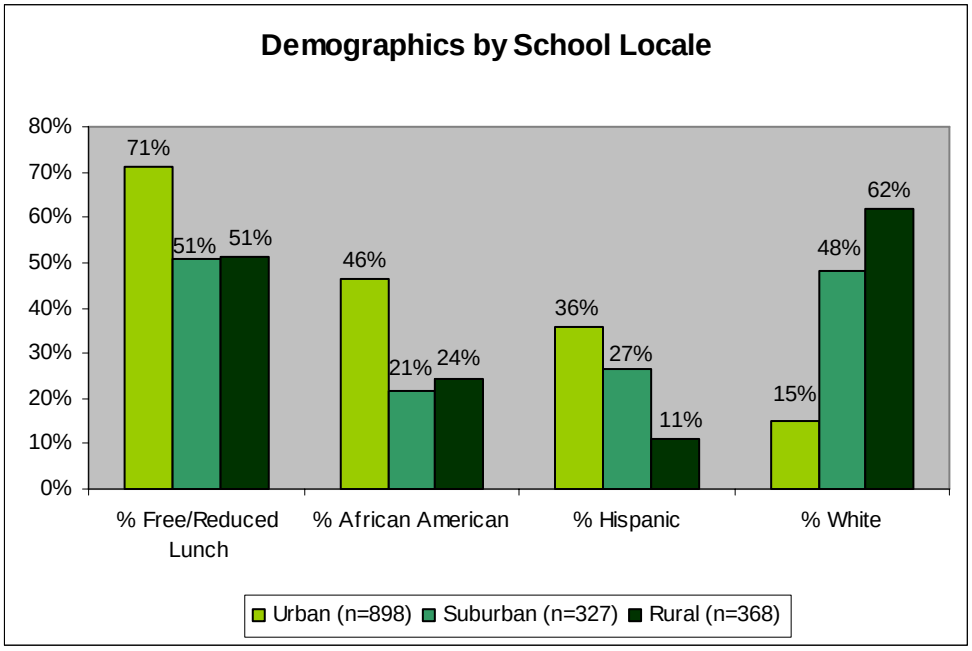
8 = Rural, inside CBSA: Any incorporated place, Census designated place, or non-place territory within a CBSA or CSA of a Large or Mid-size City and defined as rural by the Census Bureau.

The data in this profile was drawn from the Site Coordinator Survey, the Critical Processes Survey, and the CCD. Where possible, data from the surveys was combined to use all available data from across the nation in order to depict CIS programs at Urban, Suburban, and Rural schools as completely as possible. This has resulted in differing sample sizes for each analysis, as denoted by "n=" for each subgroup.

Demographic Information

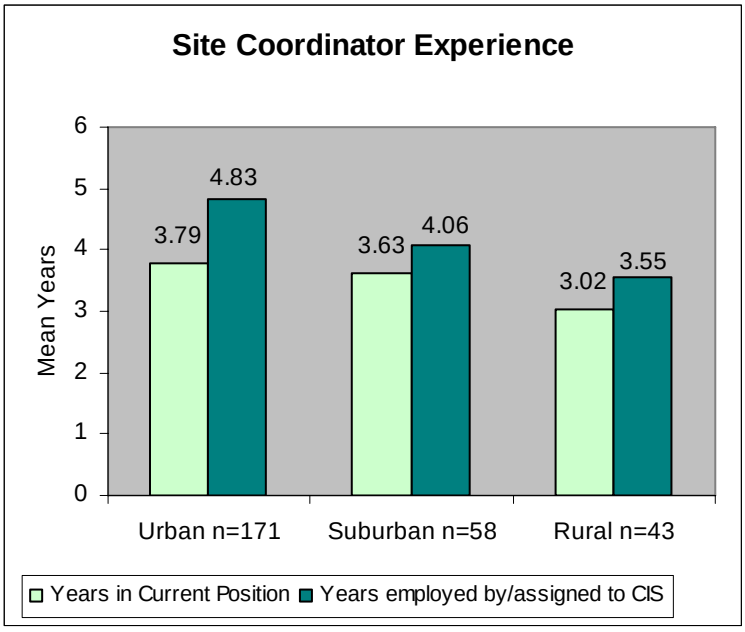
	Urban	Suburban	Rural
Number of Sites	903	332	379
Mean Years in Operation	6.57	6.05	6.43

Dataset: mrg_final_jg; Variables: locale_final yrsinop

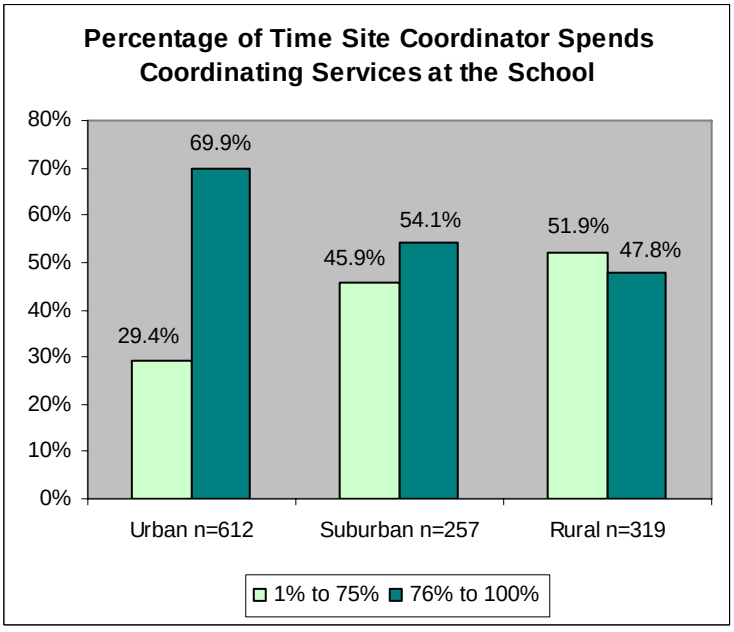


Dataset: mrg_final_jg; Variables: locale_final pctfrl03 pctbl03 pcthis03 pctwht03

Site Coordinator Information

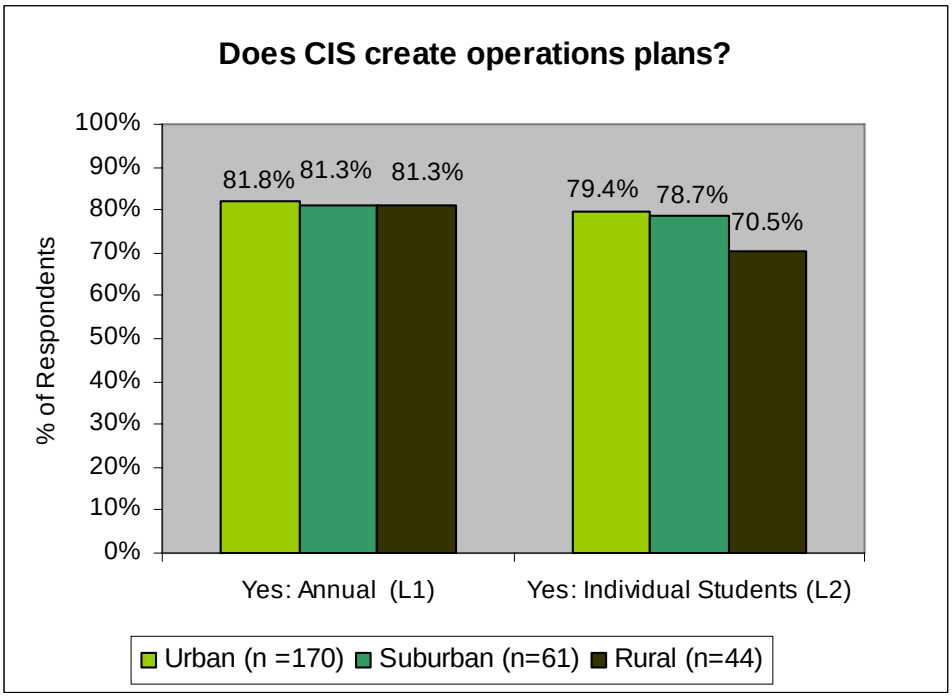


Dataset: mrg_final_jg; Variables: locale_final q7 q8



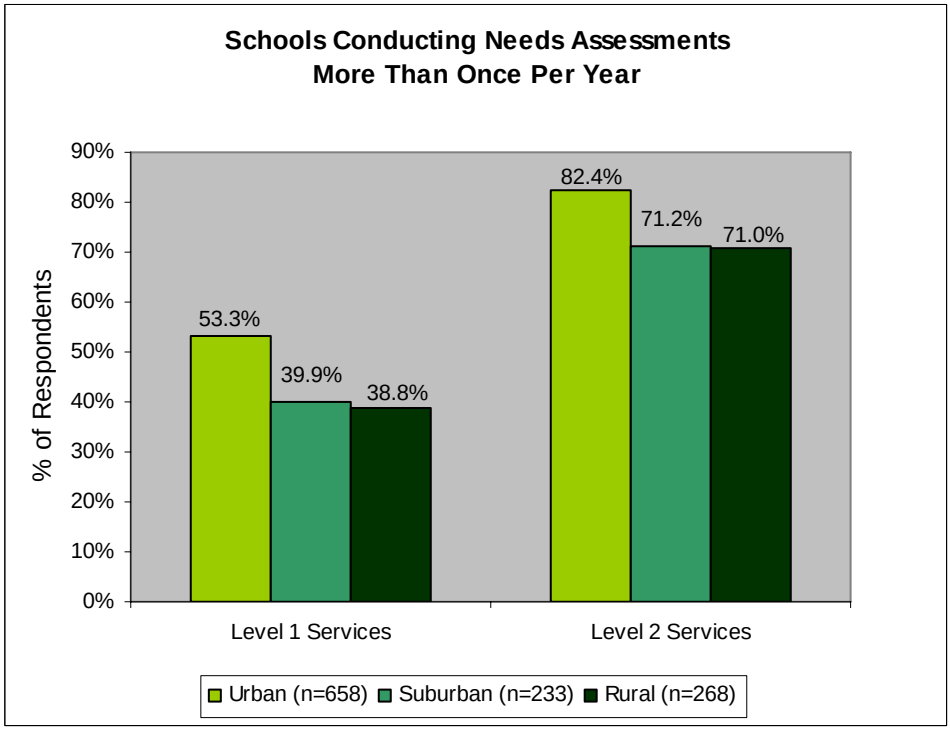
Dataset: mrg_final_jg; Variables: locale_final sctime

