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CEAC



McKeesport Area School
District 21st Century
Community Learning
Centers Program

Children Analyzing,
Navigating, Observing and
Experimenting with Science
(CANOES) Year 3 Evaluation
Report

Wei Tang, Evaluator
Dr. Keith Trahan, Interim Director

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Executive Summary

Background

The McKeesport Area School District (MASD) has established Children Analyzing, Navigating, Observing and Experimenting with Science (CANOES) after school program at Twin Rivers Elementary School through 21st Century Community Learning Centers (21st CCLC) grant funding from the Pennsylvania Department of Education (PDE). 21st CCLC funding supports the creation of community learning centers, providing academic enrichment opportunities during non-school hours for children, particularly students who attend high-poverty and low-performing schools. The 21st CCLC program is authorized under Title IV, Part B, of the Elementary and Secondary Education Act, as amended by the No Child Left Behind Act of 2001 and reauthorized by the Every Student Succeeds Act (ESSA) of 2015. Grants are awarded for out of school activities that focus on improving student academic achievement. These opportunities are designed to help students meet state and local standards in core academic subjects, such as reading and math.

Like many children in schools across the country, many McKeesport students leave school to return home to unsupervised time, until parents arrive home from work. Most often this unsupervised time is spent watching television, playing computer games, or hanging out with friends. Many of McKeesport's students come from economically distressed neighborhoods, as evidenced by the 83.4% of students enrolled in CANOES who were eligible for the federal free or reduced lunch (FRL) program. Thus, students from McKeesport leave a protective, supportive school environment to return to areas that expose them to temptations and potential harm not seen in safer, more affluent communities.

MASD received 21st CCLC grant funding to offer a comprehensive and sustainable afterschool program for the 2019-2020 school year to help increase student performance on academic achievement measures, such as the Dynamic Indicators of Basic Early Literacy Skills (DIBELS), the Pennsylvania System of School Assessment (PSSA), and class grades. The McKeesport Area School District is a suburban, public school district serving the Pittsburgh suburbs of Dravosburg, McKeesport, South Versailles Township, Versailles, and White Oak. It covers approximately 7 square miles and serves approximately 3,390 students in PreK-12th grades through four schools and one technology center. Twin Rivers Elementary School serves approximately 850 students. The vision of MASD is, "to create a learning environment, which provides students an opportunity to maximize their potential and achieve success."

Program Overview

Funding from 21st CCLC grant has allowed MASD to expand its afterschool programming, increasing capacity, and strengthening the supplemental academic services provided. Using teachers as afterschool staff maximizes coordination with in-school instruction and focuses on academic excellence.

The project has the following primary goals:

1. To provide opportunities for academic enrichment, including providing tutorial services to help students (particularly students in high-poverty areas and those who attend low-performing schools) meet state and local student performance standards in core academic subjects such as reading and mathematics.
2. To provide students a broad array of additional services, programs, and activities, such as youth development activities, drug and violence prevention programs, counseling programs, art, music, and recreation programs, technology education programs, and character education programs, that are designed to reinforce and complement the regular academic program of participating students.
3. To provide families of students served by community learning centers opportunities for educational development.

The CANOES program operates in Twin Rivers Elementary School serving students in grades K-3. The program is in operation Monday – Thursday, for three hours beginning at 3:30pm and going until 6:30pm. The program ran during the 2019-2020 school year, including a 2019 summer session. During the school year, students begin with a nutritious dinner served by Nutrition, Inc., the District’s food service provider. This is followed by 20 minutes of homework help. Following homework help, all students participate in recreational time plus an additional two hours of academic enrichment. Another snack is provided just before dismissal. McKeesport’s oversight of Twin Rivers Elementary School and CANOES helps to ensure a connection to the school day by staffing the program with MASD teachers and additional staff.

The 2019 summer session was offered over 24 days from June 10th until July 18th for students in Pre-Kindergarten through fourth grade. The daily scheduled offered participants breakfast at 8:30 AM, 20 minutes of recreational activities, two hours of academic enrichment, and lunch. The daily program ended at 12:30. Each week students engaged in a variety of enrichment activities related to science-based themes. The district also offered transportation home.

