The Efficacy of the Los Angeles Unified School District Public School Choice Initiative for Student Achievement Outcomes:

Evidence from the First Year

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Abstract:

As policymakers strive to improve student achievement, school turnaround and portfolio management reforms are growing in popularity. The Los Angeles Unified School District Public School Choice Initiative (PSCI) combines these reforms. Using student-level difference-in-difference regressions alongside qualitative analyses, this paper examines the effectiveness of PSCI in improving student achievement in the first year of its implementation. We find that students in PSCI "focus" (turnaround) schools perform significantly worse than their peers in comparison schools on math and English Language Arts achievement tests. However, students in PSCI "relief" schools that are newly opened to relieve overcrowding in surrounding schools perform significantly better. Our qualitative analyses suggest that there are many factors associated with the implementation and execution of the intervention that may contribute to these results.

I. Introduction

Reformers at all levels of government are searching for systemic reforms that can help them improve student achievement. One policy solution that is growing in popularity is the institution of "turnaround" reforms in the lowest performing schools. Turnaround reforms expect schools and districts to enact dramatic changes that produce significant achievement gains in a very short period of time, and to sustain that improvement over the long run. Another approach that is becoming more and more widely used in districts across the nation is the "portfolio management model." Unlike the school-centered turnaround approach, portfolio reforms treat the district as the key unit of change. This model encourages a diverse set of service providers to operate schools so the district can observe the performance of various educational approaches and make informed decisions about the selection, continuation and termination of school operators (Bulkley, 2010; Lake & Hill, 2009).

Although school turnaround and district portfolio management strategies are in use across the country and often discussed in national media and policy debates, research on the implementation and effects of both turnaround schools and portfolio districts remains limited. Given this narrow research base, it is important to capitalize on opportunities to advance our understanding of how turnaround and portfolio reforms operate independently and in tandem. Los Angeles Unified School District (LAUSD)'s Public School Choice Initiative (PSCI), which combined both of these popular reforms, affords such an opportunity. Implemented for the first time in August 2009, PSCI allowed teams of internal and external stakeholders to compete to turn around the district's lowest performing schools and to operate new schools built to relieve overcrowding. At its inception, PSCI intended to turnaround approximately 200 of the district's low-performing "focus" schools and open 50 newly constructed "relief" school sites. The district's theory of change behind PSCI merged the portfolio and turnaround concepts and held that with intensive supports and appropriate autonomies, a range of school providers would be able to turn around low-

performing schools and operate newly-opened schools to increase student achievement. The ultimate goal of this district reform was to build a diverse portfolio of schools that would be tailored to and supported by the local community and that would foster improved student performance.

This paper examines the effectiveness of the PSCI reform in improving student achievement in the first year of its implementation. Specifically, we ask: *Was PSCI effective in improving student achievement on standardized test outcomes in its first year of implementation?* Because the school turnaround model as implemented nationally and in LAUSD assumes rapid improvements in student achievement, a study of the first year of intervention effects is particularly relevant. In addition the LAUSD experiment is facing strict scrutiny from the LAUSD school board, teachers' associations, parents, the media, and the federal government. Given these political pressures, results from the early impact analyses are being used to shape future iterations of the reform, and may be considered in larger policy discussions about the efficacy and wisdom of portfolio and turnaround reforms.

Using LAUSD's administrative student-level dataset that follows students in the 2009-10 and 2010-11 school years (the last year of pre-implementation and the first year of the reform implementation for the first cohort of affected schools), we employ a difference-in-difference estimation approach to begin to isolate the impact of PSCI on student achievement outcomes. We find that, in the first year of the reform, students in PSCI focus (turnaround) schools performed significantly worse than their peers in math and English Language Arts (ELA), and did not perform significantly differently in science and social science achievement tests. However, students in newly opened PSCI relief schools performed significantly better than students in low-performing LAUSD schools and than students in the feeder schools from which students transferred in all four subjects. Qualitative data from interviews with district and partner organization leaders and observations of PSCI 1.0 activities (e.g., support meetings, school accountability visits) suggest possible rationales for

our results and highlight lines of inquiry that will be pursued more fully in the next phase of our research.

In the remainder of this paper we first place PSCI in a broader policy and research context by summarizing the literature on school turnaround and the portfolio management model. In so doing we highlight our limited understanding of the impacts of these reforms on student achievement and draw into focus the importance of studying reforms like PSCI. We then provide further detail about PSCI to illuminate why this hybrid turnaround-portfolio management reform is a particularly relevant case for study. Next, we outline our student-level administrative dataset, the difference-in-difference approach taken to estimate the effects of the PSCI reform on student achievement, and the qualitative data used to flesh out our results. We then present our results from our analyses and draw from our qualitative data to provide insight into why we might find negative effects of PSCI on students enrolled in focus schools. Last, we discuss the possible implications of our results for policy, practice, and research, and outline plans for future study.

II. A Brief Review of the Literature on School Turnaround and Portfolio Reform

Given the relatively recent policy focus on school turnaround and portfolio reforms, the literature exploring both types of reform is limited. Although the research base that examines the challenges and successes in the implementation of such reforms is increasing [see Bulkley et al. (2010), Gyurko & Henig (2010), Knudson et al. (2010), Levin et al. (2010), Menefee-Libey (2010), and Villavicencio & Grayman (2012) for recent examples], little evidence about the effectiveness of such policies in improving student achievement is available. This section briefly reviews the current landscape of research regarding the efficacy and implementation of school turnaround and portfolio management model reforms. The extant research, although still in its infancy, suggests that the design of PSCI incorporated many of the lessons from recent research.

Turnaround Reforms

Designed to improve conditions in consistently underperforming schools by changing staffing, governance, support, and/or instruction, school turnaround encompasses a range of improvement strategies, from the dramatic (e.g., school closure or reconstitution) to the modest (e.g., adding a new professional development provider). According to one definition, turnaround "focuses on the most consistently underperforming schools and involves dramatic, transformative change" (Calkins, Guenther, Belfiore, & Lash, 2007, p. 10). School turnaround is intended to improve student and school outcomes quickly—within two to three years (Herman, Dee, Greene et al., 2008, Villavicencio & Grayman, 2012). Under federal guidelines for School Improvement Grant (SIG) funds, "turnaround" is given a narrower definition as one of four possible interventions for improving low-performing schools (SIG reforms also include "restart," "transformation," and "school closure"). The SIG turnaround model has specific parameters: replace the principal, rehire no more than half of school staff, and grant the new principal sufficient flexibility to implement a comprehensive approach to improve student outcomes. However, all four SIG reform models are incorporated into the more expansive definition of "turnaround" used in the literature and in policies across the country.[1] Throughout this paper we refer to turnaround as the broader umbrella term, indicating a reform that requires dramatic improvement in chronically low-performing schools.

To date, little evidence exists regarding the efficacy of school turnaround efforts. The U.S. Department of Education's Institute of Education Sciences *What Works* practice guide on school turnaround (2008) found no empirical studies of requisite rigor demonstrating intervention effects (Herman et al., 2008). This may be due in part to the complexity of interactions between state, federal, and district accountability policies that makes comparative outcome analysis across states

[1] Restart stipulates that a district convert a school under a charter school operator that has been selected through a rigorous review process and mandates that the operator enroll any former student who wishes to attend. The SIG transformation model requires changes in instructional programs, community engagement, sustained supports and flexibility in hiring (US Department of Education, 2010).

difficult (Center on Education Policy, 2008; Linn, 2005). However, even within states or districts, there is little understood about the impacts of such reforms on student achievement and other outcomes.

Much of the research on turnarounds focuses on the reconstitution model, which is conceptually similar to the definition of turnarounds under the SIG reform.[2] A recent study finds evidence that SIG-funded school reforms led to significant improvements in the lowest-performing schools' performance in California in their first year of implementation (Dee, 2012). Importantly, Dee finds that the SIG turnaround model drives the positive results and that the restart and transformation models are less effective in improving school performance. In addition, descriptive research about implementation issues with and intermediate outcomes of school reconstitution, discusses the effect of reconstitution on organizational conditions that influence school performance (Rice & Malen, 2009). These studies identify serious challenges faced by districts in accessing an adequate supply of capable and committed staff and providing additional valued resources and support structures to bolster the capacity of these schools (Fraga, Ehrlichson, and Lee, 1998; Hess, 2003; Odden and Archibald, 2000; Rice and Croninger, 2005; Wong, Anagnostopoulos, Rutledge et al., 1999).

Given these challenges, it is not surprising that research on the intermediate outcomes of reconstitution suggests that this is a risky strategy for school improvement (Rice & Malen, 2010). One study of six reconstituted schools finds negative near-term outcomes of school restructuring, including high levels of teacher turnover, with first-year and non-certificated teachers often replacing experienced teachers, and only marginal adjustments in classroom practice (Malen, Croninger, Muncey et al., 2002; Malen and Rice, 2004; Rice and Malen, 2003; Rice and Malen, 2009). Recent studies of SIG-funded school turnarounds identify particular challenges in maintaining an adequate

[2] A key difference between SIG turnaround and reconstitution is the lack of funding associated with reconstitution relative to SIG turnaround.

supply of effective principals and teachers and finding individuals at the state and local level with the expertise and commitment to carry out major school improvement efforts (Center on Education Policy, 2012; U.S. Government Accountability Office, 2012).