Planning



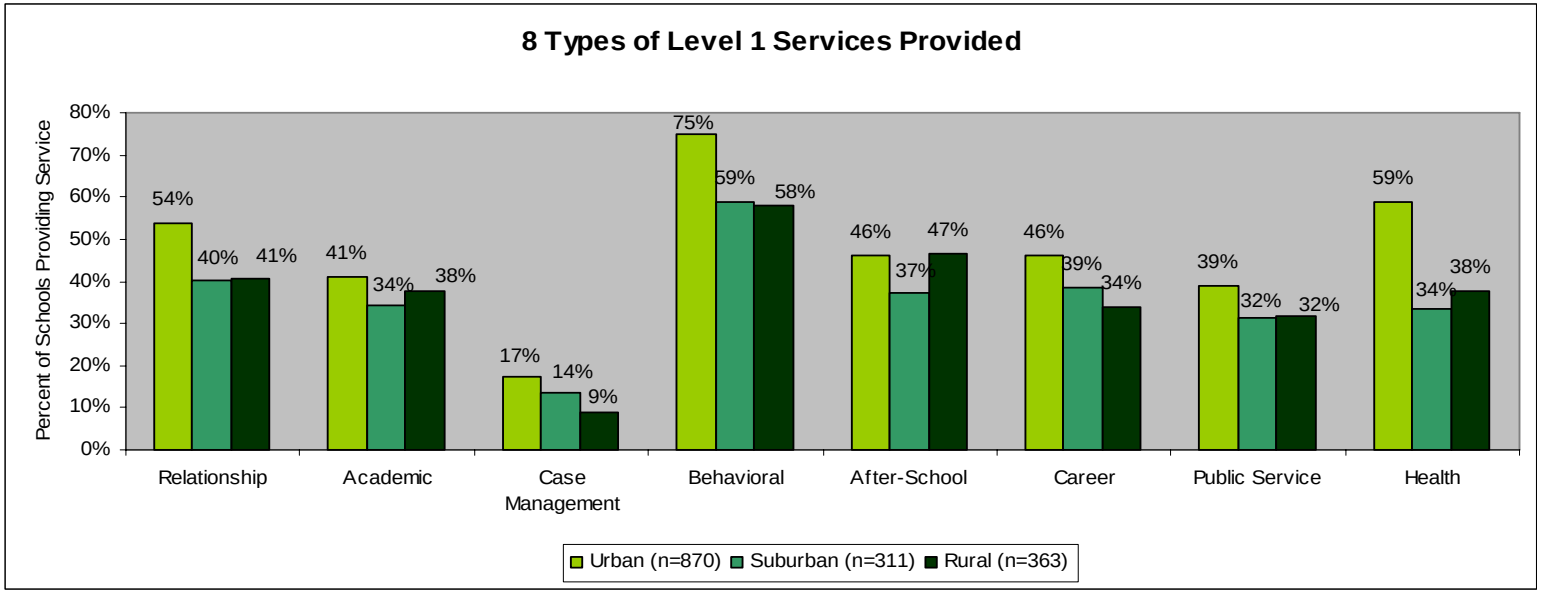
Dataset: mrg_final_jg; Variables: locale_final q20 q43

Needs Assessments

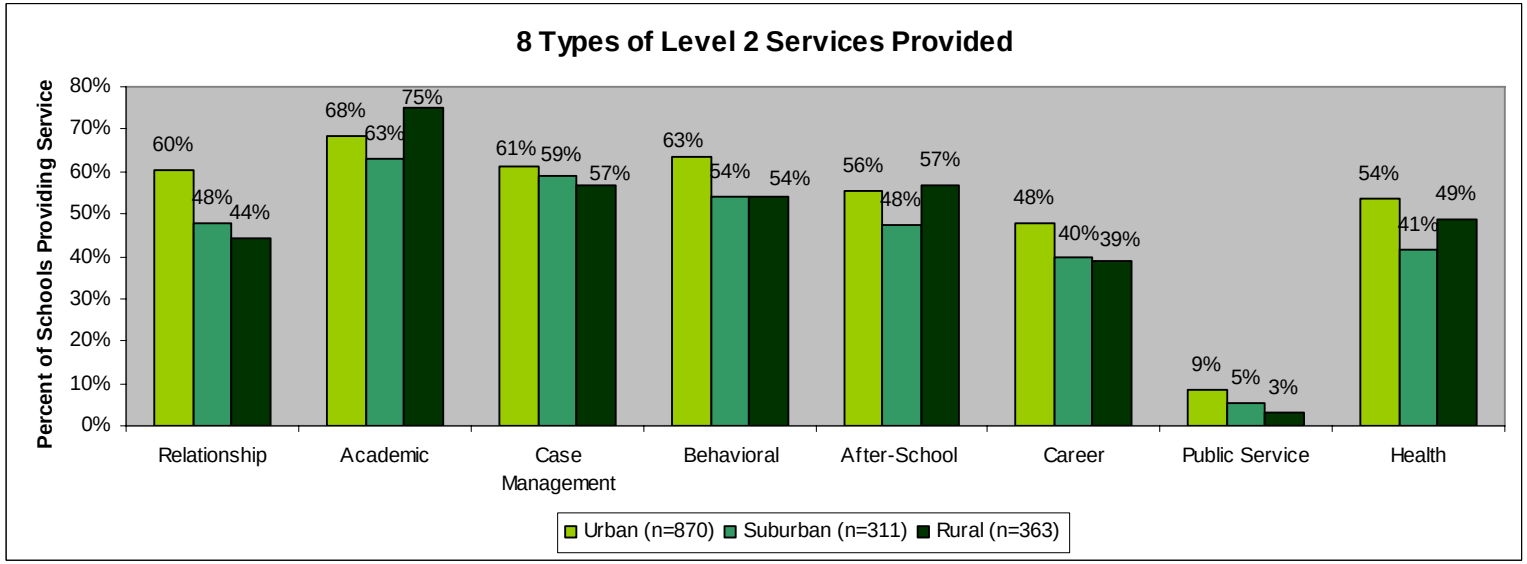


Dataset: mrg_final_jg; Variables: locale_final needsl1 needsl2

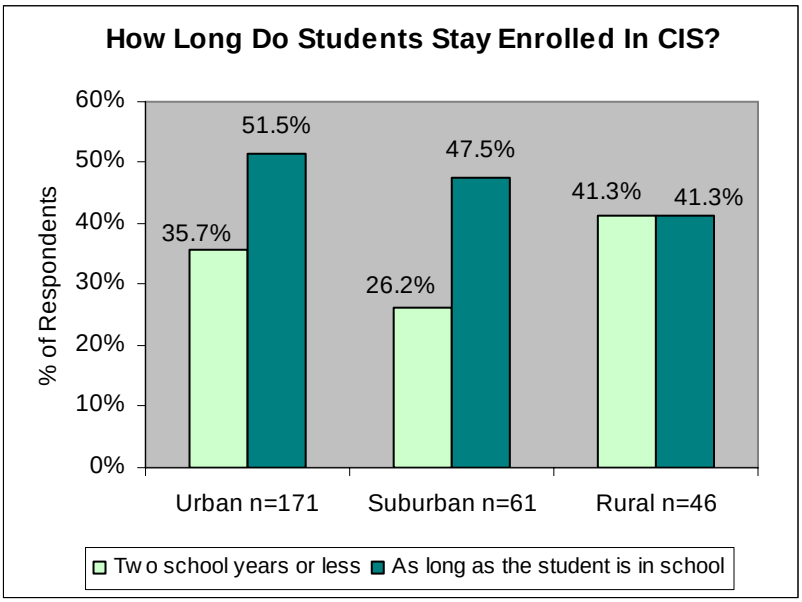
Service Delivery



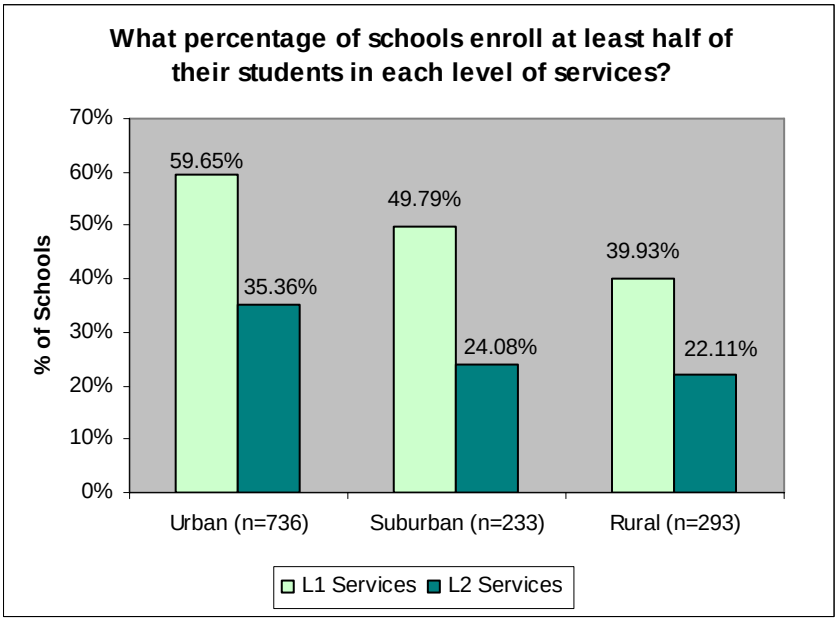
Dataset: mrg_final_jg; Variables: locale_final q22_relationship q22_academic q22_caseman q22_behavioral q22_aftersch q22_career q22_public q22_health



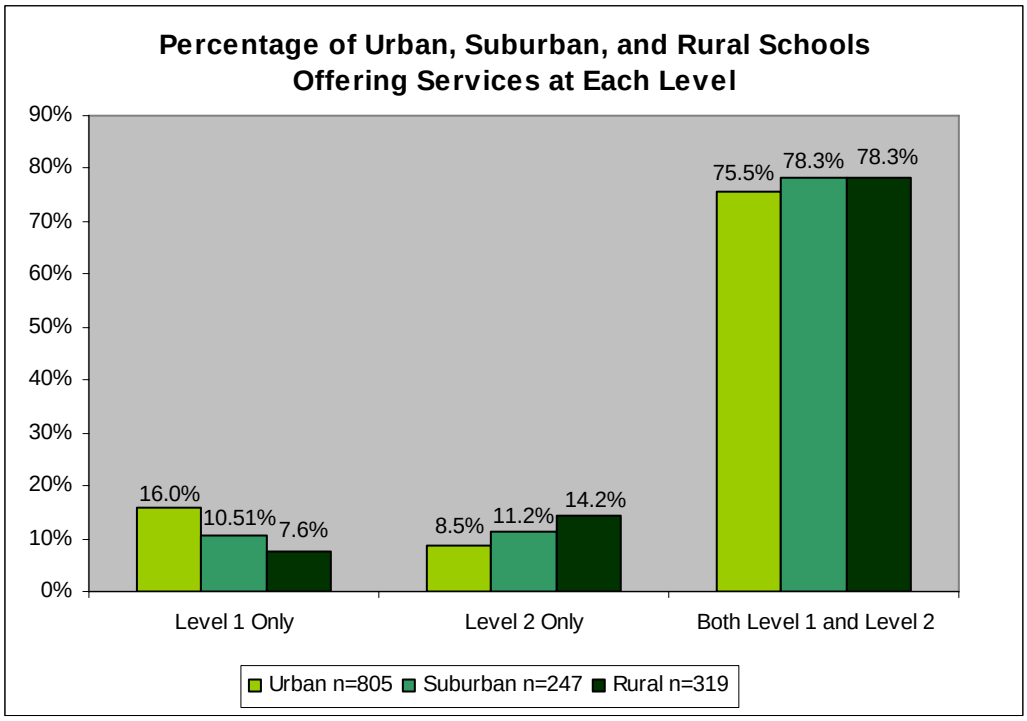
Dataset: mrg_final_jg; Variables: locale_final q45_relationship q45_academic q45_caseman q45_behavioral q45_aftersch q45_career q45_public q45_health