All students can access CANOES programming, but students with DIBELS or PSSA scores of low or below proficiency on reading and/or math, eligibility for free-reduced lunch, or recommendations by teachers or counselors, due to poor academic performance in school, are encouraged to participate in the program. Additionally, program staff utilizes data from various assessments to constructs individualized plans for student to maintain or improve their success in school.

Parent engagement is another aspect of 21st CCLC programs. CANOES held three parent/family events in throughout the pandemic shortened programming year. Parent events this year included Family Literacy/Science Night, Recycling Night, and Gingerbread House Decorating Night. Additional events were planned for March and April but were canceled due to the COVID-19 pandemic and subsequent move to all remote schooling.

Evaluation

A key element in McKeesport's 21st CCLC grant request is a yearly evaluation of the program by an external evaluator to help gauge program outcomes. The Collaborative for Evaluation and Assessment Capacity (CEAC) in the University of Pittsburgh School of Education works with CANOES and MASD for this purpose. To this end, CEAC conducted interviews with the program director of the afterschool program, and examined programming, academic, and attendance data provided by MASD. Students in the CANOES program, their parents, and MASD teachers received surveys as well; however, response rates were lower than normal likely due to the pandemic and the difficult ending of the school year.

Data Sets and Methods

Data sets from the academic year 2018-2019 include the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) (grades K-3) standardized tests for math and reading, report card grades in math and reading, school attendance, CANOES attendance, and parent program attendance.

Report card grades in reading and math were collected for students. The reading and math scores were reported numerically. A matched pairs analysis was performed on 103 student's reading and report card grades. For students who decreased within 90-100 range, they were categorized as "did not need to improve."

Surveys were administered parents and teachers. These surveys collected perception data on questions related to academic performance, behavior, engagement, and satisfaction with the program. Likely due to the abrupt end to the after school program and a difficult move to remote learning caused by the pandemic, this year's parent survey did not receive responses. Individual interviews were also conducted with the site coordinator, along with site visits. Program documentation was also collected.

Key Findings

Academics:

- 69.0% (n=71) of students in math and 69.0% (n=71) of students in reading improved or didn't need to improve between the beginning and end of the year DIBELS
- 44.6% (n=58) and 53.1% (n=69) of students increased their report card grades in math and reading from the beginning to the end of the program
- At least 70% of teachers indicated their students either improved or did not need improvement in completing homework to the teacher's satisfaction, academic performance, and class participation.

Behavior:

- Over 50% of teachers indicated their students either improved or did not need to improve their behaviors related to paying attention in class, coming to school motivated, and volunteering in class.

Participation:

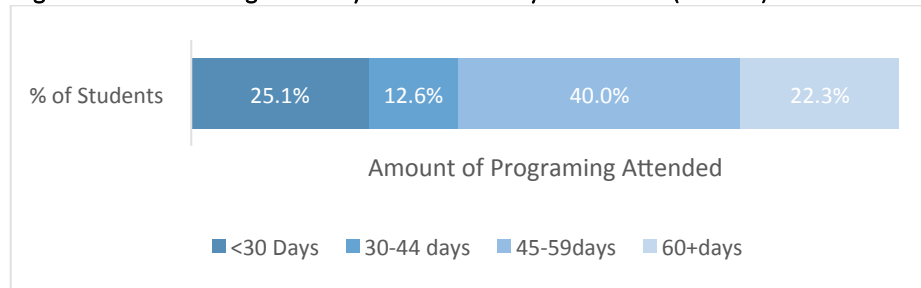
- Students remained engaged in CANOES throughout the year with 62.3% (n=109) of students attending at least 45 days of programming.