In addition, case study research provides some valuable insight on the implementation challenges of turnaround and common practices used by schools that are successfully enacting turnaround reforms (Bondy, Mayne, Lagley et al., 2005; Duke, 2006; Freiberg, Prokosch, Treister et al., 1990, Center on Education Policy, 2008; Chenoweth, 2007; Herman et al., 2008; Wang and Manning, 2000). For example, echoing the results from the Effective Schools research (Edmonds, 1979; Purkey & Smith, 1983), Duke (2006) summarizes characteristics of successful schools identified across multiple studies of school turnaround, such as prompt assistance to struggling students, teacher collaboration, data-driven decision making, effective school leadership, staff development, alignment of instruction with curriculum, regular assessments, high expectations, parental involvement, and adjustments to scheduling. Similarly, another recent report described common strategies used in eight California districts attempting to improve their lowest-performing schools and concludes with two key lessons for school turnaround: 1) long-term improvement requires district-level systematic changes in resource alignment and policy to support school turnaround, and 2) turnaround efforts must be tailored to the school's particular conditions, context, and problems (Knudson, Shamburgh, & O'Day, 2010).

Portfolio Management

The portfolio management model is utilized by more than 20 districts, including New York City, Chicago, Philadelphia, and New Orleans (Hill & Campbell, 2011). In contrast to a pure market-based reform in which parent and student school choice and exit determines schools' operational tenure, the portfolio model allows the district to determine which operators will be added or removed from the portfolio system (Henig, 2010). The limited research on the reform's effects on

schools and students has shown mixed results. For example, recent studies in the New York and Philadelphia portfolio reforms yield inconsistent results of the effect of portfolio reforms on student achievement (Fruchter & McAlister, 2008; Kemple, 2011; Mac Iver & Mac Iver, 2006). While these studies attempt to isolate the effect of portfolio reform on student achievement, only Kemple (2011) utilizes a causal research design to measure the impact of the portfolio intervention on student achievement. He finds that students enrolled in New York's Children First portfolio reform schools saw increases in student achievement. Research on Chicago's Renaissance 2010 reform has also found mixed results; the district saw an increase in elementary and middle school student achievement, while high school students showed slower progress on measures such as graduation rates, ACT composite scores, absenteeism, and grade point average (Humphrey & Shields, 2009; Roderick et al., 2008). None of the Chicago studies isolate the *impact* of portfolio reform on achievement. Rather, they assess how students measured up to projected gains in achievement.

Studies of individual districts demonstrate some of the difficult organizational changes and challenges resulting from a shift to portfolio management (Bulkley, Christman, and Gold, 2010; Christman, Gold and Herold, 2006; Gyurko and Henig, 2010; Hill, 2011; Levin, Daschbach, and Perry, 2010; Menefee-Libey, 2010; O'Day, Talbert, and Bitter, 2011). This research emphasizes the importance of maintaining supply and adequate local capacity to sustain portfolio reforms and notes difficulties in engaging parents and the community in the reforms. Much of the implementation research also explores central office restructuring and leadership (Honig & DeArmond, 2010) and redesign of supports to the newly autonomous schools that are part of the portfolios (Nadelstern, 2012; Robinson, Kannapel, Gujarati, et al., 2008). Studies indicate that district central offices occupy a pivotal role in strategic management of the portfolio because they must ensure coordination of services (Levin, 2010). Lake and Hill (2009) describe the importance of creating new departments for performance management, as well as ensuring diffusion of the reform to other district

departments. Further, the district must assume the precarious role of a neutral manager with no pre-determined operator preference (Lake & Hill, 2009).

As we will discuss in the next section, LAUSD's Public School Choice Initiative is a hybrid turnaround-portfolio reform strategy that, whether intended or not, incorporates many of the lessons learned from the previous literature on school turnaround and portfolio reforms. Given its structure and basis in two popular and growing reform strategies, PSCI serves as an important case study for research on the efficacy of variants of these reforms, especially as this blending of reforms may serve as a model for other large urban districts as they strive to improve student achievement. Moreover, LAUSD has been implementing interesting reforms worthy of research for many years. Unlike the heavily-researched urban districts of New York City, Chicago, Washington, D.C., and Philadelphia, among others, LAUSD has not been widely studied using sophisticated quantitative methods to understand the impacts of the district's various reforms.

III. Background on LAUSD's Public School Choice Initiative (PSCI)

PSCI built on decades of past reform efforts in Los Angeles, most notably a series of systemic reforms seeking to empower local actors and advance student achievement in the 1990s (Kerchner et al., 2008). These reforms—the Los Angeles Educational Alliance for Restructuring Now (LEARN) and the Los Angeles Annenberg Metropolitan Project (LAAMP)—shared many of the same ideas and levers of changes embraced by PSCI, including increased autonomy and accountability, capacity-building, planning, and parent involvement (Kerchner et al., 2008). Howeve, while LAUSD had increasingly adopted non-traditional school options for families in the past, including charter schools and magnet programs, PSCI's introduction of competition for the operation of district facilities represented a dramatic shift in district policy.

Fueled in part by the district's persistent and widespread student achievement problems, the LAUSD Board of Education adopted the Public School Choice resolution in August of 2009. The exact origins of the policy are contested in the documentation and interviews conducted for this study. When first introduced, Board Member Yolie Flores-Aguilar's draft resolution allowed internal educator-led teams and management organizations, as well as external not-for-profit organizations and charter school operators, to submit plans to operate newly-constructed schools (relief schools) in response to poor performance of some of LAUSD's new schools in their initial years of operation. According to some informants, at the urging of Superintendent Cortines, the resolution was revised prior to adoption to also include the lowest-performing schools in the district (focus schools) in this competitive process.

Much of the rhetoric surrounding the adoption of this initiative alluded to school choice and increasing the number of quality educational options for parents and students in LAUSD. As adopted, however, the initiative was not intended to be a typical "choice" program in which parents choose the school their child will attend, but rather a process in which the community had the opportunity to participate in developing school plans. In early cohorts, the ultimate "choice" in PSCI was made by the LAUSD Board rather than directly by parents.

The district's Theory of Change, illustrated in Figure 1, highlights six key levers of change that, if implemented, were expected to lead to dramatic improvements in student performance: rigorous screening of school plans; competition among a diverse set of applicant teams; granting school operators autonomy over key domains such as staffing, budget, governance, and curriculum; district oversight and accountability; technical assistance and support from the district and its partners; and community and parent involvement in the selection, development, and implementation of school plans. These mechanisms were expected to yield a diverse set of high-quality learning environments (see Figure 1 for specific characteristics identified by LAUSD) and ultimately positive

student outcomes. It was hypothesized that improved student outcomes would result either directly or indirectly through effects on teachers, other school staff, parents and community members. To the extent that PSCI's effects spilled over to non-PSCI schools—via pressure to implement reforms to avoid being selected into the initiative in the future, the intentional or natural spread of successful school models and ideas, or, in the case of relieved schools, the alleviation of overcrowding—positive student outcomes were expected to translate into higher-quality schools overall.[3]

The initiative involved two types of schools. A "focus" school was an existing school selected for participation because of poor performance. LAUSD uses a composite performance metric to select annual cohorts of low-performing focus schools. The performance metric used to select Cohort 1 (the set of schools under study in this paper) consisted of five different performance metrics: 1) school program improvement status; 2) Academic Performance Index (API) growth scores; 3) percentage of students scoring proficient or advanced on the California Standards Tests (CSTs); and 4) meeting Adequate Yearly Progress (AYP) targets; and 5) dropout rates.[4] The district intended to continue selecting cohorts of low-performing schools using variations of this selection mechanism until all struggling schools in the district were transformed into high performers. A "relief" school was a newly constructed school designed to ease overcrowding in primarily low-performing schools. The first round of PSCI involved 14 focus and 28 relief schools.[5]

In the first iteration of PSCI (studied herein), both internal and external applicant teams were free to create proposals to manage either a focus or a relief school. Internal team applicants included groups of teachers (school-based teams) and combinations of teachers, parents and/or

[3] The Theory of Change was developed by the research team based on 19 interviews with district leaders and other individuals involved in the inception and implementation of the reform conducted during the first year of our study, as well as a review of multiple LAUSD documents, media reports and other documentation. Once the Theory of Change was generated, the researchers shared it with district leaders and other key actors, who refined it according to their understanding of the reform.

[4] In addition, schools selected into PSCI could not be an iDesign school, a specific kind of partnership school within LAUSD.

[5] We note that, while there were 14 focus and 28 relief schools, there were only 32 campuses as some campuses housed more than one school.

administrators from the local school community (local district teams). External teams included non-profit organizations, charter management organizations (CMOs), or some combination of internal/external actors. LAUSD asked teams to select a governance model from among six existing district models that vary in the levels of autonomy the school has from district and/or union policies (Figure 2). These models were: independent charter schools, pilot schools, Expanded Site Based Management Model (ESBMM) schools, affiliated charter schools, network partner schools and traditional school models.[6] In addition, the district's request for proposals required teams to provide a detailed description of their proposed education plans and organizational structure. Proposals ranged from 100-300 pages, included detailed appendices, and described how the school would operate, including what curriculum would be used and how professional development would be incorporated.

In September 2009, the district identified its first cohort of participating schools (PSCI 1.0), which would open or reopen in the fall of 2010. Submitted applications underwent a multi-stage review and final recommendations were issued to the LAUSD Board, which voted on the final set of winning applicants. In February 2010 the Board selected from about 100 school applications, awarding 32 PSCI schools to internal school- or local district-based teams. The Board selected six teams proposing charter schools and three teams from non-profit organizations.[7] Table 1 shows the number of schools included in PSCI 1.0 by type (focus or relief) and governance model.

Through this initiative, LAUSD combined the school turnaround and portfolio management model reforms. By selecting the lowest performing schools in the district for inclusion in PSCI and by requiring that new school plans are written, selected and executed for these schools, the initiative

[6] We note that charter schools that are included in PSCI are required to accept all students who qualify for enrollment based on neighborhood geographic boundaries. If the school does not fill with these students, PSCI charter schools are allowed to enroll additional students, up to a pre-specified percentage of enrollment, based on a lottery system. This enrollment process is not unlike other district schools, which may accept students from outside their enrollment area via LAUSD permits, as space is available.

