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21st Century Community Learning Centers 2013

A Quasi-Experimental Investigation of Program Impacts on Student Achievement in Mathematics and Reading/Language Arts

This report summarizes an evaluation study investigating the effects of participation in the 21st Century Community Learning Centers (CCLC) program on student achievement in mathematics and reading/language arts, for the cohort of students who participated during the 2012–2013 school year.

Method of study. We conducted a quasi-experimental examination of within- and between-group differences in student assessment outcomes (WESTEST 2) in both mathematics and reading/language arts. The treatment group consisted of students who participated in at least 30 days of CCLC during the 2012–2013 school year. A control group consisting of demographically similar students who did not participate in CCLC was selected using propensity score matching (PSM).

Findings. Using a series of independent samples t-tests, we found no significant differences between CCLC and non-CCLC students' year-to-year gains in mathematics or reading/language arts nor in their 2012–2013 end-of-year scores in mathematics or reading/language arts. Using a series of paired t tests, we found CCLC students exhibited statistically significant mathematics gains from 2011–2012 to 2012–2013 in Grades 4, 5, 6, 7, 9 and 11; the students also exhibited statistically significant gains during this time period in reading/language arts in Grades 4, 5, 6, 7, 8, and 10. We ran similar tests for non-CCLC students and found statistically significant mathematics gains in several grades (i.e., Grades 4, 5, 6, 7, 8, 9 and 11), and reading/language arts gains in Grades 4, 5, 6, and 7. Using repeated measures analysis of variance tests, we found significant main effects for time, but there were no statistically significant interaction effects between groups and time. However, in reading/language arts, the interaction effects approached significance in Grades 8 and 10. In both cases, CCLC students outperformed the non-CCLC comparison group.

Limitations of study. This study only encompassed a single year of CCLC intervention. It is likely that academic achievement gains on standardized assessments would not be realized until more time has elapsed. Second, we were able to examine only Grades 4–11 in the study due to a lack of available achievement data for Grades K-3. This is a significant limitation when one considers the fact that approximately 50% of the 2012–2013 CCLC cohort was enrolled in these grades.

Recommendations. To the extent possible, we will attempt to prepare next year's edition of this report at the outset of the 2014–2015 school year, a time when the data are more actionable for CCLC program staff. Further, we will work with CCLC program staff to plan additional research to be conducted at the conclusion of the 2013–2014 school year to examine the impact of longer-term participation in CCLC on student academic achievement outcomes. The study will examine outcomes for students who participated in CCLC for at least 2 academic years to determine if prolonged participation in the program produces statistically significant gains in achievement.

For more information, contact Nate Hixson, Office of Research (nhixson@access.k12.wv.us), or download the full report from the WVDE Office of Research website at <http://wvde.state.wv.us/research/reports2014.html>.

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