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Texas 21st Century Community Learning Centers Evaluation

2007-2008

Executive Summary

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EXECUTIVE SUMMARY

The 21st Century Community Learning Centers (21st CCLC) program is a federal initiative authorized by the No Child Left Behind (NCLB) Act of 2001 that provides out of school time opportunities for academic enrichment to help students meet state and local performance standards in core academic subjects. Programs and activities are designed to reinforce and complement the regular academic program of participating students. Families of students are also offered opportunities for literacy and related educational development.

The purpose of this study was to provide a comprehensive description of the implementation and impact of the 21st CCLC program in Texas during the 2007-08 academic year, to examine the impact of program participation on student outcomes, and to investigate possible mediating, moderating, or other explanatory variables associated with successful programs. The five specific evaluation tasks for the study were:

- A statewide survey assessment to attain a better understanding of the nature of existing programs;
- A profile and description of 21st CCLC programs, operations, staffing patterns, and students served;
- An analysis of the impact of 21st CCLC participation on student-level achievement outcomes;
- Investigation of variables that mediate or moderate the relationship between program participation and student-level outcomes; and
- A determination of specific programmatic features associated with the various student achievement outcomes included in the evaluation.

Two complementary studies were conducted to answer the research questions. The first study, conducted by Learning Point Associates (LPA), addressed the first two tasks by looking at the attributes of the 21st CCLC program in Texas. The second study, conducted by the Center for Research in Educational Policy at the University of Memphis, examined the remaining tasks by analyzing program effects on student achievement.

To complete these tasks, several sources of data were analyzed, two of which were leveraged in an effort to create a program profile to describe 21st CCLC program planning and goals, program activities, center operations, center staffing, and student attendance: Data collected directly from 21st CCLC grantees via a Web-based data collection tool maintained by TEA (the Texas 21st CCLC Tracking & Reporting System), as well as data collected through online surveys of grantee directors, center directors, and center staff. These data, along with Texas Assessment of Knowledge and Skills (TAKS) scores for the past five school years (2003-04 to 2007-08) and data collected through the Public Education Information Management System (PEIMS) (e.g., “at-risk” status) were used to study program impact on student-level achievement.

Program Profile

The following section summarizes key findings from the program profile, which included results from the grantee and center directors, and about the program’s impact on student attendance.

Program Planning and Goals

Grantee and center directors provided responses about their program planning efforts and the main goals of programming. Notably, nearly all center and grantee directors indicated that providing a safe environment for youth, helping youth improve their academic performance, and providing hands-on academic enrichment activities were primary objectives of programming. Additionally, more than three-quarters of all directors indicated that helping youth with their TAKS scores and helping youth develop socially were primary objectives of programming.

Both center directors and center staff stated that input from students' school day teachers was most commonly received and used in program planning, as compared to student's academic or educational plans, student's standardized test scores, students' grades, or input from parents. The majority of grantee directors indicated that they were very much involved in program goal setting for centers funded by their grant, linking program goals to program design, and evaluating program implementation in centers.

There were some statistically significant differences between center directors based on whether they were employed full or part-time, and their years of experience, particularly as noted in the summary of the survey outcomes, when it came to academic vs. non-academic areas of program focus. Grantee directors also differed in their responses based on these divisions, although these differences were not tested for statistical significance due to lack of reliability of such results based on the relatively smaller numbers of grantee directors who responded to the survey. In looking at these differences, one of the most interesting findings was that part-time center directors appear less focused (than full-time center directors and both part and full-time grantee directors) on providing non-academic areas of programming (i.e., providing community service or civic engagement opportunities, providing leadership opportunities to youth, helping connect youth to their community, and identifying health or social services youth need), and more concerned with academic achievement (e.g., helping youth improve their TAKS scores).