[7] We provide greater detail on the proposal and award process for PSCI in earlier work (AUTHOR, 2012).

incorporated school turnaround. Moreover, the literature discussed above suggests that LAUSD's Public School Choice Initiative may be a particularly promising version of the turnaround reform. Specifically, PSCI was context-specific, included various methods of turnaround (from reconstitution to transformation), incorporated systemic district-level changes and invested in capacity building. The extant literature suggests that these attributes are important in successful turnarounds. In addition, PSCI required applicant teams to highlight how they would foster many of the elements found to contribute to successful turnaround efforts, such as data-driven decision making, teacher collaboration, staff development, curricular alignment, and parental involvement.

By encouraging multiple models of school governance, PSCI built on LAUSD's increasingly diverse portfolio of schools.[8] Again, the LAUSD initiative incorporated some of the learnings from the literature on portfolio reforms into the design of PSCI. As shown in Figure 1, PSCI was based on a theory of change that stressed the need for competition from multiple providers, supports for providers as they designed and then implemented their school plans, and parent and community engagement in school design and operation. The portfolio reform literature highlights all three of these levers as important elements of successful portfolio reforms.

IV. Data and Methods

This paper draws on an analysis from the first year of a three-year mixed methods study, with particular focus on the student outcomes for the first cohort of schools that opened their doors as turnaround or new schools under their PSCI plans. We use LAUSD administrative student-level and school-level data. We include in our sample all students in PSCI schools as well as students

[8] LAUSD is a member of the Portfolio School District Network, working with the Center for Reinventing Public Education (CRPE) to build and manage its portfolio of schools. Looking to portfolio districts in New York, Philadelphia, New Orleans, D.C., and Oakland as models, LAUSD leaders view PSCI as an expansion of LAUSD's existing portfolio of schools, which currently includes 183 independent charter schools, 172 magnet programs, 34 pilot schools, 21 ESBMM schools (authors' calculations), and 380 small learning communities including career academies (lausd.net).

enrolled in multiple sets of comparison schools. In addition, we draw from our qualitative interview and observation data to provide context to our quantitative results. These qualitative data suggest possible explanations for the quantitative findings.

This section first reviews the LAUSD administrative data we use to assess the effect of being enrolled in a focus or relief PSCI school on student achievement in the first year of PSCI implementation. We then outline our difference-in-difference estimation strategy. We note at the outset that, while this methodology attempts to isolate the causal impact of PSCI on the achievement outcomes for students in either relief or focus schools, there are, as always, threats to the validity of this interpretation and our results should taken as strong evidence of the relationship between PSCI and outcomes rather than as definitive proof of a causal effect. Last, we provide a brief overview of the qualitative data used in this study.

Administrative Data

We begin with a panel dataset from LAUSD's administrative data for the 2009-10 and 2010-11 school years. This dataset includes 461,229 student observations in 2009-10 and 442,679 in 2010-11, which represent all of the second- through eleventh-grade students enrolled in LAUSD in each year except those in many of the charter schools (which at this time are not required to provide data to LAUSD).[9] When we match students by their district identification numbers we retain approximately 80% of all students, or 343,325 students, from the original 2009-10 and 2010-11 dataset. These students are enrolled in LAUSD during the two school years of interest in this analysis (2009-10 and 2010-11), have consistent enrollment data in previous years, and exhibit

[9] Although LAUSD's total enrollment in the 2010-11 school year included approximately 670,000 students, our sample is much smaller. This is because 22% of enrolled students are in non-tested Kindergarten (~53,000), 1st (~53,000) and 12th (~41,000) grades. In addition, we were forced to exclude approximately 68,000 students enrolled in charter schools from our analysis because charter schools did not report their data to LAUSD. We note that the exclusion of charter schools from LAUSD data is at times problematic because some of these schools should have been included in our sample but are not.

normal grade progression across years.[10] In our analyses, we incorporate student-level data including students' CST scores in math, ELA, and science and social science; information on students' race and ethnicity; qualification for the federal free- and reduced-price lunch program (an indicator of poverty); and students' English language learner (ELL) status. We also include school-level data from public datasets regarding school level (elementary, middle or high school), school enrollment, the proportion of students who are minority in a given school, the proportion of students who are native English speakers.

Estimation Strategy

To understand the relationship between being enrolled in a PSCI focus or relief school and achievement outcomes, we might use a student-level cross-sectional regression model to predict the academic achievement of students in PSCI schools. However, such a model is likely endogenous; a relationship between outcomes and enrollment in a PSCI school may be due to the actual impact of the reform on student achievement *or* it may occur because schools were selected into the initiative in part because of their low academic achievement. To avoid this problem, we must find a suitable group of students to whom we might be able to compare students in treated schools. These students would need to be similarly low-performing, but should not be enrolled in PSCI (treatment) schools.

We ideally would like to compare students' achievement gains post-intervention to their own achievement trajectories before the reform took place. However, even this does not entirely reduce the problem of potential bias in our analyses because a shift may have occurred that impacts *all* students in the district that we would then falsely attribute to PSCI. In order to obtain a more valid estimate of the impact of PSCI on student achievement in focus or relief schools, then, we would like to compare these within-treated student pre-post differences to the same comparisons in

[10] We limit our sample in this way because we want to be confident that we are not identifying off of students who are anomalies – i.e., who exhibit unusual grade progression patterns or who move in and out of the district. Usual grade progression is defined as students who progress one grade in each year, who are retained in the same grade in two consecutive years, or who skip ahead a grade in two consecutive years.

students enrolled in a set of non-treated control schools. To do this, we use a simple student-level difference-in-difference approach that allows us to compare the change in students in "treated" (PSCI) schools' achievement from the year before PSCI was implemented (2009-10; pre) to the first year of PSCI implementation (20010-11; post), relative to this pre-post change for students enrolled in "control" (non-PSCI) comparison schools. We estimate the following equation:

$$Y_{ist} = \beta_0 + \beta_1(PSCI_{st}) + \beta_2 Time_t + \beta_3(PSCI * Time)_{st} + \boldsymbol{X}_{ist}\beta_4 + \boldsymbol{Z}_{st}\beta_5 + e_{ist} \qquad (1)$$

where Y_{ist} is the ELA, math, science or social science CST score for student *i* in school *s* at time *t*. We run separate models for each different CST outcome. Because CSTs are not vertically aligned and are not comparable across tests and years (note that in some grades there are multiple different tests for a given subject that a student might take), we standardize the outcome variables within each test/grade and year so as to be able to compare achievement across tests and years. $Time_t$ is a year indicator that takes the value of "1" in the treatment year (2010-11) and "0" in the pre-treatment year (2009-10). The vector $\boldsymbol{X}_{ist}$ consists of student-level characteristics including indicators of students' racial minority status (a "1" indicates the student is a minority student, with white and Asian students serving as the reference group), poverty status (free- and reduced-price lunch eligibility, defined as whether or not a student ever identified as eligible for free-and reduced-price lunches), and ELL status (a "1" indicates that the student ever identified as an ELL). $\boldsymbol{Z}_{ist}$ is a vector of school-level characteristics including the natural log of school size (student enrollment), school-level average CST performance, the proportion of students in a school who are minorities, the proportion of students who qualify for the federal free- or reduced-price lunch program, and the proportion of students in a school who are native English speakers.

$PSCI_{st}$ is simply a treatment indicator that takes a value of "1" for students enrolled in PSCI schools and "0" for students in non-treated schools. Because focus schools are not comparable to relief schools given that focus schools are the lowest-performing schools in the district whereas

relief schools are brand new facilities that draw students from overcrowded but not necessarily low-performing schools, we run our analyses separately for students enrolled in focus and relief schools. In the analysis of the impact of focus schools on student achievement, the $PSCI_{st}$ indicator takes a value of "1" for focus schools, and "0" for non-PSCI comparison schools (comparison groups are defined in greater details below). Similarly, in our analysis of the impact of relief schools on student achievement, the $PSCI_{st}$indicator is given a value of "1" for relief schools and "0" for comparison schools. The coefficient of interest in our model is β_3, which provides the difference-in-difference estimator. This coefficient tells us the difference in the change in achievement outcomes for students in treated focus or relief schools relative to those in non-PSCI comparison schools between the 2009-10 and 2010-11 school years. Because the intervention occurs at the school level, we include robust standard errors clustered at the school level in all models.

Comparison Groups

We use three comparison groups in our main analyses. The first comparison group serves as our primary control groups in our analyses of the impact of PSCI on students enrolled in PSCI *focus* schools. This control groups consists of students in "near-selected" PSCI focus schools. As mentioned above, LAUSD uses a set of indicators to select focus schools for inclusion in PSCI. To be included in PSCI, a school must meet (i.e., score a "1" on) all of these indicators. The school was excluded from PSCI if it was missing data for any criteria (missing data counts as a "0," or as not meeting the indicator). To qualify for our set of "near-selected" comparison schools, we follow the way LAUSD selected PSCI focus schools and count as a near-selected school any schools that missed scoring a "1" on *one* indicator, regardless of whether or not that data point was missing. As such, this comparison set includes schools that had non-missing data for all indicators and received a "1" on all but one of those indicators, *and* schools that had data missing for one indicator and scored a "1" on all of the indicators for which they had data, but effectively received a "0" on the missing

indicator. Notably, schools with data missing for more than one indicator are not counted as "near selected", even if they received a "1" on all the indicators for which they had supporting data. There are 93 schools in this treatment group, 74 of which are included in our analyses.[11]

The second comparison group is our primary control group in our analyses of the impact of PSCI on students in newly-opened *relief* schools. This comparison group (labeled "feeder") consists of students in all schools from which newly opened relief schools draw their student populations. Students are allocated from feeder into relief schools using neighborhood boundaries, which are determined based on the density of students in the geographic area as well as the projected relief effect on targeted overenrolled feeder schools. We use as a comparison set of schools all schools from which relief schools take students to relieve over-enrollment. There are 64 schools in this comparison group, all of which are included in analyses.