Results

Attendance and Demographics

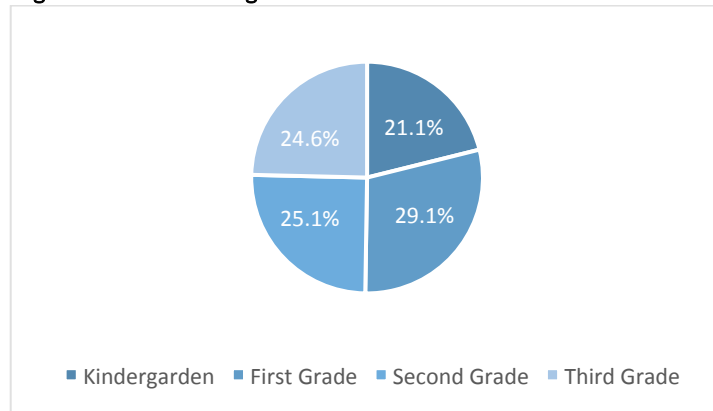
Regarding CANOES attendance there were 205 students who attended at least one day of programming in either the school year or summer program. Students must attend 30 or more days to be considered a regular attendee of CANOES; 21st CCLC in the U.S. Department of Education prescribed this standard. In total, there were 76 days of CANOES programming in this pandemic shortened programming year. 175 students attended at least one day of programming during the school year. Furthermore, 131 students (74.9%) met the regular attendee guidelines and 44 (25.1%) did not. In order to further measure consistent of attendance, the number of days that regular attendees attended was also assessed. The highest percentage of students (40.0%, n=70) attended between 45 and 59 days of programming, follow by 25.1% (n=44) who attended less than 30 days (Figure 1). Thirty students attended only the summer program.

Figure 1. Percentage of Days Attended by Students (n=175)



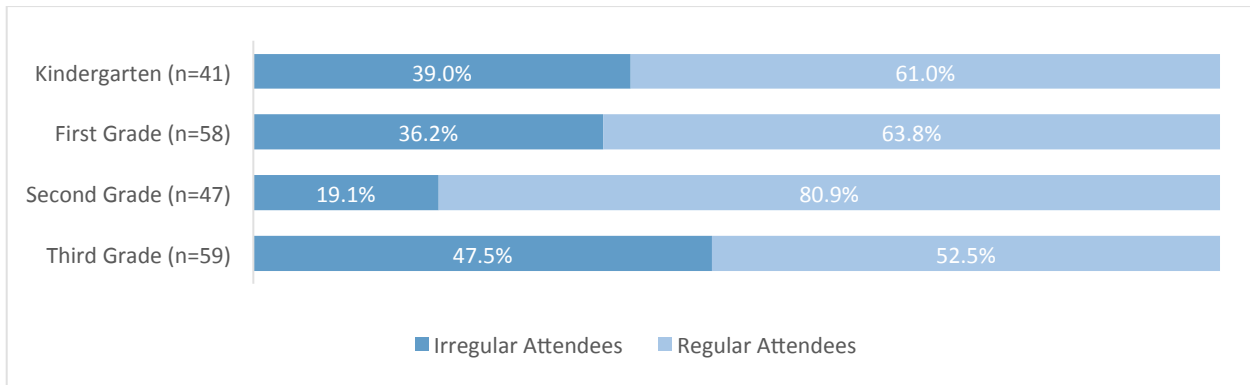
Participation levels were consistent across grades. Third grade students had the largest number of students 51 (29.1%). Kindergarteners made up the smallest group making up 21.1% (n=37) of students enrolled in CANOES.

Figure 2. Percentage of School Year Attendees in Each Grade (n=175)



The percentage of students who were regular attendees in each grade was fairly consistent, except second graders who had 80.9% regular attendees. Third grades' high percentage of irregular attendees is explained by a high number of students (n= 16) in the third grade who only attended the summer 2019 program. Except for that, all the grades were in the range of 60-80% regular attendees. The consistency among grades displays that there is no concern for a specific grade maintaining attendance, but rather a modest need to better understand the individual causes for less than 30 days of attendance and the relationship with summer attendance.

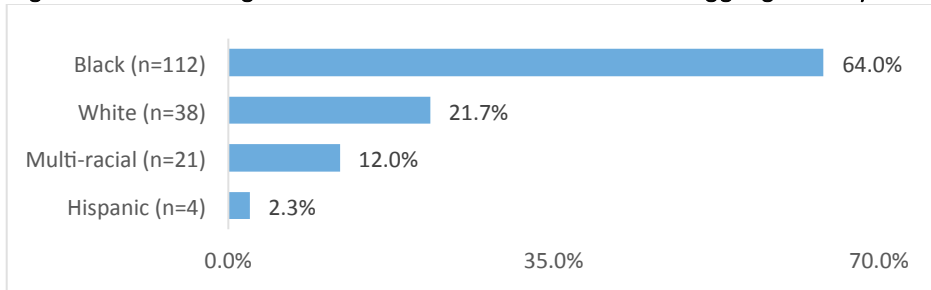
Figure 3. Percentage of Students in Each Grade of Regular vs. Students with less than 30 days Attendance