Dataset: mrg_final_jg; Variables: locale_final q53_1

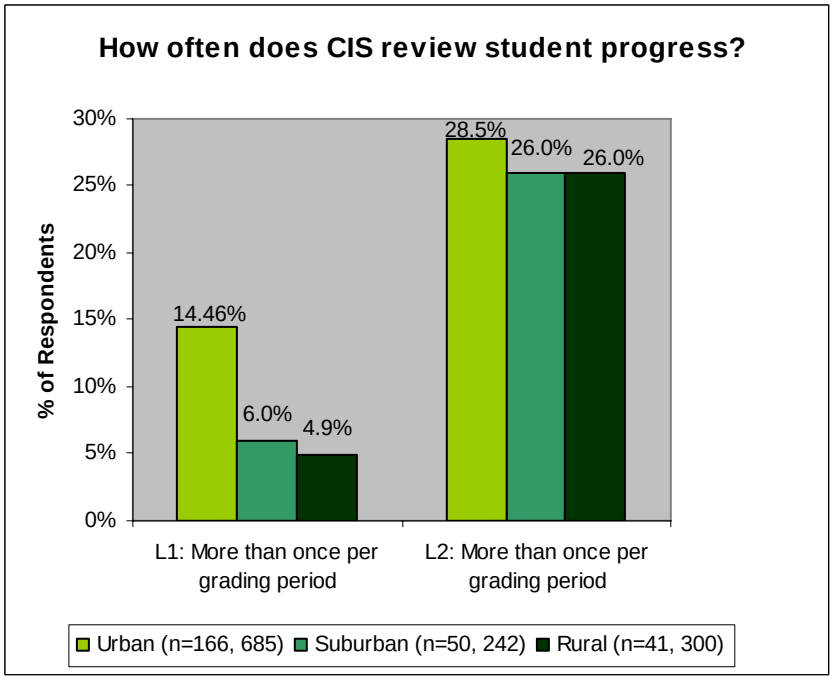


Dataset: mrg_final_jg; Variables: locale_final q10 q12



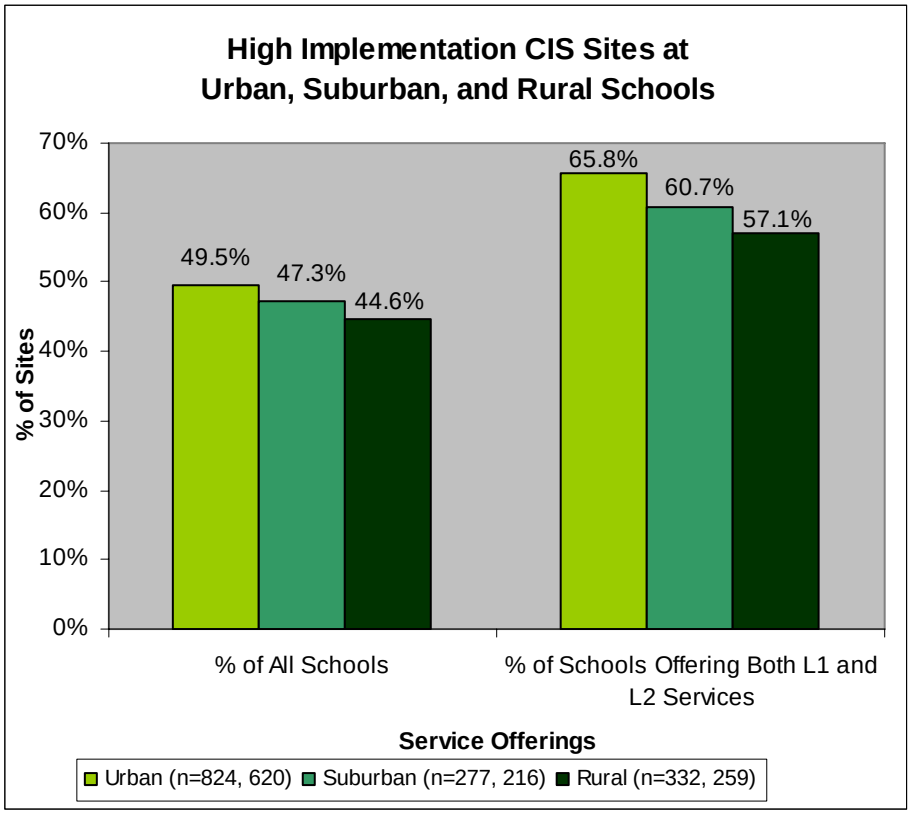
Datasets: mrg_final_jg; Variables locale_final levelservice

Monitoring



Dataset: mrg_final_jg; Variables: locale_final q29_1 monitorl2

Typology



Dataset: mrg_final_jg urban sub rural; Variables: locale_final high_implementer levelservice

Appendix G: Race/Ethnicity Profile
A comparison between primarily African American, Hispanic/Latino, White, and Diverse CIS schools

Race/Ethnicity Profile

This profile provides a view of the differences and similarities between race/ethnicity subgroups within the main sample. When used in conjunction with outcome data, the demographic and process information provided in this profile can help create a fuller understanding of how CIS looks and works at primarily African American, Hispanic/Latino, White and Diverse schools.

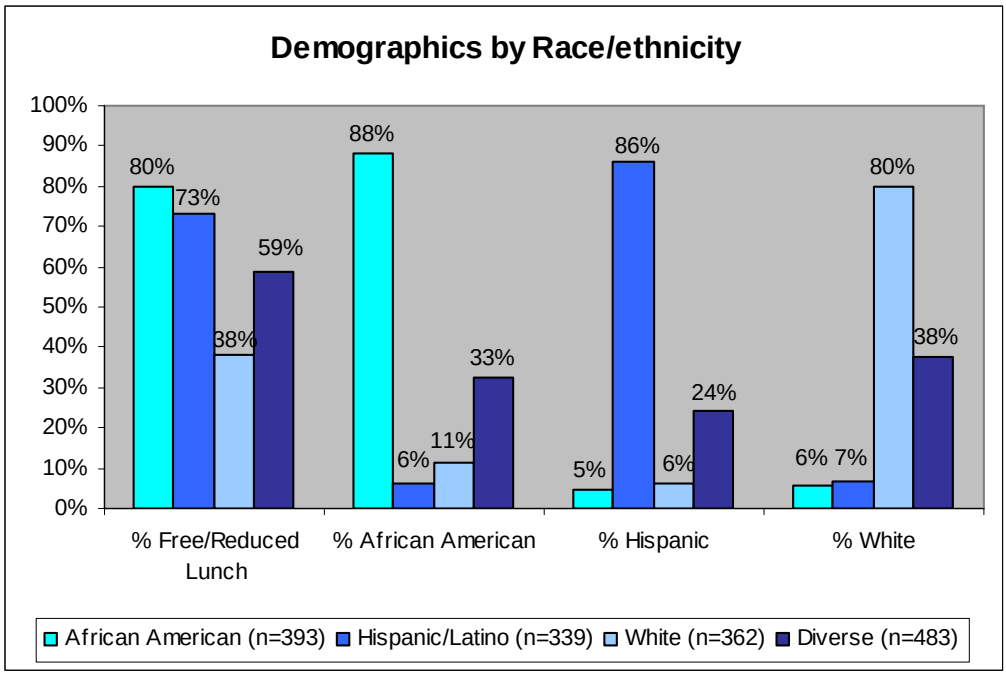
Placement into race/ethnicity groups was determined based on the NCES Common Core of Data (CCD) racial categories from 2003. Each of these first three race/ethnicity subgroups (African American, Hispanic/Latino, and White) is comprised of schools having at least 60% enrollment of that racial/ethnic group (see actual means in demographics below). The Diverse subgroup consists of the remaining schools, with a mean racial composition of 33% African American, 24% Hispanic, 38% White, and 5% Asian and Native American.

The data in the profile was drawn from the Site Coordinator Survey, the Critical Processes Survey, and the CCD. Where possible, data from the surveys was combined to use all available data from across the nation in order to depict CIS programs at primarily African American, Hispanic/Latino, White and Diverse schools as completely as possible. This has resulted in differing sample sizes for each analysis, as denoted by "n=" for each subgroup.

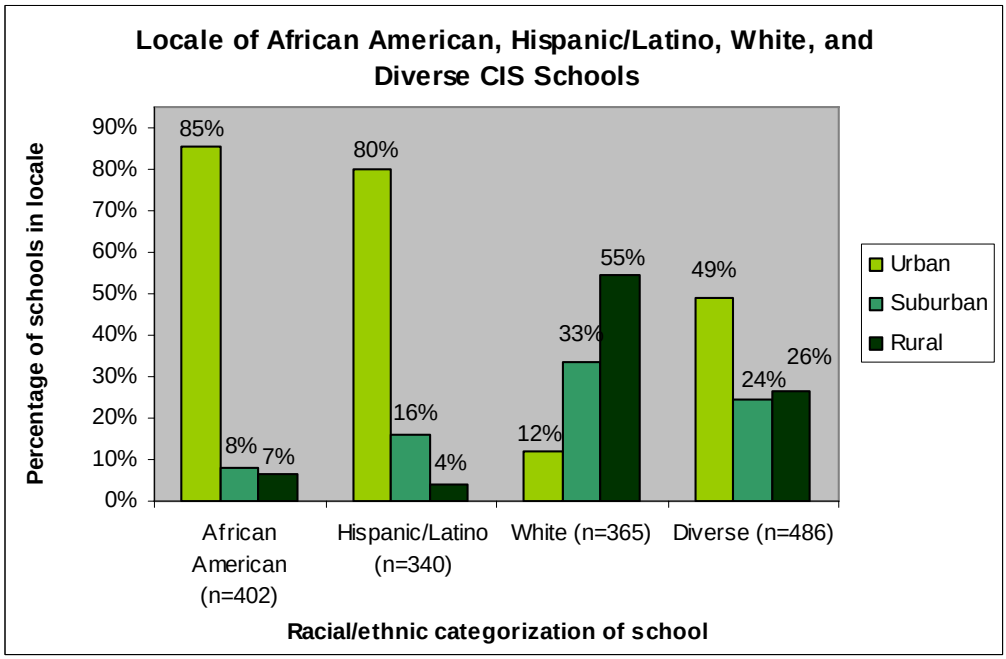
Demographic Information

	African American	Hispanic/ Latino	White	Diverse
Number of Sites	402	340	365	486
Mean Years in Operation	6.36	6.87	5.60	6.90