- In addition, more than half (53%) of center directors with a mid-level of experience (3-4 years), and nearly half (43%) of center directors with a high level of experience (5 or more years), indicated that helping parents and/or adults with literacy or other skills was a primary objective of the program.
- For those center directors with a low level of experience (2 years or less), only 32% responded that helping parents and/or adults with literacy or other skills was a primary objective, and 15% responded that this item was not an objective.

Program Activities

Data on the provision of program activities were gathered through both program surveys and administrative data:

- The academic skill building focus of 21st CCLC emerged in analysis of both sources.
- Nearly all center directors reported providing academic skills development frequently, and almost all grantee directors placed the provision of academic skills development as a primary priority.
- For all other activities, greater discrepancies existed between what center directors reported providing and grantee directors prioritized.

Using information obtained from the Texas 21st CCLC Tracking & Reporting System, based on the activities offered in the 609 centers in 2008, the largest number of centers fell into the *Mostly Enrichment* activity cluster ($n=190$), while 163 centers were classified as *Mostly Homework Help and Enrichment* and 163 centers were classified as *Mostly Recreation and Enrichment*. The smallest cluster of centers was in the *Mostly Tutoring and Enrichment* category ($n=92$). Broadly defined, academic enrichment (i.e., Enrichment) activities expand students' learning opportunities in ways that differ from the methods used during the school day with the aim of helping students meet both state and local standards in core content areas such as reading, mathematics, and science.

Center Operations

In 2007-08, regardless of the number of years the grant had been in place, during the regular school year, centers had the highest average number of hours of operation (approximately 13%) after school (as opposed to before or during school, or on weekends). Centers from all grant years were similar in terms of the average operating hours and the days and weeks of operation during the regular school year, although centers in their fifth year did have the highest average number of weeks of operation (32.2). Centers associated with grants in their fourth year, however, were more likely to have had a summer program than centers associated with grants in their second or fifth year: 90% of all fourth year centers had a summer program, compared with 73% for second year programs and 79% for fifth year programs.

Center Staffing

Center directors and center staff responded to survey items regarding the staffing of 21st CCLCs. More than half of center staff indicated that their primary role was teaching or leading regular program activities, while approximately one-quarter of staff reported that their primary role was to perform administrative duties. According to center directors, about half of the programs had a parent liaison/parent outreach coordinator or a master teacher/education specialist, and nearly two-thirds had an administrative support position.

The Texas 21st CCLC administrative database was also employed in exploring program staffing. Similar to the activities clusters, centers were classified into clusters based on the extent to which they relied upon different categories of staff to deliver programming. Six primary staffing models were identified:

- Centers staffed mostly by college students
- Centers staffed mostly by a combination of school day teachers and college students
- Centers staffed mostly by school day teachers
- Centers staffed mostly by school day teachers and other non-teaching school staff
- Centers staffed mostly by school day teachers and individuals with some or no college
- Centers staffed mostly by administrators, school day teachers, and other community members

School day teachers were involved to some extent in each of the staffing clusters outlined, although the degree of involvement varied significantly across clusters.

- In 2007-08, most centers were classified in the *Mostly Teachers* cluster ($n=239$), followed by the *Mostly Teachers and College Students* cluster ($n=125$).
- From 2006 to 2008, there were declines in the *Mostly College Students*, *Mostly Teachers*, and *Mostly Teacher and Other School Staff* clusters, and an increase in the *Mostly Teachers and Staff with Some College* cluster.

- Respondents, it appears, felt that the combination of teachers and staff with some college was a more effective staffing formula.

Student Attendance

While grantee and center directors did not report that participant recruitment was a significant challenge, grantee directors were more likely than center directors to indicate that recruitment and attendance constituted moderate or minimal challenges to implementing high quality programming. Across all centers in Texas during the 2007-08 school year, students attended 21st CCLC programs a median of 57 days, meaning that half the program participants attended more than 57 days and half attended less. On average, attendance gradually decreased with an increase in grade level, with a significant drop between fifth and sixth grades and between sixth and seventh grades.