In this reporting year, more girls (57.7%, n=101) enrolled in the CANOES program than boys (42.3%, n=74). When looking at only regular attendees, the percentage stays nearly the same as all attendees (55.7%, n=73 female; 44.3% n=58 male). Of all the students enrolled in the CANOES program, 72.6% (n=127) received free or reduced lunch, and again the percentage is nearly the same when looking specifically at regular attendees (71.1%, n=96). As for students identified for special education (non-gifted) services, only 12.6% (n=22) of the students enrolled had this identification and this percentage was nearly identical (11.5%, n=15) when looking at only regular attendees. No students in the program were identified as having limited English proficiency (LEP).

Race and ethnicity was reported in four categories: Black, White, Hispanic, and multi-racial. Black students made up the majority of students enrolled (64.0%, n=112), followed by White students (21.7%, n=38), then multi-racial students (12.0%, n=21) (Figure 4). The remaining 2.3% of students were four (2.3%) hispanic students. When looking at only regular or irregular attendees the percentages stay relatively similar. Also, the demographics of CANOES participants was fairly similar to that of the whole school, which were 69.5% black, 17.5% white, 11.5% multi-racial, and 1.5% hispanic.

Figure 4. Percentage of All School Year Attendees Disaggregated by Race and Ethnicity



Irregular Attendance

Among the 44 attendees with less than 30 days in the school year, the number of days attended ranged from 1 to 29 days. 61.4% (n=27) attended less than 10 days and 38.6% (n=17) of the students attended more than 10 days. Demographics of irregular attendees were similar to regular attendees. A majority of irregular attendees was female (63.6%, n=28). With regard to grade, similar numbers of kindergarten (n=12, 27.3%), 1st (n=14, 31.7%) and 3rd (n=12, 27.3%) grade students were regular attendees; however, 2nd grade had notably fewer number (n=6, 13.7%). With regard to race, percentages were similar to overall attendee figures: 47.7% (n=21) Black, 34.1% (n=15) White, 13.6% (n=6) multi-racial, and 4.6% (n=2) Hispanic/Latinx.

Summer Program 2019

Students in Kindergarten through third grade were given the opportunity to participate in the 2019 summer program in the mornings through CANOES as well. The program had an enrollment of 59 students who attended at least one day of the summer program. In total there were 24 days. 78.0% of the students (n=46) attended at least 10 days in the summer program. There were 30 students (50.8%) who only attended the summer program. More female (64.4%, n=38) than male (35.6%, n=21) students attended the summer program. Third grade was the largest age group, composing 33.9% (n=20) of the program (Figure 7). The ethnic composition of the program was 61.0% (n=36) Black students, 28.8% (n=17) White students, and 10.2% (n=6) multi-racial students.

Figure 7. Percentage of Attendees of the Summer Program Disaggregated by Age

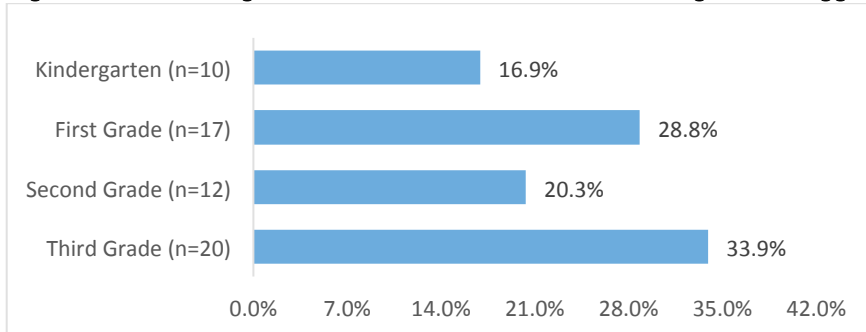
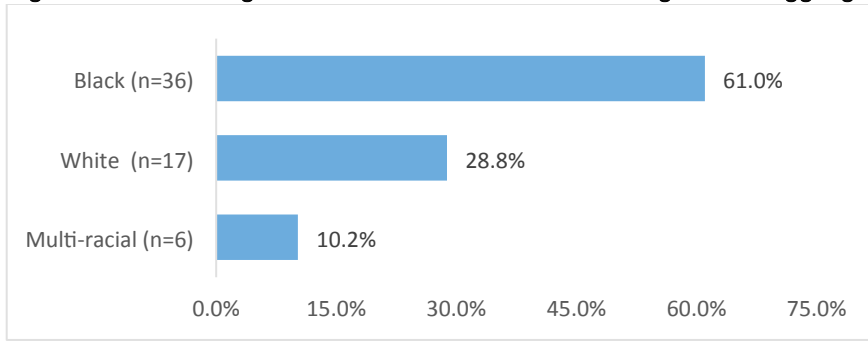