Dataset: mrg_final_jg; Variables: race_final yrsinop

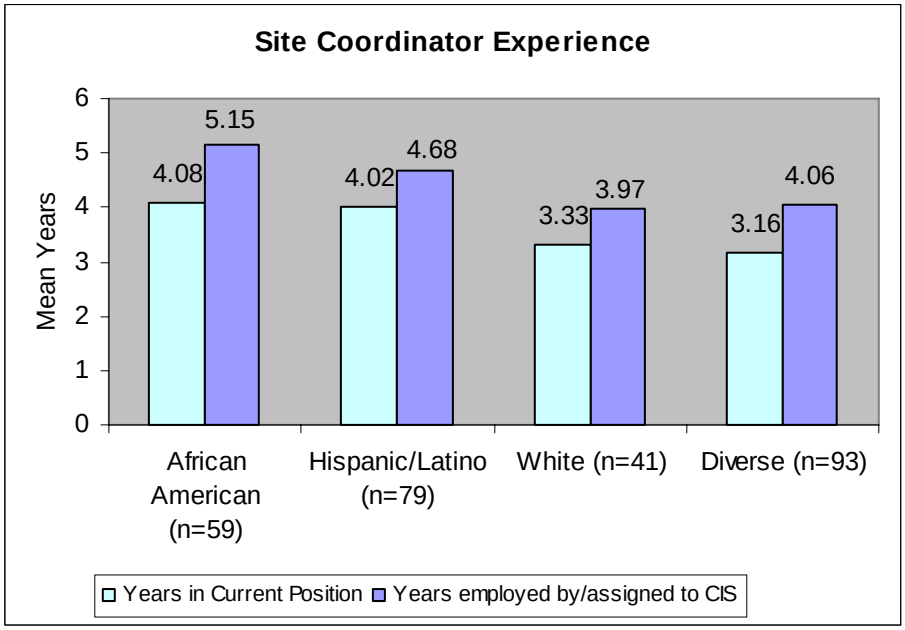


Dataset: mrg_final_jg; Variables: race_final pctfrl03 pctbl03 pcthis03 pctwht03

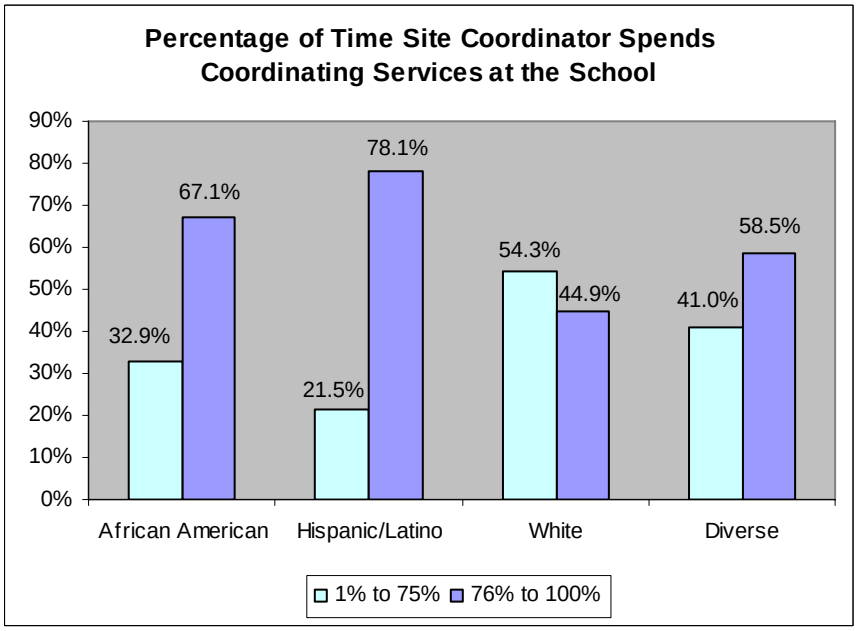


Dataset: mrg_final_jg; Variables: locale_final race_final

Site Coordinator Information

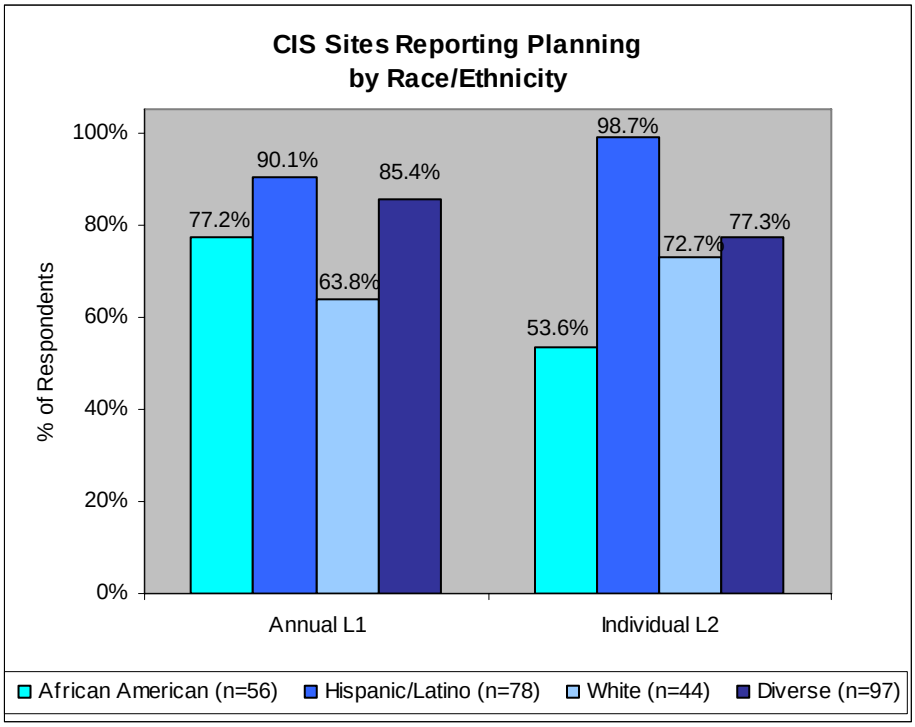


Dataset: mrg_final_jg; Variables: race_final q7 q8



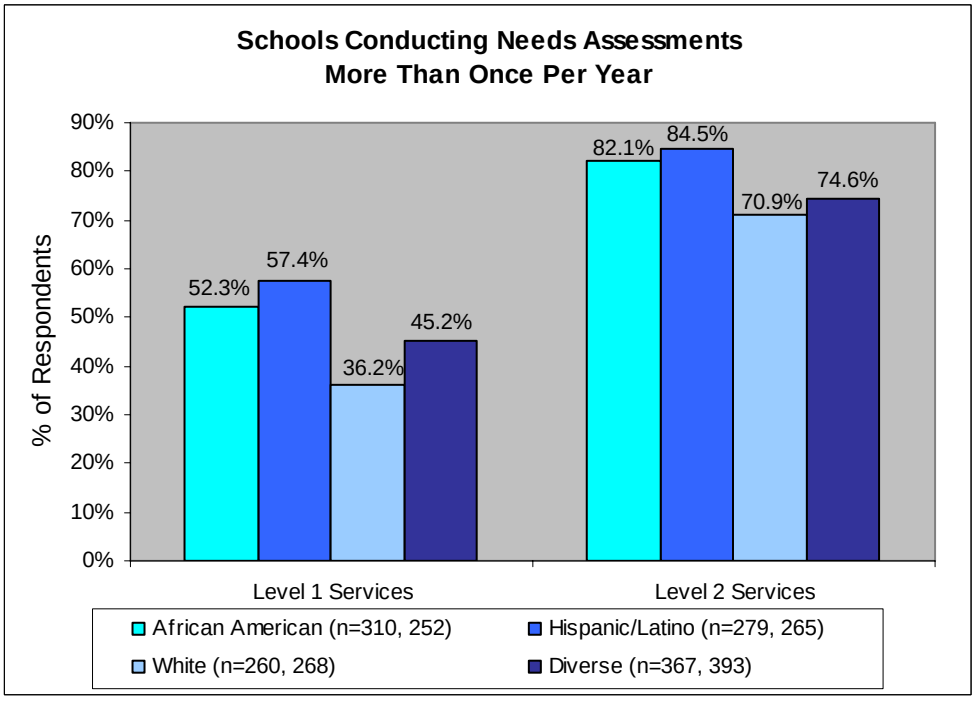
Dataset: mrg_final_jg; Variables: race_final sctime

Planning



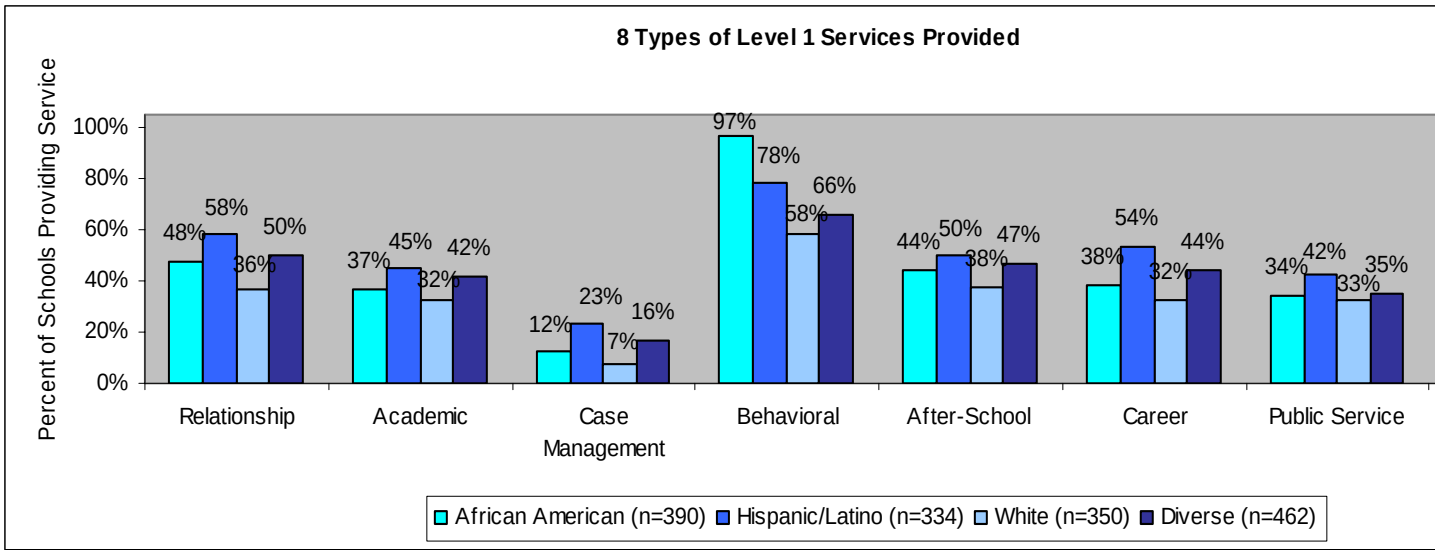
Dataset: mrg_final_jg; Variables: race_final q20 q43