Our third comparison group (labeled "PI3+" in Tables 2-5) consists of *all low-performing* schools in LAUSD – those classified as in Program Improvement Year 3 or higher under NCLB classifications (i.e., those consistently failing to make Adequate Yearly Progress under the No Child Left Behind Act). In our analyses we compare students in the treated focus schools with the set of students in PI3+ schools (in Tables 2 and 3) as well as students in the treated relief schools with the set of students in PI3+ schools (in Tables 4 and 5). There are 236 schools in this comparison group, 235 of which are included in analyses. Given that PSCI focus schools are by definition the lowest-

[11] The total sample of schools and students in LAUSD differs from the total sample of schools and students eligible for our analyses because of missing data. We created the comparison groups based on a list of schools provided to us by LAUSD. Then, we merged the comparison group data with the LAUSD school-level data for 2010-11 and found that a number of schools were missing student-level data (e.g., charter schools, schools closed in 2010-11). In addition, not all analyses include the total sample of eligible students because not all students have test scores in all subjects and years. Approximately one-third of schools in LAUSD are missing data on one or more of the selection indicators. These schools are, in essence, given a "by" by the district on that missing indicator. The majority of these schools are charter schools, which are not required to provide data to LAUSD. The most frequently missing indicator is graduation rate. In addition, three percent of schools are missing data on the percent proficient indicator and three percent are missing data on the API indicator.

performing of the PI3+ schools, and that relief schools are not necessarily drawn from low-performing (PI3+) schools, we believe that this is the least defensible comparison set. We include it so that we may have one set of schools in common to which we can compare both focus and relief schools. However, we do not compare students in all the PSCI treated schools (relief and focus combined) with the students in PI3+ schools to estimate an "overall" effect of PSCI. This is because we hypothesize that PSCI, while offering the same treatment for both types of schools, should have different impacts on students in focus and relief schools given the different school contexts.

Robustness Checks to Address Possible Data Limitations

The intent of this analysis is to isolate the effect of PSCI on student achievement in the first year of PSCI implementation for students enrolled in PSCI Cohort 1.0 schools. Several factors may bias our results. Of primary concern, we know that schools selected for PSCI 1.0 knew of their selection in the "pre" year (2009-10), and in fact were in the midst of writing their PSCI school plans. Based on our qualitative data, we believe that this might have caused administrators, teachers and possibly students to change their behaviors in this "pre" year – for better or for worse – and this may have impacted performance in these schools in the 2009-10 year. We test to see if our results are biased by this "pre-treatment year effect" by running all of our analyses using the 2008-9 year, before schools were selected or even knew of PSCI, as the base year for the difference-in-difference model. All of our results are robust to the replacement of the 2009-10 "pre" year with data from the 2008-09 school year, and are available from the authors upon request.

The phase-in timing of the intervention also leads to possible difficulties in our estimation strategy. Specifically, as discussed above, new cohorts of treated schools are identified each year. Given this strategy, the first year of implementation for Cohort 1.0 schools is also the "pre" year for Cohort 2.0 schools – the year that PSCI 2.0 focus schools were identified for the next round of the intervention. Twenty-one of our PI3+ comparison schools, 16 of our near-selected comparison

schools, and one of our feeder set of comparison schools are selected for inclusion in later cohorts of PSCI. We might expect that these schools will change their behavior in this selection year – in either positive or negative ways – which may impact our estimates of the treatment effect for 1.0. To address this concern, we also run all of our analyses on a set of restricted comparison schools, removing future treated schools from our analyses. The results from these analyses are presented in the columns marked "R" alongside results from our main specifications (in columns marked "full" in Tables 2 through 5.

We may also be concerned that our selection of schools in the "near-selected" comparison group does not provide the most accurate set of comparison schools for the PSCI focus schools given our decision to follow LAUSD's selection process that does not take into consideration whether or why schools may be missing data on one or more indicators. To address this, we also generate a second set of "near-selected" comparison schools. To be included in this comparison group, we examine only indicators for which data are not missing, and count as a "near-selected" school any school that scored a "0" on one of the set of non-missing indicators. In this comparison group, then, a school that was missing data for all but three indicators, and met two of those three criteria but not the third, is included in our comparison group. This second near-selected comparison group subsumes the first near-selected group, with 104 schools, 83 of which would be included in analyses. We find substantively similar results using this second near-selected set of schools, and results are available from the authors upon request.

We may also be concerned that the students in our comparison groups are not similar to those in our treatment groups. However, we found no significant differences in the proportions of students classified as minority, ELL, or eligible for free- or reduced-price lunches in the treatment compared to the comparison groups. We do see, however, that the *combined* set of PSCI and comparison schools have higher proportions of minority, ELL and low-income students than does

the district as a whole. This is not unexpected given that PSCI and comparison schools are selected because they are amongst the lowest performing schools in the district, but this does constrain our ability to generalize our results to higher-performing schools and students.

Remaining Limitations

Although we are able to address most of the limitations to our analyses with the robustness checks specified above, we are unable to address the simple availability of data. Given our data constraints (we only have one year of "post" data), we cannot examine achievement growth trajectories, which will provide a better picture of the long-term effects of the reform. As such, our results reflect student performance after only a single year of implementation. However, we believe that this is a valid time frame for analysis of PSCI given the expectation that turnaround reforms bring about improvements in student achievement in just one or a few years, whereas education scholars and advocates for school reform suggest that significant change in student and school outcomes is often a slow process with the true effects of a single approach to reform requiring between three and ten years of implementation at best to materialize fully (Fullan, 1999; Fullan & Stiegelbauer, 1991; Fullan & Miles, 1992; Nunnery, 1998). Further study will be needed to understand the longer-term efficacy of PSCI. To that end, future analyses will estimate difference-in-difference models that include multiple time points pre- and post-intervention. In addition, the sample size of schools does not allow us to test whether students in schools with different governance models are higher or lower performing. Given this sample size constraint, we cannot assess whether the different models of school governance available in PSCI are more or less effective at raising student performance.

Qualitative Data

In this paper we draw on qualitative data from interviews with LAUSD board members, superintendents, and executive-level staff, as well as with key leaders at partner organizations such

as the teachers' and administrators' unions, Unite LA, the Los Angeles School Development Institute, and the United Way of Greater Los Angeles (n=26), interviews with participants in the later cohorts (n=18 design team leaders from five 2.0 schools and four 3.0 schools), as well as observations of four school accountability reviews and three technical assistance meetings that involved multiple 1.0 schools. We also collected and analyzed all relevant documents, such as meeting agendas, powerpoints, and print and online communication. Collectively, these data provide information on the overall design of PSCI and information on what occurred in schools during the pre-year and the first year of PSCI implementation, including support received and challenges encountered. We coded the observation and leader interview notes and documents along important dimensions upon which the intervention was based (e.g., the initiative's theory of change) and then analyzed these data across schools. To enhance the internal validity and accuracy of findings we triangulated data from multiple sources, comparing interview data to documents and observation notes whenever possible.

Our qualitative data come with one caveat: given the study timeline, our qualitative data collection activities began in 2010-11 and mainly covered Cohort 2.0. As a result, we did not directly observe technical assistance and support provided to Cohort 1.0 PSCI schools, which occurred in 2008-09. However, we did observe meetings and reviews of PSCI 1.0 schools which occurred during the first year of implementation for these schools – 2009-10. We draw on these data for this paper. In addition, we report on data collected from district and leader interviews that relate to PSCI 1.0.

V. Results & Discussion

Achievement Results: Focus Schools

Tables 2 and 3 show our results from the estimation of equation (1) for focus schools and their comparison groups. Overall, we find that PSCI has a negative impact on students enrolled in

focus schools relative to students in near-selected schools and other low-performing schools. Table 2 shows our estimates of the relationship between PSCI participation and student ELA and math achievement. In columns 1 and 2 we see that students in PSCI focus schools perform worse on standardized tests relative to students in the near-selected comparison set – by about 4 to 4.5% of a standard deviation, significant at the .10 level with the full sample (that includes students in future PSCI schools) and at the .05 level when we restrict the sample to students in schools that are never selected for PSCI. Columns 3 and 4 show the effect of PSCI on students in focus schools relative to all other PI3+ schools in the district. The direction of the relationship remains negative, but the magnitude decreases substantially. Given that we believe the PI3+ control group to be less sufficient for use in the difference-in-difference analyses, we view these results as generally supportive of our main findings. Columns 5 through 8 shows results using students' math CST scores as the outcome measure. We again see a significant relationship between enrollment in a PSCI focus school in the first year of reform implementation and decreases in students' math achievement, of approximately 7 to 8% of a standard deviation. The results are again slightly smaller in magnitude for the PI3+ comparison.