Figure 8. Percentage Attendees of the Summer Program Disaggregated by Ethnicity



Academic

The following section will report data analysis pertaining to academic performance of CANOES students. Standardized scores on the DIBELS assessment are reported, followed by report card data, and survey results related to academic performance from MASD teachers. All academic data is for regular attendees only. Due to the disruption of school and life due to the COVID-19 pandemic in the spring of 2020, DIBELS mid-year administration is used as the post measure for this reporting year. Also, as in most states, the PA state standardized assessment (PSSA) was canceled for this reporting year. Grades and surveys are based on the standard end of the year administration.

DIBELS – Local Standardized Assessment

The DIBELS assessment is administered to students in kindergarten to sixth grade and measures early literacy and numeracy skills. These tests are designed to identify students struggling with content and skills early in an effort to improve future academic success. Scores of the exam are benchmarked on a four-point scale of well below benchmark to above benchmark.

Scores were obtained for 129 students on the DIBELS math test at the beginning of the year, and 129 students for the middle of the year administration. Of the students at the beginning of the year, 38.0% (n=49) were already above benchmark, and this increased to 39.5% (n=51) at the end of the year. For the DIBELS reading test, scores were also obtained for 129 students for the beginning of the year administration and the middle of the year. Of the students at the beginning of the year, 50.0% (n=65) were already above benchmark but this number decreased slightly to 42.6% (n=55) at the end of the year.

Figure 9. DIBELS Math Scores at Beginning of the Year (BOY) and Middle of the Year (MOY)

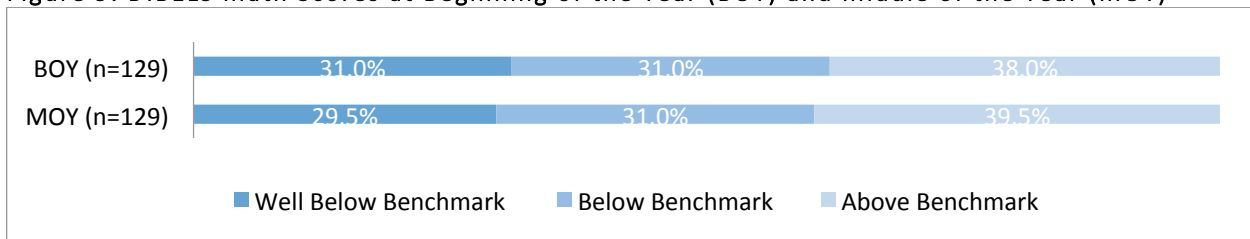
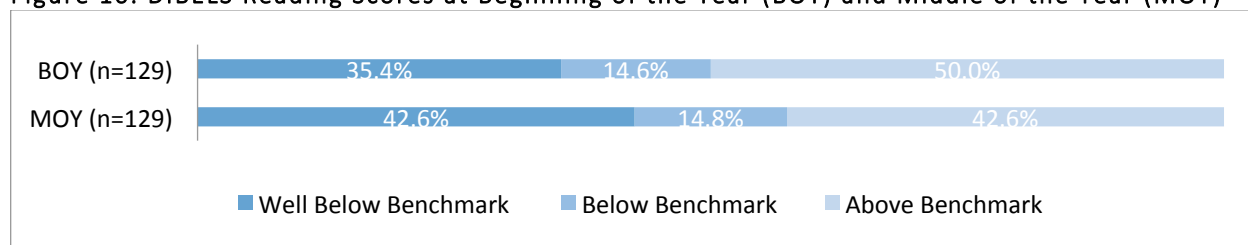


Figure 10. DIBELS Reading Scores at Beginning of the Year (BOY) and Middle of the Year (MOY)



To better account for the changes in scores, a match pair comparison of 128 attendees for the math assessment and 129 attendees for the reading assessment from the beginning to the middle of the year was performed. On this measure, most participants improved or didn't need to improve (Math: 47.7%, n=61; Reading: 47.3%, n=61) from beginning to middle of the school year. Among the students who improved, 23.0% (n=14) increased from well below or below to at or above benchmark in math, and 8.2% (n=5) increased from well below or below to at or above benchmark in reading.

