

2008-09 Comparison of Outcomes: SUN High School Students and Matched Controls

This report summarizes the results of a study comparing outcomes for high school students participating in community school extended-day services with a matched comparison group of students not participating. The community schools are part of the SUN (Schools Uniting Neighborhoods) Community Schools located in Multnomah County, Oregon at Portland Public School District (PPS) high schools. The study focuses on outcomes from the 08-09 school year.

SUN Community Schools was founded by the City of Portland and Multnomah County in 1999 as a partnership of city, county and schools. SUN Community Schools are the school-based service delivery site for a comprehensive set of services including:

- Extended-day academic and enrichment programs that are linked with the school day
- Family involvement and strengthening programs
- Health and social services for students, families and community
- Community events
- Adult education

At the four PPS high school SUN Community Schools, site managers are employed by local non-profit social service agencies that contract with the county. In their role, they build upon assets already in the communities and tailor their events, classes, services and activities to what the local community wants. Thus there is a wide variety of classes offered by each school but it is an expectation that one-third of classes are focused on academic supports, tutoring, homework clubs, and/or credit retrieval. All students are eligible to participate in SUN services and high schools where SUN services are located are the lowest achieving in the district.

Sample and Methodology

Selection criteria for both SUN and comparison students included enrollment in 9th to 12th grade during the 2008-09 school year and attending one of 12 high schools or high school academies.

Students who were enrolled in PPS in October 2008 and who participated in SUN School

services at least 30 days or more during the school year¹ were matched with students who did not attend SUN using propensity score matching (Rosenbaum & Rubin, 1983).

Propensity scores were obtained from a logistic regression model using 8 matching variables: (see table 1):

Table1: Matching Variables

1. Gender
2. Grade
3. School
4. English language learner status
5. Free/reduced lunch status
6. Special education status
7. Ethnicity
8. 8th grade reading score on the Oregon Assessment of Knowledge Scale (OAKS) achievement test.

The final sample consisted of 441 SUN and 499 comparison students.

Outcome Measures

Academic success was measured using data collected by PPS including:

- High school credits earned during the school year
- Attendance during the school year
- Change scores in OAKS Reading and Math scores from 8th to 10th grade

Demographic Comparison of Sample and Matched Control Group

As a result of propensity score matching, there were no statistically significant differences between the two groups on any of the demographic variables.

There were slightly more females than males in this study. The largest ethnic groups were African American (43%), white (28%), and Hispanic (18%).

¹ SUN students participated in 30 to 139 days of services; the mean number of days was 47.8 with a standard deviation of 20.3.

Comparison of SUN Students and Matched Controls: 2008-09

Almost three-quarters of the students were 9th and 10th graders. About one in five were English Language Learners and/or had an IEP. About four in five were eligible for free or reduced meals.

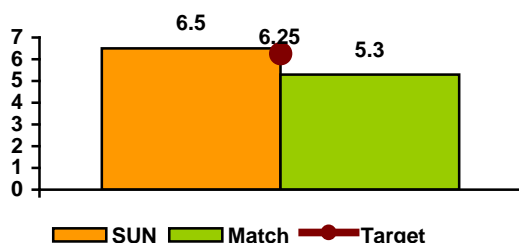
Results

High School Credits

High School credit hours available from 432 (98%) SUN students and 471 (94%) matched control group students. There was a moderate statistically significant difference ($p < .001$) between SUN students who earned 6.5 and the comparison group who earned 5.3 credits.

SUN students earned more than the expected credits (6.25) required to be on track to graduate within 4 years, whereas the matched control group did not (analysis controlled for grade and previous achievement).

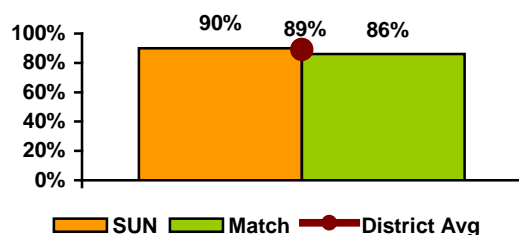
Figure 1: High School Credits Earned



Attendance

SUN students attended 89.8% of their enrolled days compared to 85.6% for comparison students. There was a small but statistically significant difference after controlling for previous attendance. A difference of 4.2 percentage points corresponds to an additional 2.4 days spent in school.

Figure 2: Percent of School Days Attended



OAKS Reading and Math Scores

On the OAKS reading and math tests in 10th grade, there were no statistically significant differences between 10th grade SUN and control group students. There was also no difference in the rate of change between 8th and 10th grade scores on the OAKS test.

Table 2: OAKS Reading and Math Scores

	N	Mean
Reading		
SUN	108	232.9
Match	134	233.5
Math		
SUN	109	231.3
Match	133	229.9

Conclusion

This study confirms that students at SUN attended regular school more frequently than students not participating in SUN. In addition, SUN students earned more credits toward graduation. In this study, these positives, however, were not corroborated by an increase in standardized test scores.

Reference

Rosenbaum, P.R., & Rubin, D.B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70, 41-55.

Authors

Carrie J. Furrer, Portland State University
Linda Magnuson, Multnomah County Department of Human Services
Joseph Suggs, Portland Public School District

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For more information: www.multco.us/sun