Table 3 presents our exploratory results for the relationship between enrollment in a PSCI focus school and science and social science achievement, respectively. These outcomes are less straightforward than ELA and math outcomes because not all grades are tested in these subjects. For instance, social science is only tested at the secondary level once in 8th grade, and twice in high school. Similarly, science is only tested in 5th grade at the elementary level, 8th grade in middle schools, and then in multiple years in high school. This testing pattern reduces our sample of students and schools included in these analyses and reduces our power to detect effects of even moderate significance. In some cases, the sample size is reduced enough that we are not able to produce reliable estimates. Specifically, there are too few students in the feeder school comparison

set to allow for the estimation of the PSCI "effect" on the social science achievement of students in PSCI relief schools relative to feeder schools. These insufficient student numbers occur because the majority of feeder schools in PSC 1.0 were elementary or middle schools and thus test very few students in social science. This issue also reduces the generalizability of these results to just students in grades that are tested in these subjects. In addition, as with the math test, students in tested grades can take multiple different classes that have their own associated tests. For instance, 11th grade students can be enrolled in Algebra II or Geometry depending on their previous performance and will take the CST for the respective course regardless of their grade level. We standardize the scores within each test to allow comparability across tests and grades.

Table 3 shows that the impact of PSCI on focus school students' science and social science achievement holds to the same patterns as shown in Table 2 regarding student math and ELA achievement. We see that enrollment in a PSCI focus school is associated with decreased science and social science achievement. The negative relationship between science achievement and enrollment in a PSCI school is significant at the .10 level when the comparison group includes the full sample of schools, and at the .05 level when the comparison group is restricted to school that never become a part of PSCI in later cohorts. The relationship between social science achievement and enrollment in a PSCI school is negative but not significant at conventional levels. We view these results as suggestive of an impact on student performance given our data limitations in these subject areas.

Achievement Results: Relief Schools

Tables 4 and 5 present our results from the analyses of PSCI on students enrolled in relief schools relative to those who remain in the feeder schools and to those in low-performing PI3+ schools. Where we found a consistently negative impact of PSCI on focus schools, here we show that PSCI had a positive and significant impact on students enrolled in relief schools. When we

contrast students in newly opened relief schools to the comparison set of feeder schools, we see that these students do markedly better than their peers in ELA achievement by about 16-17% of a standard deviation (Table 4, columns 1 and 2). The magnitude of the increases when students in relief schools are compared to those in PI3+ schools, and remains consistent at the .001 level (columns 3 and 4). Columns 4 through 8 show results using students' math CST scores as the outcome measure. We again see a significant relationship between enrollment in a PSCI relief school and increases in students' math performance (of about 19% of a standard deviation relative to feeder schools; 15% relative to PI3+ schools). Table 5 presents results from our analyses of the impact of PSCI on science and social science outcomes for students in relief schools. We again find support for the more reliable math and ELA findings that PSCI positively impacts achievement for students in relief schools.

Altogether, our results suggest that after one year of implementation, students in PSCI 1.0 *focus* schools perform significantly worse in ELA and math, and possibly science and social science, than the students in sets of comparison schools. However, students in PSCI 1.0 *relief* schools perform significantly better. These results are again only indicative of the first year of reform implementation, and as such should be considered with cautious optimism in the case of newly-opened schools and with guarded concern in the case of turnaround focus schools.

Possible Explanations of Achievement Results

Although the negative results for focus schools in the first year of PSCI implementation are disappointing, past research and our qualitative data suggest that they are to some extent not surprising. These schools undergo a process of school turnaround that can include dramatic shifts in school governance models, operations, staffing, and instructional programs. Such transformations require extensive changes at local school sites. Fullan and Miles (1992) argue that since these types of reforms are complex and uncertain, they demand greater effort in order for change to take hold.

Our qualitative data indicate that the transitional year was particularly hard for PSCI 1.0 focus schools. As one district leader explained,

> If I have a new school, I get to come in, I get to start my own culture...we get to set the culture at this new building. There is no baggage with this particular building. With focus schools, there is baggage and history that comes with that building… so you have to go in and try to interrupt and break that, deal with it at its core… our work is going to be around turnaround schools to figure out how we go in and interrupt that and then re-culture the kids, re-culture the parents because they've all come with experiences about particular schools, about particular buildings.

In addition, funding challenges constrained PSCI 1.0 focus schools and made implementation of their PSCI school plans difficult in the first year. For instance, budgeting difficulties and regulations from the state forced focus schools that had planned on re-opening as pilot schools to postpone their transitions into fully autonomous schools in order to maintain funding levels under the Quality Education Investment Act (QEIA). Budget concerns led some PSCI schools to delay full implementation of certain elements of their plans or to scale back planned implementation, and may have stymied efforts to increase student achievement.

One major issue that may have interfered with focus schools' immediate success calls into question one of the core beliefs behind the PSCI theory of change. Specifically, district leaders, partners and stakeholders believed that competition was a key lever in the reform – that generating competition between multiple applicant teams would motivate teams to work even harder to develop high quality and innovative plans that would enhance their chances of being selected to run their school. They also assumed that the Board would select high quality plans. However, not every school received multiple applications, and the plans that were selected were not always particularly high quality. In PSCI 1.0, fewer teams proposed plans for focus schools than for new relief schools, and three focus schools and one relief school were uncontested. On average, focus schools received 1.9 proposals per school, while an average of 2.8 proposals were submitted for each relief school. District and partner organization leaders noted that some PSCI 1.0 schools did not receive high

quality plans, perhaps due to low levels of competition at those sites. Further, the Board chose five of the 14 focus schools "with reservations," indicating that they did not necessarily think the plan was of high enough quality. In contrast, only one of the 28 relief school was uncontested and only one relief school was approved "with reservations" by the Board.

In focus schools awarded to internal teams, we might also expect added challenges that interfere with having positive effects on student achievement. Nunnery (1998) reviews eight large-scale studies of prominent comprehensive school reform models and finds that in two of these studies local development efforts were less likely to bring substantial change in student outcomes than implementation of externally developed programs (Crandall & Loucks, 1983; Stringfield et al., 1997). This is because, in locally developed initiatives, teachers lacked sufficient time and other resources to develop programs and experienced frustration and anxiety in models requiring such development (Bodilly, 1996; Nunnery et al., 1997). In contrast, externally developed programs tended to be more clearly defined, and included specific and practical training, feedback, and structural changes (Greenwood et al., 1975). Given that nine of the 12 PSC 1.0 focus schools were awarded to internal teams, we may expect to see less success during the early stages of implementation at these sites.

Furthermore, there may be reasons to believe that newly opened relief schools have an advantage over their overcrowded feeder schools and other low-performing LAUSD schools in raising student performance. To start with, new schools – with their modern facilities and the potential for an unsullied school culture – may attract fresh and excited faculties, administrators and staff. In our observations of 1.0 meetings, both relief and focus 1.0 schools noted constraints in selecting their staff. However, relief schools may have been in a better position to attract higher quality teachers. In addition, while both focus and relief schools can apply for a waiver to allow members of the design team who wrote the PSCI plan to transfer to the new school, teachers at the

schools that feed into a relief school have the right to transfer to the new school in equal proportion to students, according to their seniority in the district. District leaders reported recommending that relief school teams present their plans at feeder schools in order to attract those teachers who were drawn to the school's mission and vision and to discourage transfer among those teachers who might be unwilling to fulfill the additional duties expected of teachers at the new school.

In addition, there is no "old way" of doing things at these new sites, which may allow all stakeholders at new sites to be more innovative and open to change. In interviews, district leaders noted that the school culture in focus schools was often unproductive, whereas the culture in new schools was more malleable. In the words of one district leader,

> It's much easier for people going to a new school to dream and come with a new approach. It's very challenging sometimes in the focus schools to let go of old dreams and old beliefs and the belief in what they were doing. Nobody wants to think that they get up every day and go to work and they are not doing any good.

Moreover, literature suggests, and the PSCI experience appears to confirm, that new school buildings –new labs, state-of-the-art classrooms, and even simply functional and working structures – can help to increase student achievement (Berner, 1993; Duyar, 2009; Duran-Narucki, 2008; Welsh et al., 2012). It is also possible that students who were enrolled in feeder schools in 2008-09 and then moved to a new relief school in 2009-10 benefited from leaving overcrowded schools to new and upgraded facilities. Their increased performance may have less to do with actual improvements in instruction or changes in governance models and more to do with changed (and upgraded) school environments. In fact, a recent study of the opening of approximately 130 new facilities in LAUSD between the years 2002 and 2008 finds that students who switched into new elementary school facilities performed 18% of a standard deviation better in math and 20% of a standard deviation better in ELA each year he or she was enrolled in the school (although high school students enrolling in new high school facilities did not see the same magnitude of achievement gains) (Welsh et al., 2012). However, it is also equally feasible that comparison students in feeder schools

experienced improved conditions after PSCI because their schools were less crowded, suggesting that the positive performance gains we see in relief schools is over and above that experienced by students in relieved feeder schools.

Last, several district and partner organization leaders noted that implementation-phase support and technical assistance were not available to many focus schools, or that PSCI schools did not have the time to access the support services available to them in the tight timeline provided. As a result, some focus schools may not have had the capacity to implement their plans. Relief schools, however, received some additional support and assistance during a series of workshops specifically designed for newly constructed schools. Support and technical assistance are essential in mitigating the effects of existing constraints, such as budgetary limitations, staffing restrictions, and confusion over waivers and autonomies, during school start-up and the first year of implementation. The absence of such support may have further hindered the ability of focus schools to improve student achievement.

All this is not to say that the success of the relief schools in the first year of implementation was a foregone conclusion; the positive relief school results are particularly interesting given that newly opened schools face a different set of challenges than turnaround schools which might have negatively impacted student performance in relief schools. Several studies of charter school start-ups find negative effects of charter schools on student achievement in the first year of operation but show gradual improvements over time (Bifulco & Ladd, 2003; Booker et al., 2004; Solomon, Paark, & Garcia, 2001). In a study of how the management of Edison charter schools impacts student achievement, Gill et al. (2005) found that the average proficiency rates of Edison students declined in the first year of operations. They argued that this decline may have been a result of inadequate time to fully implement their instructional plans. Although relief schools under PSCI are not always

(or even usually) charter schools, we still might have expected similar implementation challenges to hinder student performance in relief schools' first years of operation.