Needs Assessments

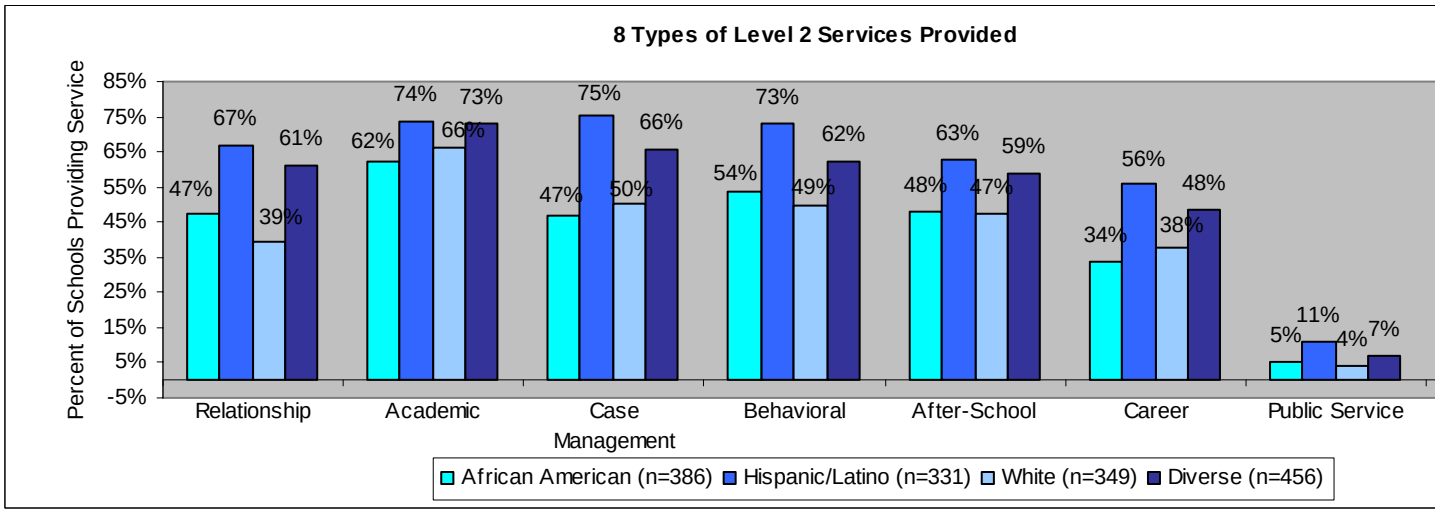


Dataset: mrg_final_jg; Variables: race_final needsl1 needsl2

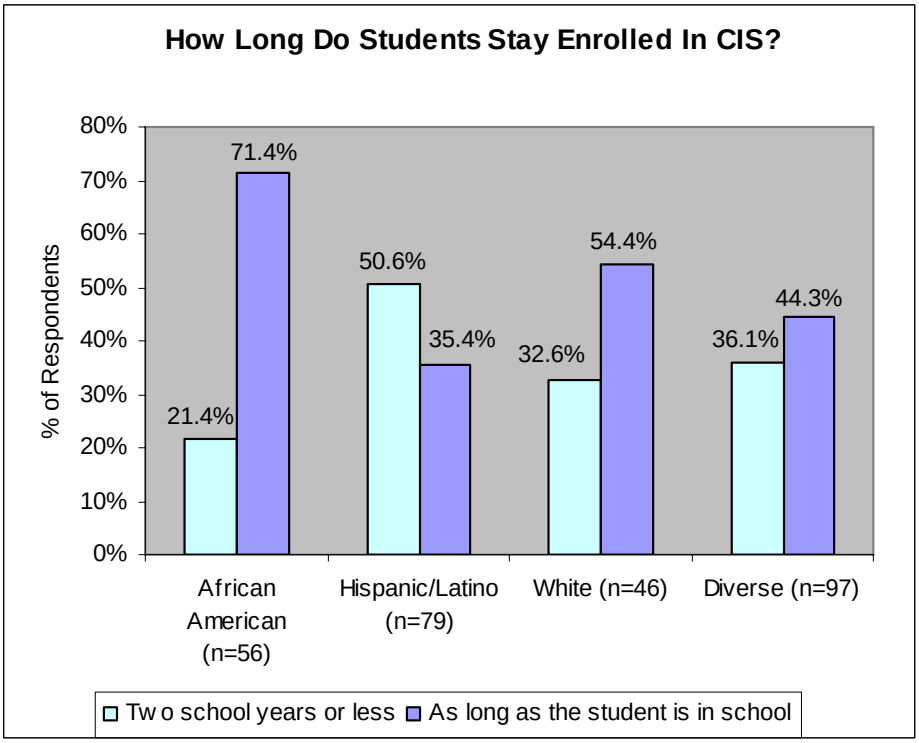
Service Delivery



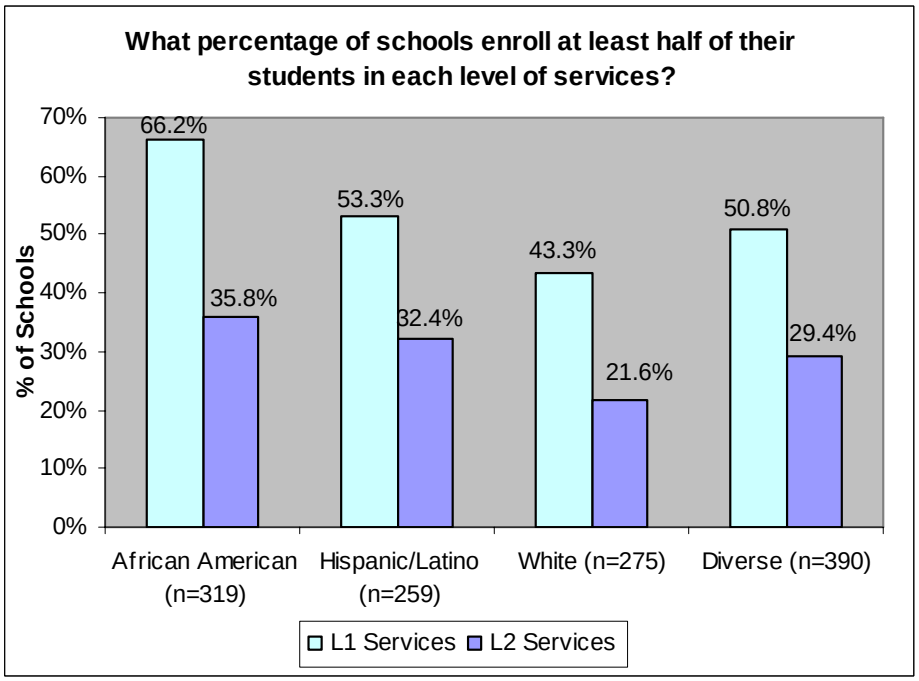
Dataset: mrg_final_jg; Variables: race_final q22_relationship q22_academic q22_caseman q22_behavioral q22_aftersch q22_career q22_public q22_health



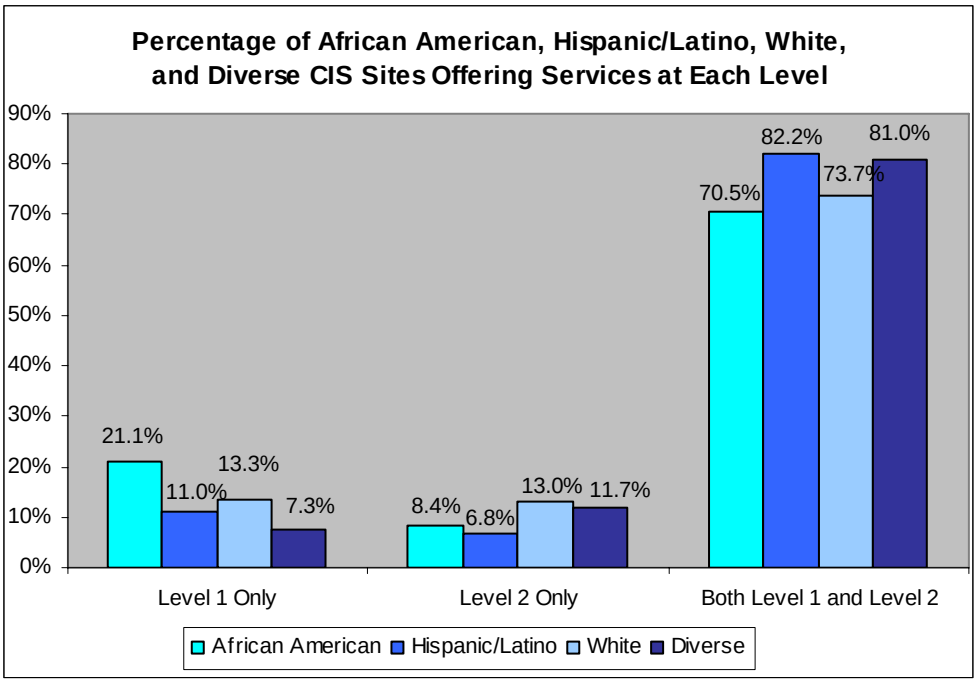
Dataset: mrg_final_jg; Variables: race_final q45_relationship q45_academic q45_caseman q45_behavioral q45_aftersch q45_career q45_public q45_health