- Nearly 70% of 21st Century attendees in 2007-08 were Hispanic. African-Americans (21%) made up the next largest population of attendees. Furthermore, the largest percentage of attendees (nearly a quarter of the population) were in 3rd and 4th grades. The percentage of attendees by grade fell fairly steadily for each grade after Grade 3.
- Notably, centers that implemented practices supportive of youth development experienced higher rates of student attendance.
- A similar pattern emerged for centers that implemented practices supportive of academic skill building.
- Implementing practices supportive of parent involvement predicted higher attendance as did a center's staffing configuration of mostly college students.

Achievement Study

The following section of the executive summary summarizes key findings from the analyses examining student achievement. This part of the study looked at the impact of 21st CCLC participation on student-level achievement outcomes, investigated variables that mediated or moderated the relationship between program participation and student-level outcomes, and determined specific programmatic features associated with the various student achievement outcomes included in the evaluation. The models employed in this study to estimate 21st CCLC attendance effects on student achievement and retention in grades were as rigorous as possible in lieu of random assignment to the intervention.

Student Sampling and Data Issues

Two different samples were constructed for the analyses conducted:

- **Annual Samples:** Included 21st CCLC participants (no controls or non-attendees) in Grades 4 through 11 who had attendance, achievement and demographic data for the corresponding year. Samples sizes ranged from approximately 20,000 in 2005 to approximately 36,000 in 2008.
 - However, it should be noted that students labeled as receiving special education services (SPED) and limited English proficient (LEP) were underrepresented in the annual samples due to missing data.
- **Longitudinal Sample:** A five year longitudinal sample was constructed for each grade level cohort to include both (1) 21st CCLC attendees, who participated during any term (summer, fall, or spring) from 2004-2008, and (2) comparison students, who were

enrolled in 21st CCLC feeder schools during any of these years, but did not participate during any term (i.e., non-attendees).

- The five year longitudinal sample included 159,517 students who were in Grades 3 to 7 during 2004 (i.e., were in grades 7-11 in 2007-08).

Interested readers can see Appendix A for a detailed account of the sample creation process, and the methodologies (e.g., SMR weights) used to address any systematic differences between students who did and did not attend 21st CCLC activities.

Achievement Study Results

Task 1: Analysis of the impact of 21st CCLC participation on student-level achievement outcomes

Analysis #1: *Annual* effects of *subject specific* activity attendance on the odds of passing TAKS for each grade level 4 to 11 and year 2005 to 2008.

Analysis #2: Effects of *cumulative* 21st CCLC attendance (total of all 21st CCLC sessions attended over five years) on five year retention rates for each grade cohort in the five year longitudinal sample.

Analysis #3: Longitudinal effects of attendance at 21st CCLC sessions that included a subject specific focus on math or reading for each of the five year longitudinal cohorts to model the effects of *annual* and cumulative attendance on achievement.

Key results were as follows:

Reading

- Overall, there appeared to have been little relationship between 21st CCLC attendance and reading achievement. Participation in sessions focused on reading had either no effect on pass rates, or only very modest effects, with the likelihood that students would pass the reading portion of the TAKS significantly increasing in 2007 and 2008 only.
- No statistically significant effects were observed for cumulative five year attendance at 21st CCLC reading activities and reading achievement for the third, fourth, fifth, or sixth grade 2004 cohorts. A small, yet statistically significant, positive effect was observed for the seventh grade cohort.

Mathematics

- Attendance at 21st CCLC sessions that had mathematics as an emphasis area had a modest, positive, and statistically significant effect on student achievement in mathematics.
- On an annual basis, attendance at math-focused sessions significantly increased the likelihood that students would pass the math portion of the TAKS in 2006, 2007, and 2008. Furthermore, session effectiveness increased each year as evidenced by increasingly strong relationships between number of sessions attended and the likelihood of passing TAKS.