VI. Conclusion & Implications

Overall, the results from our quantitative and supporting qualitative analyses indicate that the first year of the PSCI reform was not a success for students in turnaround focus schools, but may have helped students enrolled in newly opened relief schools. Although these results do not paint the most optimistic picture of the efficacy of the turnaround element of the reform, it is important to place these results in the context of the literature that shows that the first year or years of whole-school reforms are often rocky, and that schools may not demonstrate immediate improvements in outcomes (Bifulco et al., 2003; Borman et al., 2003; De la Torre et al., 2012; Orland et al., 2008). However, in the current political and reform climate that demands immediate achievement results from turnaround reforms, as well as growing accountability pressures that require districts and schools to show quick achievement gains in order to avoid reconstitution or other interventions, the first year impacts of PSCI offer important lessons for policymakers at the national, state and district levels. In addition, other districts and states are contemplating reforms similar to PSCI. For instance, "turnaround districts" have been created in Louisiana, Michigan, and Tennessee (Samuels, 2011). We hope the results from this study inform their design, implementation and expectations for impacts.

It is also important to assess whether or not the district is attempting to learn from the early lessons and improve the intervention to ensure future success. To this end, LAUSD is working with an external evaluation team (led by the authors) to understand the outcomes and learn from the successes and challenges from the early years of the initiative. In addition, LAUSD administrators have engaged in ongoing discussions about elements of the reform that appeared not to work for

early cohorts and have taken concrete action to amend the structure of PSCI to improve these problematic parts of the reform. For example, in the first two years part of the plan review process involved an advisory "vote" by parents and community members, but low turnout and reports of electioneering led district leaders and partners to replace it with new community engagement workshops and solicitations of feedback. In addition, district leaders are working with union officials from both the teachers' and the administrators' unions, as well as with stakeholders such as the Chamber of Commerce, United Way and university partners, to improve the intervention and tailor it to changing local needs.

Interestingly, however, some of the changes being instituted by the district, or as a result of working with partners such as the United Teachers of Los Angeles (UTLA – the district's teachers' union), may serve to remove some of the benefits associated with being enrolled in a newly opened relief school. To begin with, only approximately 85 new schools were slated to be opened as part of PSCI, and all but seven have already been included in PSCI Cohorts 1.0 through 3.0.[12] The remaining seven will not be included in PSCI 4.0. In addition, a Memorandum of Understanding (MOU) between the district and UTLA that was approved in November of 2011 made external teams of charter operators and non-profits only eligible to participate in PSCI 3.0 through 5.0 if they agree to operate the awarded school using current district employees under the current collective bargaining agreement. The MOU also provides PSCI and other low-performing non-PSCI teams increased opportunities for autonomy over district and union policies. Given that the majority of competition in PSCI 1.0 and 2.0 was between internal and external teams (there were few instances with more than one internal team directly competing for a given school) and the *threat* of competition largely came from the possibility that external teams might be awarded the right to

[12] We note that these approximately 85 schools were intended to be located on 50 *sites*, and include several small and/or pilot schools. Two of these relief schools were initially included in PSCI 3.0, but were removed from the Initiative based on a Board resolution stipulating that newly opened schools with very high achieving feeder schools (API scores of 800 or more) would not participate in PSCI.

operate PSCI schools, the limitations placed on external applicants and the independent charter governance model may hamper the competition mechanism that may have driven some of the positive PSCI results for relief schools.

In the coming years, it will be important to examine the effects of all of these policy changes and the extent to which the reform elements are implemented and scaled up. Of course, the ultimate test of the efficacy of PSCI lies in the years ahead. Further research will be needed to ascertain not only the impacts of the intervention on student achievement outcomes and other outcomes of interest (such as graduation rates, college preparedness, and teacher attrition and turnover), but also to assess the extent to which new school operators are implementing their plans as intended, producing high-quality learning environments, and seeing improved staff and student outcomes. We hope to answer these questions with our ongoing research in future years.

The results of this research nonetheless have several important implications for policymakers and practitioners outside of Los Angeles. First, the early outcome results may suggest that drastic turnaround-type reforms may not always produce positive results, at least as quickly as expected. These results combined with our qualitative analyses reinforce past research findings that whole-school and systemic reform takes time (Elmore & McLaughlin, 1982; Elmore & McLaughlin, 1988). Although PSCI is not alone in expecting fast results from turnaround initiatives (e.g., the federal SIG program), expecting school districts to turn around quickly may be unrealistic. This finding has important implications in an era when so many educational policymakers at all levels view turnaround as a panacea. When implementing a portfolio model or managing school turnaround, districts need time to develop a multitude of new policies, processes, and practices. Moreover, districts will then need to adapt these policies, processes and practices to their specific and often-changing local contexts, which requires complex negotiations with multiple stakeholders and decision-makers. It is important that districts are not penalized by policies that expect fast results for

trying innovative and perhaps untested strategies and also modifying them over time. Rather, schools may benefit from working with district stakeholders to adapt these policies to better address their local needs.

In addition, as the Elementary and Secondary Education Act (ESEA) undergoes reauthorization, the administration and many other stakeholders have discussed the increased use of school turnaround as a reform and accountability strategy. Such legislation might require certain chronically low-performing schools and districts to undergo prescriptive turnaround reforms. However, our study suggests that it is important to establish a firm research base about the efficacy of and implementation challenges inherent to specific reform models before instituting them in federal legislation governing multiple students, schools and districts. Just as important, federal and state legislators should be careful not to jump too quickly to conclusions about the ineffectiveness of certain reforms.

Our findings regarding the positive impacts of PSCI on newly built relief schools are equally pertinent today, when few new schools are being built or even being renovated, especially those that serve traditionally underserved student populations. If the beneficial effects of PSCI on students in relief schools is largely driven by some "new facilities" effect, as a growing research base suggests may be the case, policymakers may need to consider tradeoffs in budget expenditures that allow for the generation of new or renovated buildings in which to teach students. This is particularly concerning today, during these times of budgetary constraint and diminishing resources for schools and school buildings.

Clearly, more research on the implementation and eventual efficacy of both school turnaround and district portfolio reforms is necessary. As these reform concepts grow in popularity, it will be important to build on the successes and challenges of other districts implementing such reforms across the country to inform policy decisions at the federal, state and local levels. Such a

research base is growing (e.g., Bulkley et al., 2010; Christman et al., 2006; Gyurko & Henig, 2010; Hill, 2011; Levin et al., 2010; Menefee-Libey, 2010; O'Day et al., 2011). In light of this existing body of research on portfolio district implementation, LAUSD's PSCI provides an excellent opportunity to study the impacts of one large urban school district's attempt to implement a hybrid portfolio-turnaround reform. It remains to be seen if this strategy will be ultimately successful, both in terms of its continued implementation and its effects on student outcomes. The next phase of our research will continue to examine the impact of PSCI on student and personnel outcomes, and will also assess district- and school-level implementation of the reform. Research on the various districts implementing aspects of portfolio and turnaround reforms can build this critical knowledge base, allowing policymakers and practitioners to make more informed decisions about which strategies to use and in what contexts.