Dataset: mrg_final_jg; Variables: race_final q53_1

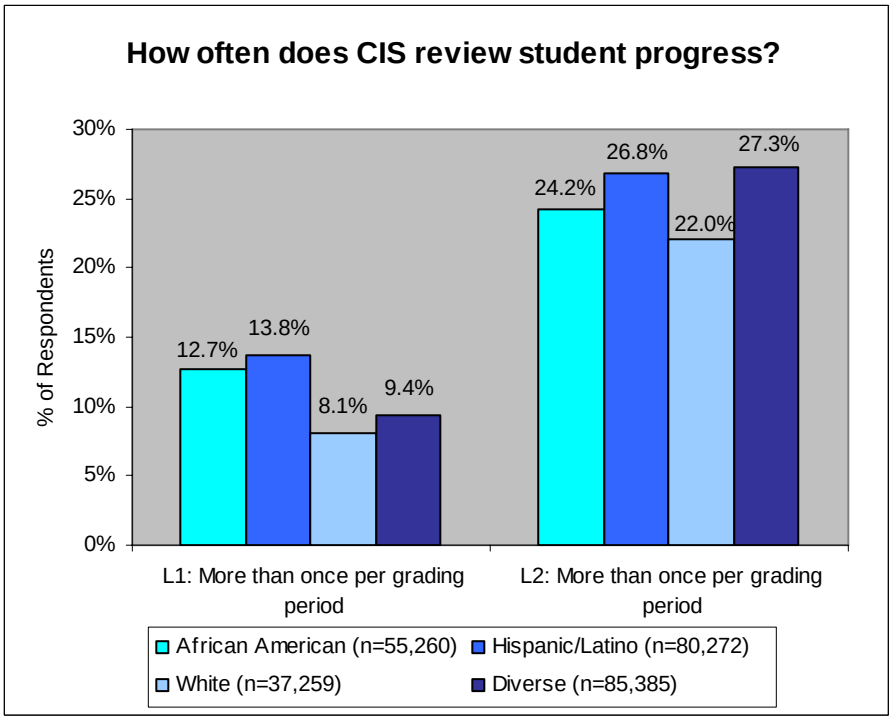


Dataset: mrg_final_jg; Variables: race_final q10 q12



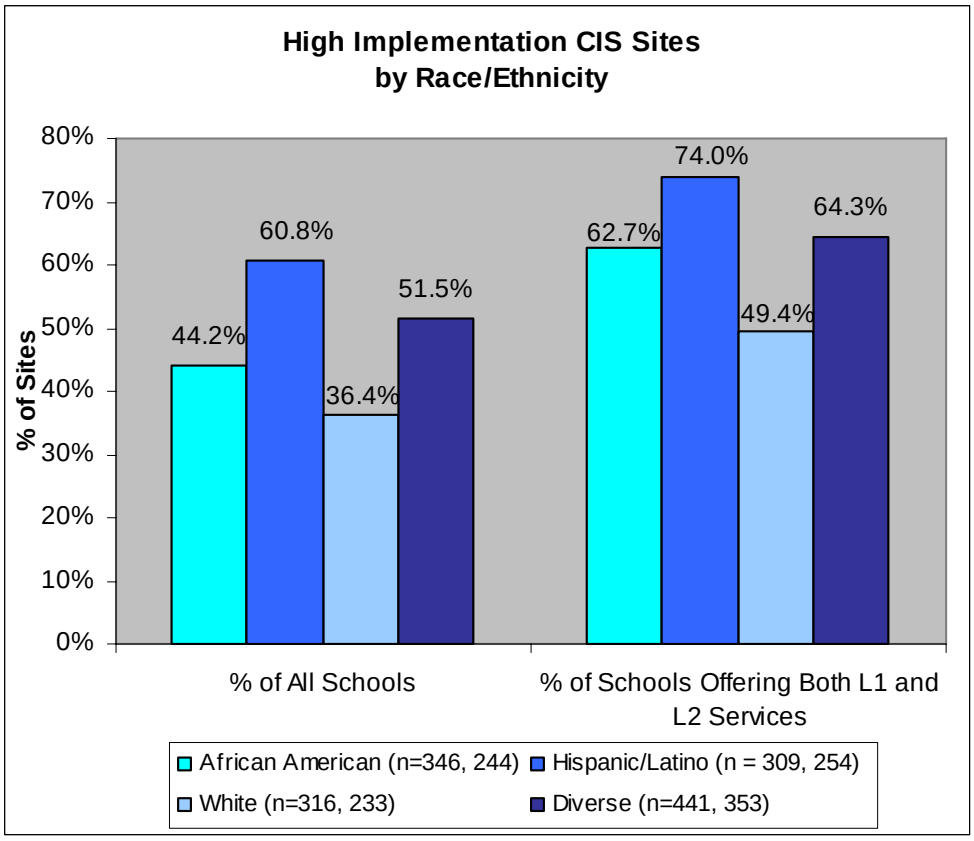
Datasets: mrg_final_jg; Variables race_final levelservice

Monitoring



Dataset: mrg_final_jg; Variables: race_final q29_1 monitorl2

Typology



Dataset: mrg_final_jg blac hisp whit div; Variables: race_final high_implementer levelservice

Appendix H: School Type Profile
A comparison between
CIS Elementary, Middle, and High schools

School Type Profile

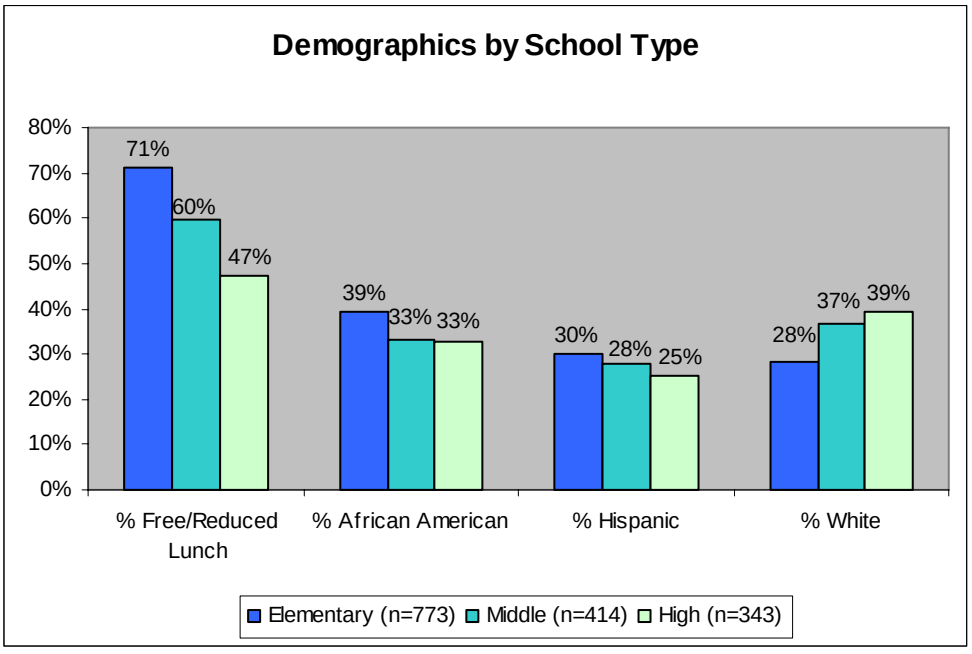
This profile provides a view of the differences and similarities between school type subgroups within the main sample. When used in conjunction with outcome data, the demographic and process information provided in this profile can help create a fuller understanding of how CIS looks and works at Elementary, Middle, and High schools.

Placement into school type groups was determined based on the National Center for Evaluation Statistics' (NCES) Common Core of Data (CCD) school level code. The data in the profile was drawn from the Site Coordinator Survey, the Critical Processes Survey, and the CCD. Where possible, data from the surveys was combined to use all available data from across the nation in order to depict CIS programs at Elementary, Middle, and High schools as completely as possible. This has resulted in differing sample sizes for each analysis, as denoted by "n=" for each subgroup.

Demographic Information

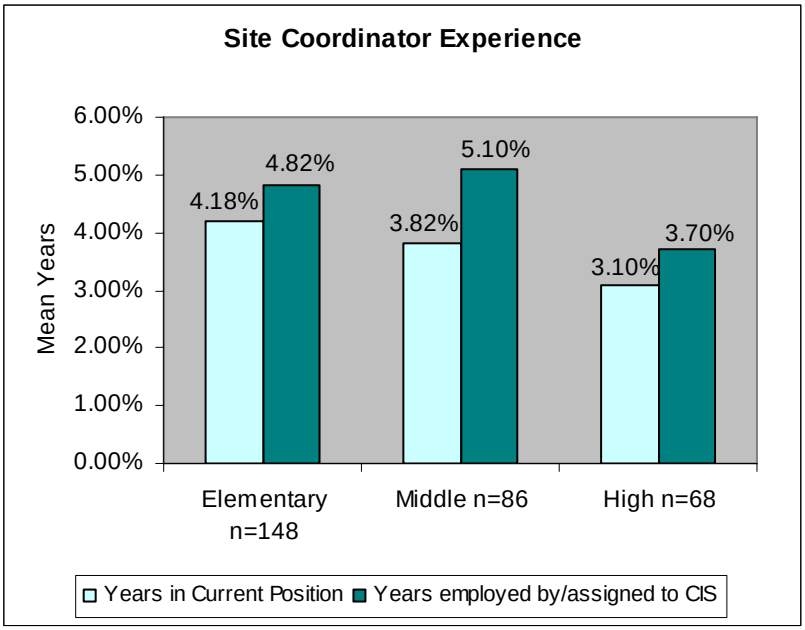
	Elementary	Middle	High
Number of Sites	866	449	348
Mean Years in Operation	5.77	6.96	7.39