- In terms of cumulative effects, small, yet statistically significant cumulative effects of attendance at 21st CCLC math activities were observed on math achievement for each 2004 grade cohort from third through seventh grades.

Retention Rates

- Cumulative attendance in 21st CCLC activities was associated with statistically significant decreases in 5 year (2004-2008) grade retention rates for middle school students (i.e., the sixth and seventh grade cohorts in 2004).
- A more modest, but statistically significant decrease in retention rates was observed for the fourth grade cohort. A small, but statistically significant increase in retention was observed for the third grade cohort, while the fifth grade cohort also had a small increase that was not statistically significant.

In terms of the generalizability of the findings, the primary limitation of this study is that longitudinally matched TAKS scores were generally not available for special education and LEP students, which resulted in the exclusion of many of these students from the analyses. The findings are pertinent to students who are similar to those who were included in the study.

Tasks 2 and 3: Investigation of the variables that mediate or moderate the relationship between program participation and student-level outcomes and determination of specific programmatic features associated with the various student achievement outcomes included in the evaluation.

Analysis: Effects of Center and Grantee Characteristics on 21st CCLC Student Achievement.

Key results were as follows:

Reading

- Reading achievement was not impacted by the type of activities carried out at a center (i.e., activity cluster). This finding was consistent across all demographic groups examined (Gifted, Limited English Proficient, Special Education, At-risk, Free Lunch, Reduced Lunch, Female, Hispanic, Native American, Asian, African-American).
- There was not a statistically significant overall impact of the staffing pattern on reading achievement. However, evidence indicated that the staffing pattern of a center was associated with the level of student achievement for students identified as at-risk of dropping out of school specifically (56% of the sample): Both the *Mostly Teachers and Other Staff* and *Mostly Teachers and College Students* staffing patterns were associated with positive, statistically significant effects on reading achievement for at-risk students.

Mathematics

- Both the *Mostly Tutoring and Enrichment* and *Mostly Homework Help and Enrichment* activity cluster types were especially effective with lower achieving students, but only the *Mostly Tutoring and Enrichment* cluster type was associated with statistically significantly higher overall math achievement (i.e., for all students in general, not taking demographics into account).. No other statistically significant activity cluster effects were observed.

- The *Mostly Teachers* staffing cluster was associated with statistically significantly higher mathematics achievement among females. The *Mostly College Students* cluster had a statistically significant negative relationship with both African-American and Hispanic student achievement. No other statistically significant staffing cluster effects were observed.

Conclusions

For the survey analyses, center and grantee directors appear to be in agreement on what they perceive to be the primary objectives of programming. However, there were some statistically significant differences between center directors, particularly when it came to their emphasis on academic vs. non-academic programming, based on whether they were employed full or part-time, and their years of experience.

In terms of student achievement outcomes, this study provides strong evidence that attendance at 21st CCLC activities that had mathematics as a focus area results in improved student achievement in mathematics, with both positive annual and positive cumulative effects. Likewise, 21st CCLC attendance tends to reduce the likelihood that a student will be retained in grade. Little or no effects were observed for reading.

The results relating center characteristics to student achievement should be viewed as exploratory and suggestive due to a low response rate at the center level. With this caveat in mind, centers staffed with a combination of mostly regular certified teachers with other staff and college students, and those that focus primarily on the combination of homework help and tutoring with enrichment, seem to be the most effective at raising student achievement in mathematics.

Given the demonstrated benefits of 21st CCLC attendance on math and retention in grade, and the tenuous connection between specific program features and program outcomes, the primary recommendation from the achievement analyses is to increase the number of *semesters* students attend 21st CCLC activities, as 75.4% of 21st CCLC students attended three semesters or less from 2004 to 2008. Most students only attend 21st CCLC for one school year. The overall effectiveness of the program most likely would be improved if grantees worked to ensure continuity of participation for students across grade levels.