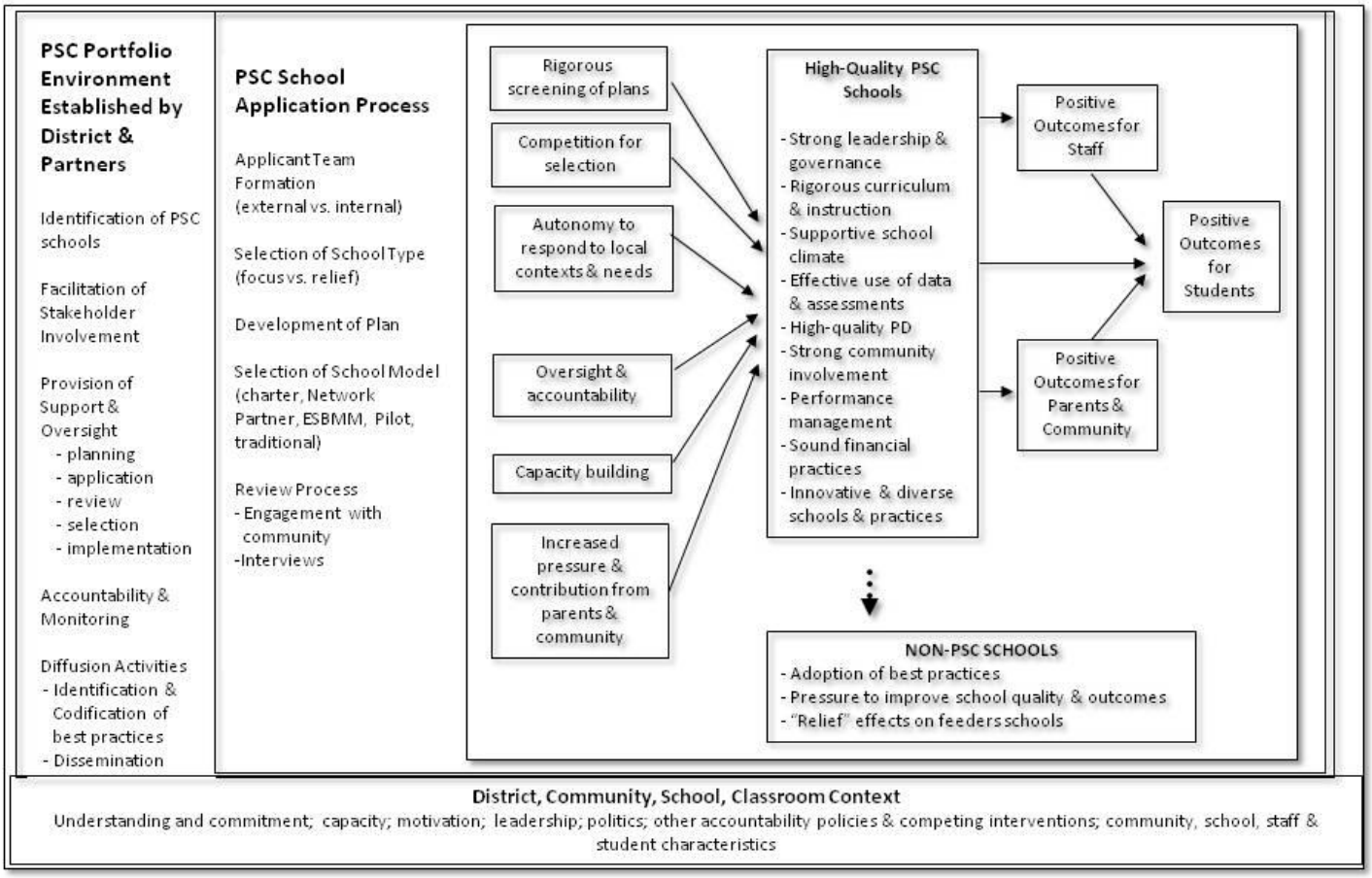

Figure 1: Public School Choice Theory of Change

Figure 2: School Governance Models Currently Operating in LAUSD

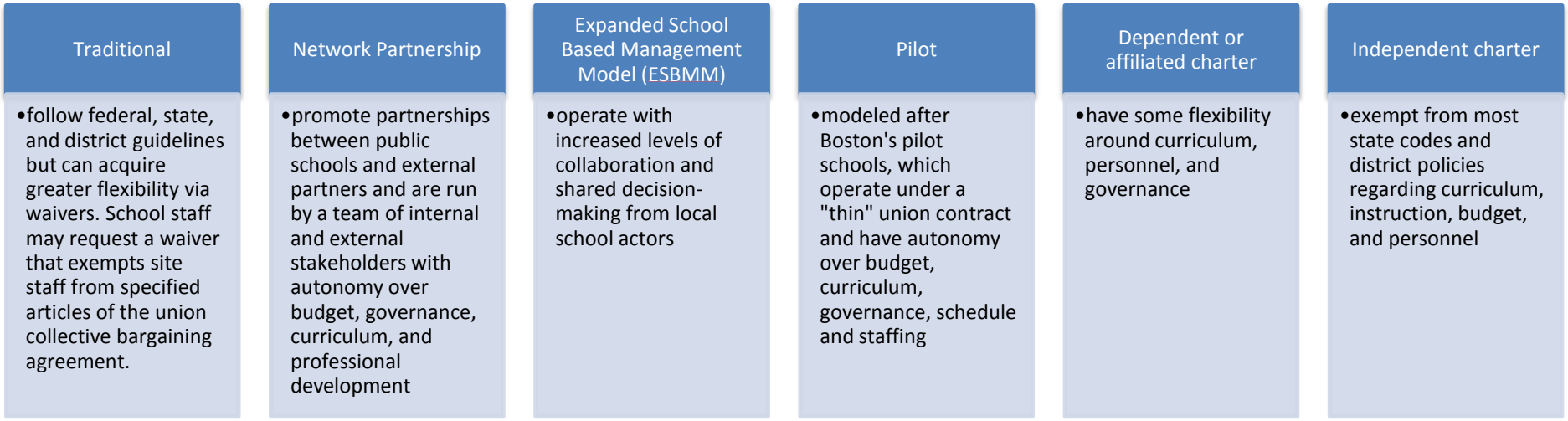

Table 1: Number of Schools in PSC 1.0, by Governance Model

	Relief	Focus	Total
Number of sites	20	12	32
Number of schools	28	14	42
Traditional	9	8	17
ESBMM	6	2	8
Pilot	6	2	8
Network Partner	1	2	3
Affiliated Charter	0	0	0
Independent Charter	6	0	6

Table 2: Difference-in-Difference Estimates of PSCI Focus Schools on Student ELA and Math Achievement, 2009-10 to 2010-11

	ELA Achievement Results				Math Achievement Results			
	Near Selected		PI3+		Near Selected		PI3+	
	Full	R	Full	R	Full	R	Full	R
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PSCI	0.030+	0.032+	0.009	0.009	0.046*	0.052*	0.023	0.026
	(0.017)	(0.018)	(0.020)	(0.021)	(0.021)	(0.021)	(0.020)	(0.021)
Time	-0.028**	-0.027**	-0.016***	-0.018***	-0.029	-0.020	-0.007	-0.007
	(0.009)	(0.010)	(0.004)	(0.004)	(0.020)	(0.019)	(0.008)	(0.009)
Diff-in-Diff Estimator	-0.039+	-0.045*	-0.010	-0.013	-0.066+	-0.082*	-0.049*	-0.053*
	(0.021)	(0.022)	(0.018)	(0.017)	(0.038)	(0.039)	(0.021)	(0.022)
Ln(enrollment)	0.052***	0.049***	0.055***	0.051***	0.003	0.007	0.025***	0.023***
	(0.008)	(0.010)	(0.005)	(0.006)	(0.008)	(0.009)	(0.006)	(0.007)
% Minority in school	0.391***	0.435***	0.517***	0.489***	0.612***	0.676***	0.611***	0.597***
	(0.102)	(0.126)	(0.100)	(0.104)	(0.118)	(0.138)	(0.069)	(0.074)
% English Orig in school	-0.172***	-0.145**	-0.209***	-0.173***	-0.044	-0.012	-0.100***	-0.081**
	(0.043)	(0.045)	(0.028)	(0.032)	(0.044)	(0.054)	(0.027)	(0.031)
% FRPL in school	0.024	0.018	0.104**	0.140***	-0.013	-0.005	0.056	0.109**
	(0.054)	(0.077)	(0.037)	(0.042)	(0.055)	(0.071)	(0.035)	(0.035)
Avg CST score	1.029***	1.019***	0.993***	0.975***	0.990***	1.004***	0.956***	0.958***
	(0.021)	(0.025)	(0.023)	(0.027)	(0.018)	(0.020)	(0.014)	(0.017)
Minority	-0.472***	-0.473***	-0.454***	-0.452***	-0.570***	-0.576***	-0.586***	-0.591***
	(0.058)	(0.062)	(0.033)	(0.034)	(0.073)	(0.079)	(0.049)	(0.051)
FRPL	-0.159*	-0.193**	-0.338***	-0.352***	-0.114**	-0.122**	-0.295***	-0.300***
	(0.067)	(0.065)	(0.047)	(0.046)	(0.039)	(0.042)	(0.054)	(0.055)
ELL	-0.177***	-0.195***	-0.250***	-0.265***	-0.038+	-0.060*	-0.117***	-0.133***
	(0.023)	(0.026)	(0.014)	(0.015)	(0.022)	(0.026)	(0.015)	(0.016)
Constant	0.231*	0.167	0.161*	0.182*	0.164	0.069	0.227***	0.217**
	(0.111)	(0.145)	(0.073)	(0.079)	(0.106)	(0.126)	(0.060)	(0.069)
R2-adj	0.086	0.098	0.105	0.112	0.081	0.093	0.100	0.104
N students	120,000	88,846	324,000	274,000	119,000	87,659	322,000	272,000
N schools	87	71	248	227	87	71	248	227
F-stat	395.237	326.959	428.651	360.840	358.528	409.083	780.148	822.048

*+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001. Columns 1,3,5 and 7 (Full) include all comparison schools, including those that were selected into future rounds of PSCI. Columns 2,4,6 and 8 (R) include only a restricted sample of comparison schools that excludes future treated schools.*

Table 3: Difference-in-Difference Estimates of PSCI Focus Schools on Student Science and Social Science Achievement, 2009-10 to 2010-11