Dataset: mrg_final_jg; Variables: type_final yrsinop

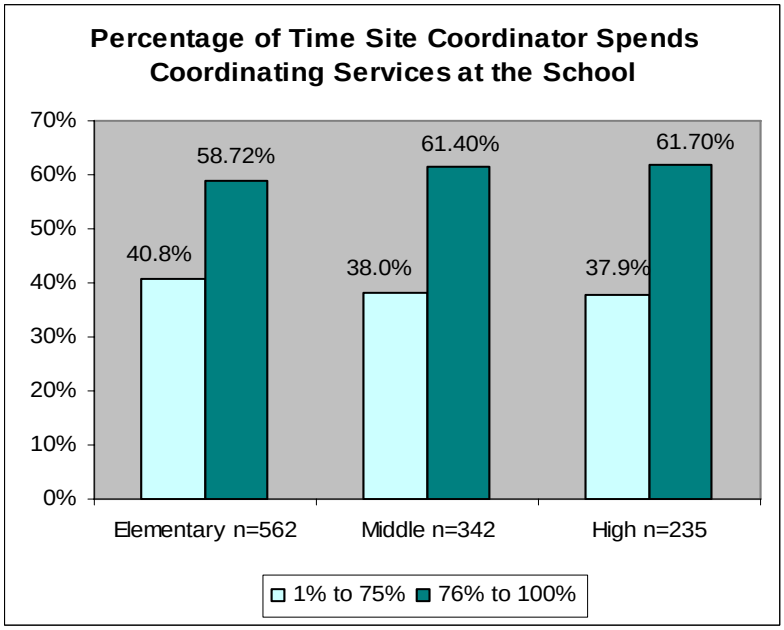


Dataset: mrg_final_jg; Variables: type_final pctfrl03 pctbl03 pcthis03 pctwht03

Site Coordinator Information

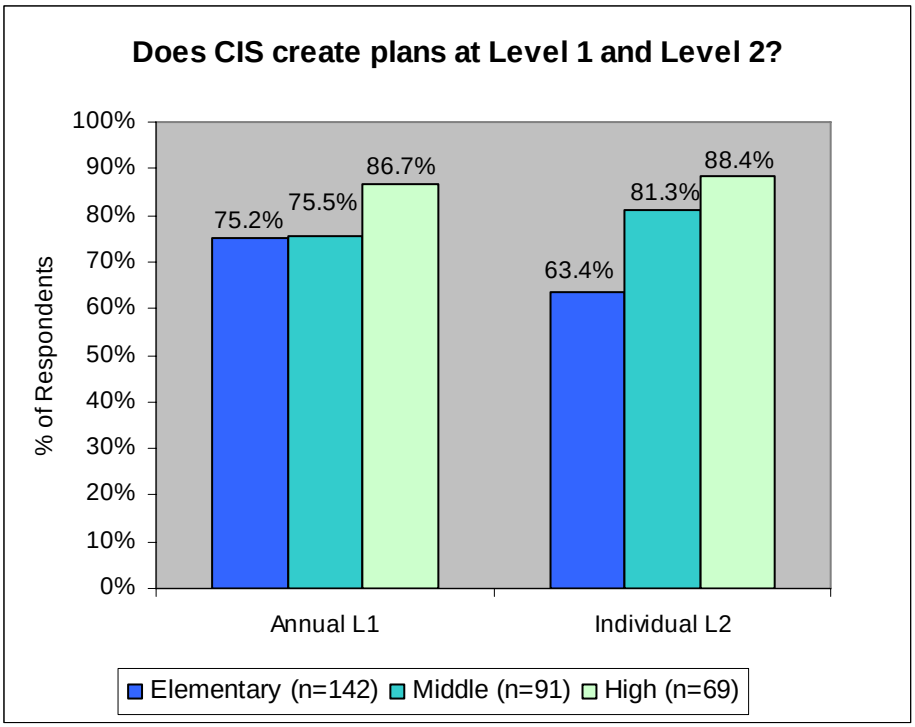


Dataset: mrg_final_jg; Variables: type_final q7 q8



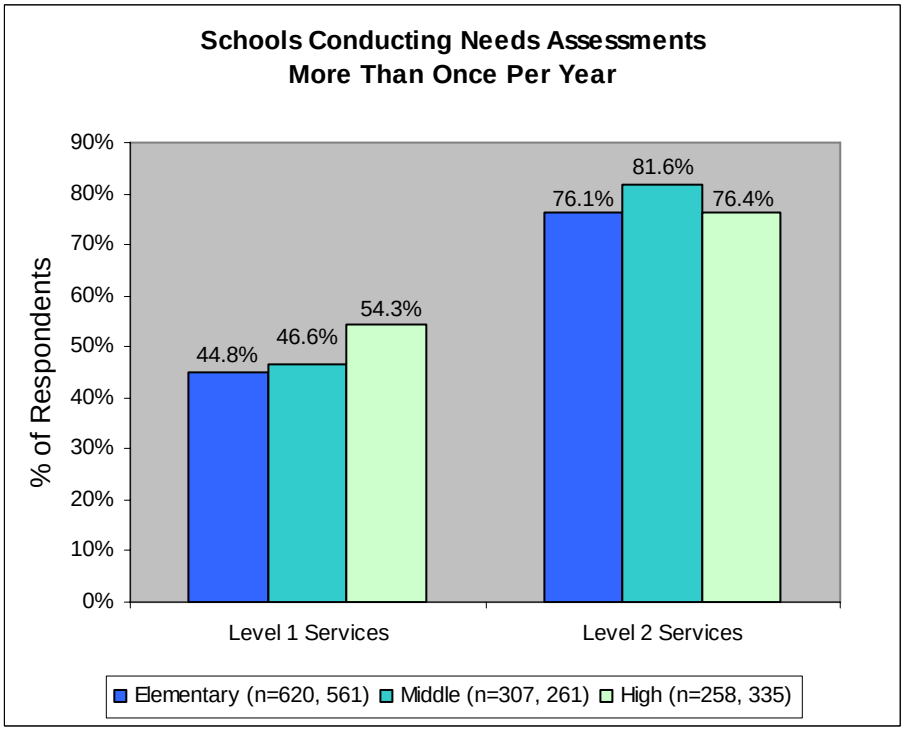
Dataset: mrg_final_jg; Variables: type_final sctime

Planning



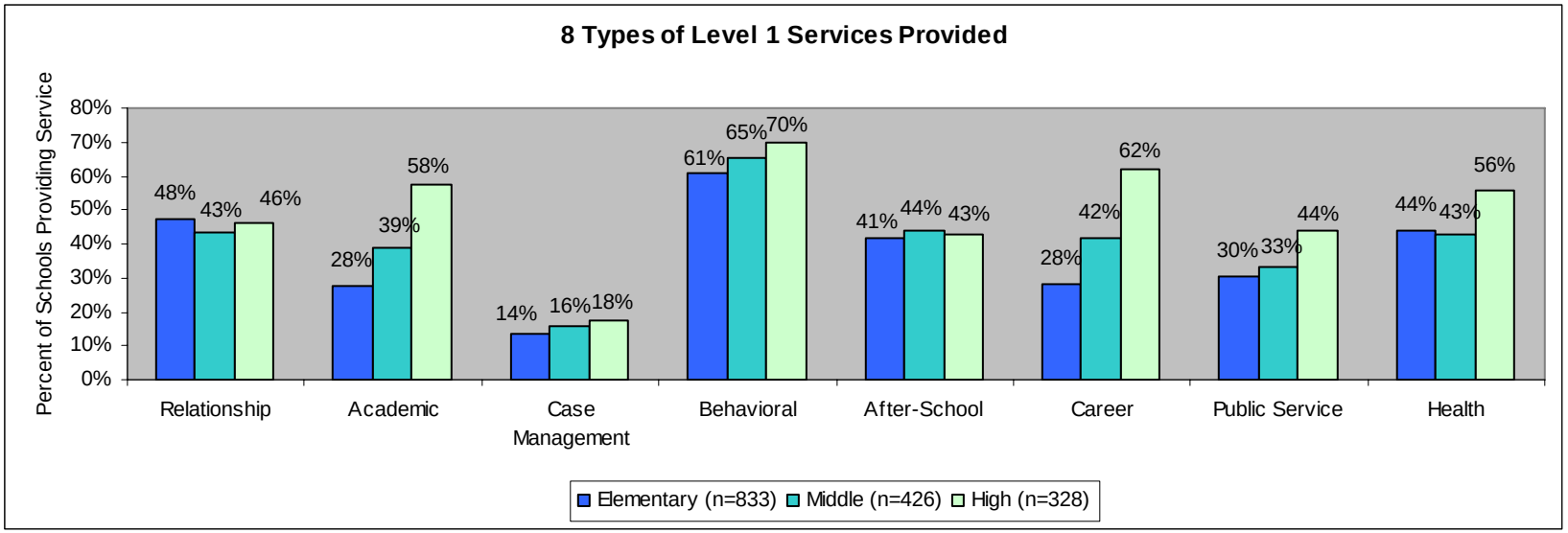
Dataset: mrg_final_jg; Variables: type_final q20 q43