	Science Achievement Results				Social Science Achievement Results			
	Near Selected		PI3+		Near Selected		PI3+	
	Full	R	Full	R	Full	R	Full	R
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PSCI	0.033	0.037+	-0.008	-0.010	0.036	0.050	-0.004	0.002
	(0.021)	(0.021)	(0.023)	(0.023)	(0.030)	(0.032)	(0.028)	(0.029)
Time	-0.041*	-0.033	-0.029***	-0.035***	-0.019	-0.015	-0.009	-0.011
	(0.016)	(0.020)	(0.008)	(0.009)	(0.016)	(0.019)	(0.010)	(0.012)
Diff-in-Diff Estimator	-0.058+	-0.078*	0.005	0.003	-0.035	-0.048	0.005	0.003
	(0.031)	(0.031)	(0.027)	(0.026)	(0.038)	(0.039)	(0.032)	(0.033)
Ln(enrollment)	0.029**	0.031**	0.036***	0.035***	0.023*	0.013	0.013*	0.011
	(0.011)	(0.010)	(0.005)	(0.006)	(0.011)	(0.016)	(0.006)	(0.007)
% Minority in school	0.411*	0.490*	0.544***	0.563***	0.503***	0.501***	0.537***	0.536***
	(0.166)	(0.190)	(0.084)	(0.091)	(0.096)	(0.115)	(0.075)	(0.078)
% English Orig in school	-0.079	-0.053	-0.106**	-0.091**	-0.186*	-0.213*	-0.330***	-0.324***
	(0.053)	(0.064)	(0.033)	(0.035)	(0.078)	(0.083)	(0.057)	(0.059)
% FRPL in school	0.076	0.084	0.074*	0.104*	0.008	0.017	0.025	0.054
	(0.049)	(0.065)	(0.037)	(0.044)	(0.038)	(0.049)	(0.033)	(0.036)
Avg CST score	0.987***	0.993***	0.982***	0.978***	1.049***	1.040***	1.031***	1.024***
	(0.023)	(0.030)	(0.015)	(0.016)	(0.021)	(0.025)	(0.021)	(0.023)
Minority	-0.588***	-0.588***	-0.550***	-0.552***	-0.517***	-0.527***	-0.507***	-0.512***
	(0.116)	(0.125)	(0.060)	(0.062)	(0.060)	(0.065)	(0.036)	(0.037)
FRPL	-0.140+	-0.174*	-0.326***	-0.349***	-0.141+	-0.166*	-0.303***	-0.323***
	(0.078)	(0.083)	(0.066)	(0.067)	(0.071)	(0.074)	(0.044)	(0.043)
ELL	-0.076**	-0.078**	-0.126***	-0.135***	-0.085**	-0.075**	-0.116***	-0.113***
	(0.023)	(0.027)	(0.014)	(0.016)	(0.026)	(0.028)	(0.017)	(0.018)
Constant	0.203	0.132	0.223**	0.219**	0.245+	0.351+	0.542***	0.552***
	(0.122)	(0.129)	(0.073)	(0.078)	(0.144)	(0.180)	(0.097)	(0.103)
R2-adj	0.079	0.093	0.105	0.115	0.101	0.112	0.114	0.122
N students	68,300	48,742	150,000	120,000	47,641	33,729	92,851	73,682
N schools	87	71	248	227	50	37	104	89
F-stat	508.304	412.389	758.629	682.271	700.954	584.414	745.867	612.740

*+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001. Columns 1,3,5 and 7 (Full) include all comparison schools, including those that were selected into future rounds of PSCI. Columns 2,4,6 and 8 (R) include only a restricted sample of comparison schools that excludes future treated schools.*

Table 4: Difference-in-Difference Estimates of PSCI Relief Schools on Student ELA and Math Achievement, 2009-10 to 2010-11

	ELA Achievement Results				Math Achievement Results			
	Feeder		PI3+		Feeder		PI3+	
	Full	R	Full	R	Full	R	Full	R
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PSCI	-0.169***	-0.170***	-0.159***	-0.167***	-0.148***	-0.147***	-0.143***	-0.141***
	(0.037)	(0.039)	(0.025)	(0.027)	(0.040)	(0.042)	(0.027)	(0.029)
Time	-0.017+	-0.019*	-0.016***	-0.018***	-0.013	-0.018	0.007	0.007
	(0.009)	(0.009)	(0.004)	(0.004)	(0.012)	(0.011)	(0.008)	(0.009)
Diff-in-Diff Estimator	0.160***	0.166***	0.182***	0.189***	0.191***	0.187***	0.146***	0.150***
	(0.045)	(0.046)	(0.031)	(0.033)	(0.044)	(0.044)	(0.032)	(0.035)
Ln(enrollment)	0.063***	0.065***	0.052***	0.048***	0.064***	0.066***	0.024***	0.022**
	(0.012)	(0.012)	(0.005)	(0.006)	(0.012)	(0.012)	(0.006)	(0.007)
% Minority in school	0.245	0.237	0.519***	0.482***	0.234	0.272	0.616***	0.600***
	(0.229)	(0.231)	(0.111)	(0.116)	(0.210)	(0.221)	(0.077)	(0.082)
% English Orig in school	-0.130*	-0.131*	-0.209***	-0.172***	-0.133*	-0.142*	-0.111***	-0.093**
	(0.063)	(0.064)	(0.027)	(0.032)	(0.063)	(0.062)	(0.027)	(0.030)
% FRPL in school	-0.099	-0.096	0.096*	0.136**	0.055	0.002	0.046	0.099*
	(0.098)	(0.113)	(0.038)	(0.044)	(0.102)	(0.112)	(0.039)	(0.040)
Avg CST score	0.998***	0.994***	0.984***	0.963***	1.028***	1.023***	0.950***	0.951***
	(0.035)	(0.040)	(0.024)	(0.029)	(0.032)	(0.033)	(0.016)	(0.019)
Minority	-0.297***	-0.294***	-0.438***	-0.435***	-0.335***	-0.331***	-0.572***	-0.576***
	(0.056)	(0.056)	(0.032)	(0.033)	(0.067)	(0.067)	(0.046)	(0.048)
FRPL	-0.313***	-0.320***	-0.363***	-0.378***	-0.293**	-0.297***	-0.327***	-0.333***
	(0.080)	(0.079)	(0.050)	(0.049)	(0.087)	(0.087)	(0.057)	(0.058)
ELL	-0.377***	-0.389***	-0.262***	-0.280***	-0.254***	-0.266***	-0.127***	-0.146***
	(0.031)	(0.030)	(0.014)	(0.015)	(0.032)	(0.032)	(0.015)	(0.016)
Constant	0.459+	0.464+	0.198*	0.230**	0.242	0.262	0.273***	0.269***
	(0.232)	(0.241)	(0.076)	(0.083)	(0.195)	(0.202)	(0.061)	(0.072)
R2-adj	0.078	0.078	0.103	0.111	0.069	0.070	0.098	0.101
N students	57,670	55,936	305,000	256,000	57,725	55,984	304,000	255,000
N schools	86	85	258	237	86	85	258	237
F-stat	278.055	250.688	454.740	389.851	259.244	240.025	711.368	749.039

*+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001. Columns 1, 3 , 5 and 7 (Full) include all comparison schools, including those that were selected into future rounds of PSCI. Columns 2, 4, 6 and 8 (R) include only a restricted sample of comparison schools that excludes future treated schools.*

Table 5: Difference-in-Difference Estimates of PSCI Relief Schools on Student Science and Social Science Achievement, 2009-10 to 2010-11

	Science Achievement Results				Social Science Achievement Results			
	Feeder		PI3+		Feeder		PI3+	
	Full	R	Full	R	Full	R	Full	R
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PSCI	-0.206*	-0.207*	-0.127***	-0.151***	-0.332**	-0.323**	-0.124**	-0.135**
	(0.086)	(0.087)	(0.032)	(0.036)	(0.095)	(0.091)	(0.043)	(0.046)
Time	-0.067	-0.068	-0.028***	-0.033***	-0.253**	-0.278**	-0.009	-0.012
	(0.061)	(0.061)	(0.008)	(0.009)	(0.080)	(0.080)	(0.011)	(0.012)
Diff-in-Diff Estimator	0.242*	0.236*	0.178***	0.199***	0.326**	0.324**	0.174***	0.174**
	(0.093)	(0.097)	(0.039)	(0.045)	(0.096)	(0.093)	(0.048)	(0.055)
Ln(enrollment)	0.038*	0.036*	0.037***	0.036***	-0.041	-0.052	0.012+	0.009
	(0.018)	(0.018)	(0.005)	(0.006)	(0.029)	(0.035)	(0.006)	(0.007)
% Minority in school	-0.018	0.009	0.525***	0.546***	-0.107	-0.206	0.567***	0.567***
	(0.370)	(0.378)	(0.094)	(0.106)	(0.517)	(0.553)	(0.086)	(0.090)
% English Orig in school	0.042	0.034	-0.142***	-0.143***	0.249	0.355	-0.325***	-0.329***
	(0.080)	(0.085)	(0.030)	(0.032)	(0.261)	(0.343)	(0.060)	(0.062)
% FRPL in school	-0.120	-0.143	0.053	0.083+	-0.058	0.073	0.039	0.077+
	(0.159)	(0.187)	(0.037)	(0.047)	(0.153)	(0.158)	(0.037)	(0.041)
Avg CST score	1.006***	1.008***	0.980***	0.981***	1.059***	1.086***	1.040***	1.038***
	(0.031)	(0.033)	(0.014)	(0.014)	(0.040)	(0.044)	(0.023)	(0.026)
Minority	-0.248*	-0.246*	-0.504***	-0.503***	-0.121	-0.124	-0.496***	-0.501***
	(0.099)	(0.099)	(0.041)	(0.041)	(0.194)	(0.196)	(0.033)	(0.034)
FRPL	-0.264	-0.270	-0.393***	-0.426***	0.545***	0.588***	-0.337***	-0.363***
	(0.191)	(0.194)	(0.073)	(0.072)	(0.046)	(0.025)	(0.048)	(0.046)
ELL	-0.207***	-0.215***	-0.139***	-0.153***	-0.130*	-0.137+	-0.125***	-0.123***
	(0.035)	(0.035)	(0.014)	(0.016)	(0.061)	(0.065)	(0.019)	(0.020)
Constant	0.620+	0.642+	0.311***	0.320***	0.235	0.202	0.532***	0.559***
	(0.317)	(0.332)	(0.077)	(0.084)	(0.476)	(0.589)	(0.100)	(0.105)
R2-adj	0.087	0.088	0.106	0.117	0.136	0.143	0.110	0.119
N students	15,753	15,308	132,000	103,000	5,681	5,230	81,006	62,111
N schools	86	85	258	237	20	19	103	88
F-stat	451.564	401.312	931.253	925.379	38,401.844	.	726.910	542.263

*+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001. Columns 1, 3 , 5 and 7 (Full) include all comparison schools, including those that were selected into future rounds of PSCI. Columns 2, 4, 6 and 8 (R) include only a restricted sample of comparison schools that excludes future treated schools.*

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