Needs Assessments

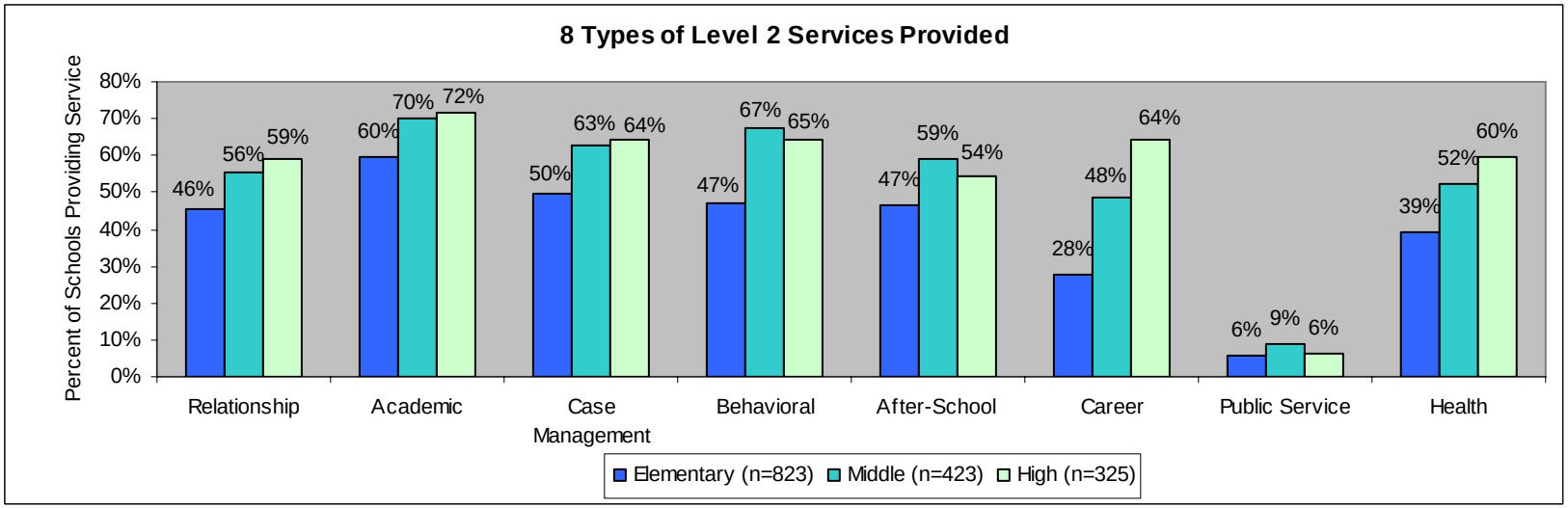


Dataset: mrg_final_jg; Variables: type_final needsl1 needsl2

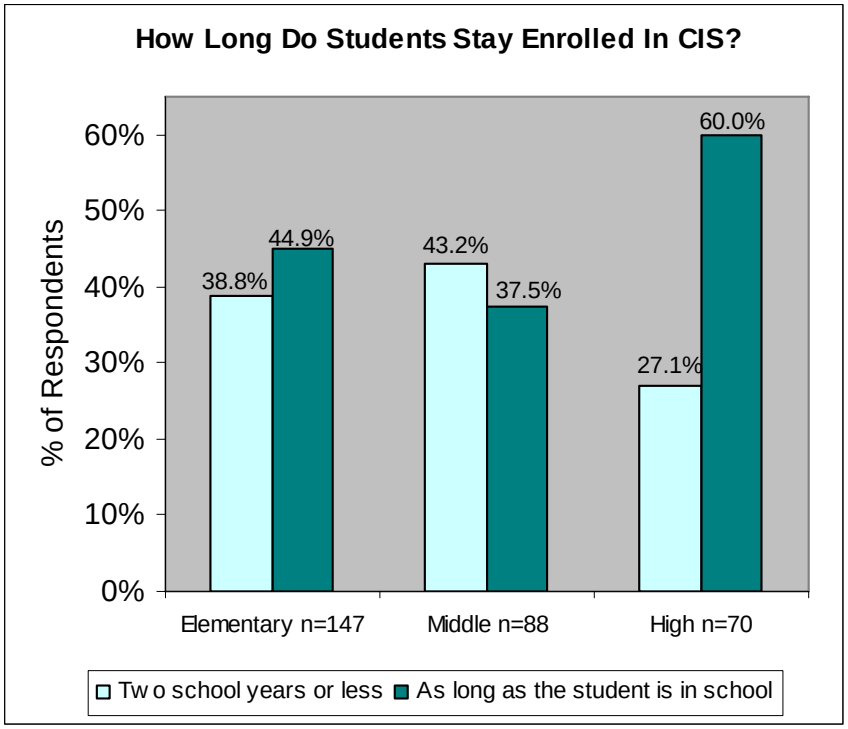
Service Delivery



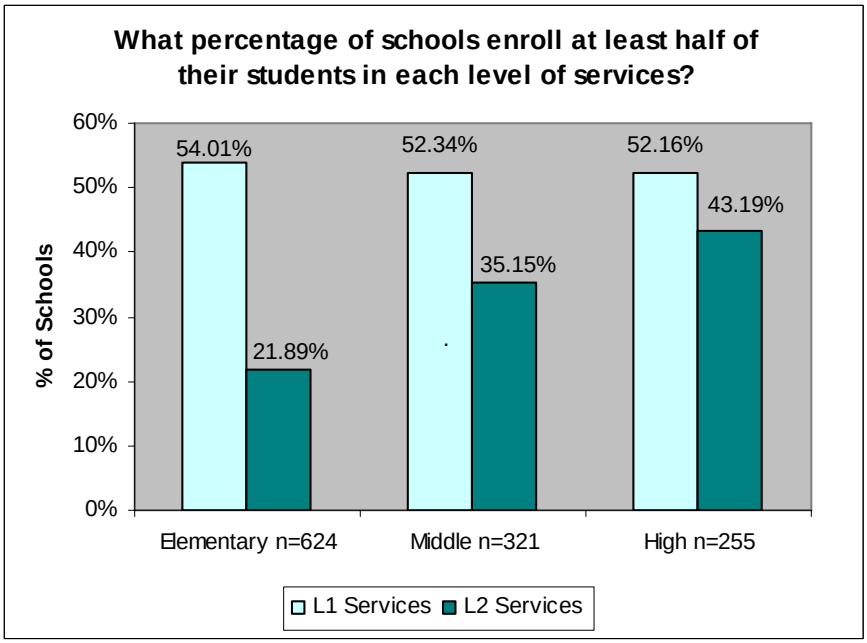
Dataset: mrg_final_jg; Variables: type_final q22_relationship q22_academic q22_caseman q22_behavioral q22_aftersch q22_career q22_public q22_health



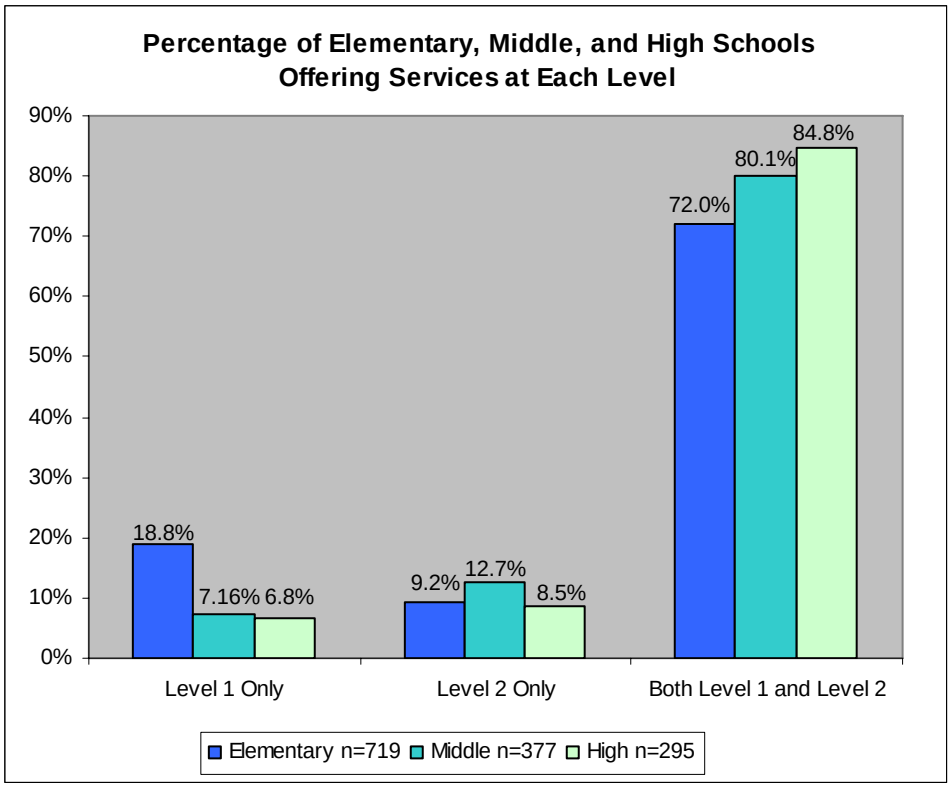
Dataset: mrg_final_jg; Variables: type_final q45_relationship q45_academic q45_caseman q45_behavioral q45_aftersch q45_career q45_public q45_heal



Dataset: mrg_final_jg; Variables: type_final q53_1

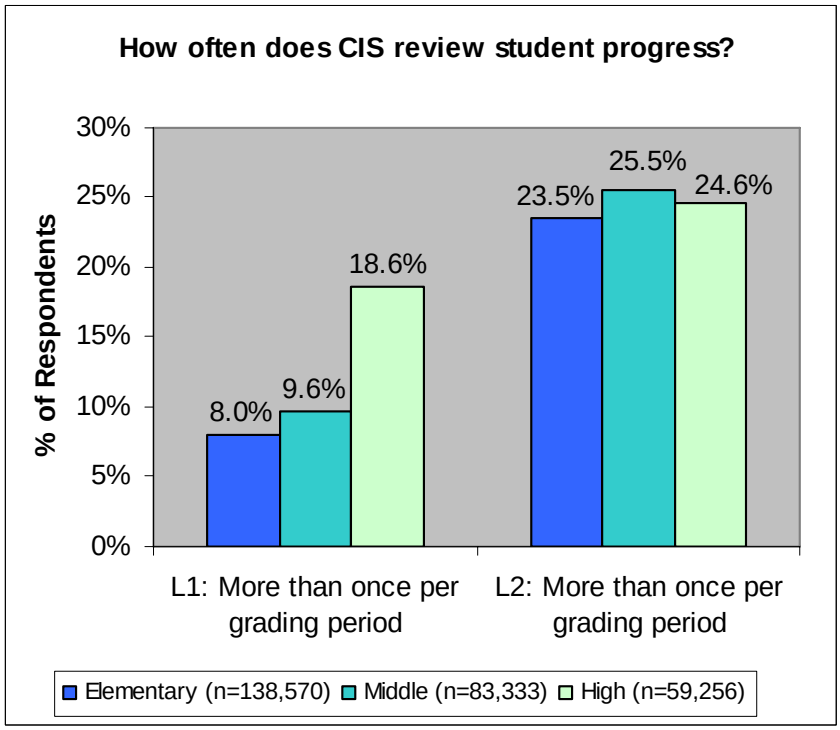


Dataset: mrg_final_jg; Variables: type_final q10 q12



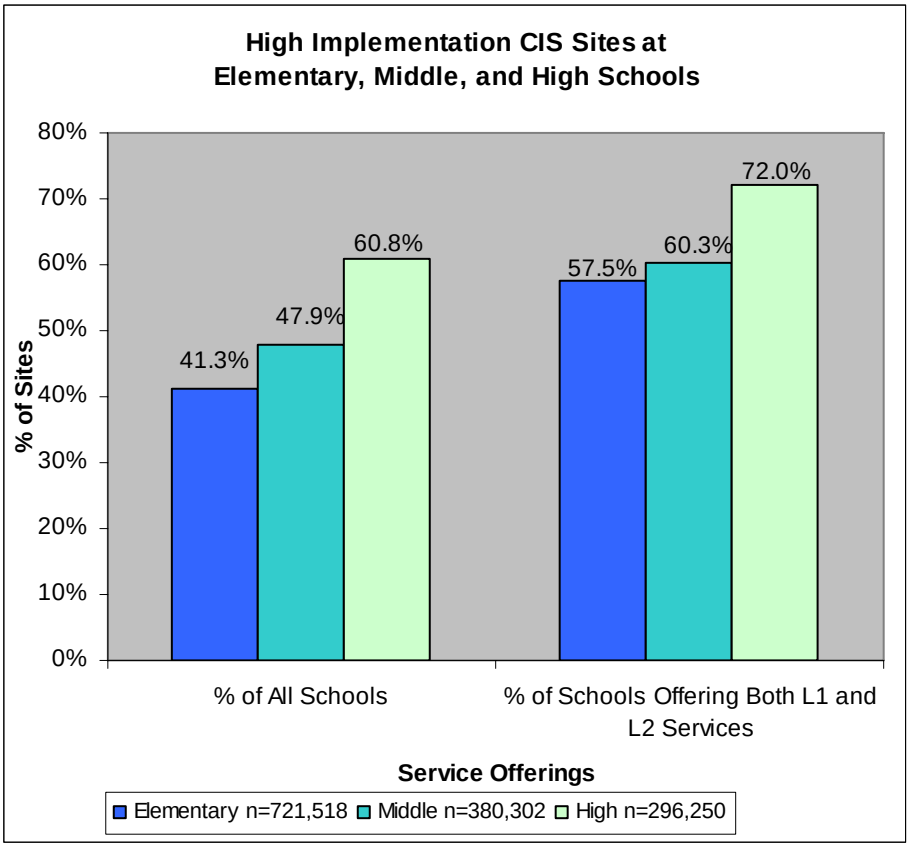
Datasets: mrg_final_jg; Variables type_final levelservice

Monitoring



Dataset: mrg_final_jg; Variables: type_final q29_1 monitorl2

Typology



Dataset: mrg_final_jg urban sub rural; Variables: type_final high_implementer levelservice