Furthermore, in math, 36.7% of the students' (n=47) scores did not change, and 15.6% (n=20) decreased from the beginning to the middle of the year. Of the students who decreased in math, just over two-thirds (n=13) went from above benchmark to below or well below. For the reading assessment, 33.3% of the students (n=43) remained the same, and 19.4% (n=25) decreased. Among the students who decreased in reading, just under two-thirds (n=15) went from above benchmark to below or well below benchmark.

Looking specifically at the 13 special education students who took the math DIBELS both at the beginning and in the middle of the year, most of them (53.8%, n=7) remained well below benchmark. One student improved from below benchmark to above, and three students (23.1%) scored above benchmark at the beginning of the year and stayed consistent in the middle of the year. Two students (15.4%) decreased from below benchmark to well below. For the reading DIBELS, 13 special education students took the DIBELS both at the beginning and in the middle of the year. Most students (53.8%, n=7) remained well below benchmark, and three students (23.1%) scored above benchmark at the beginning of the year and stayed consistent in the middle of the year. Four students (30.8%) decreased to below or well below benchmark.

When disaggregating the DIBELS data by free and reduced lunch status (FRL), about half of these students showed positive results. Of the 94 students on FRL, 46.8% (n=44) improved or didn't need to improve for math. On the reading DIBELS, 95 students took the test both at the beginning and in the middle of the year. 49.5% (n=47) of students improved or didn't need to improve.

When disaggregating the data by gender, results were similar for male and female students. For the math DIBELS, the percentage of students above benchmark increased slightly for both males and females from the beginning of the year to the middle of the year (Male: BOY 41.4%, n=24; MOY 43.1%, n=25, Female: BOY 35.2%, n=25; MOY 36.6%, n=26) (Figure 11). For the

reading DIBELS, the percentage of female students at benchmark decreased slightly from 50.0% (n=36) at the beginning of the year to 43.7% (n=31) in the middle of the year. The percentage of male students at benchmark decreased from 50.0% (n=28) at the beginning of the year to 41.4% (n=24) in the middle of the year (Figure 12).

Figure 11. Local Math Assessment Student Benchmark at the Beginning (BOY) and Middle of Year (MOY) Disaggregated by Male and Female

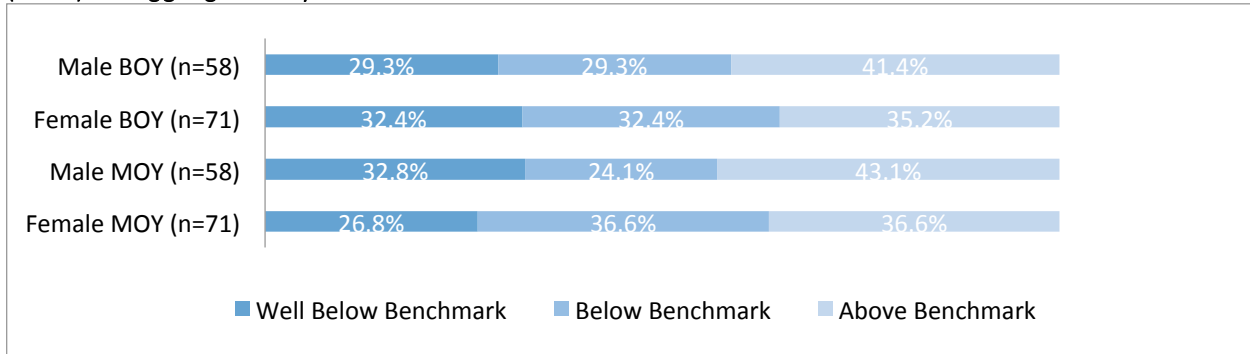
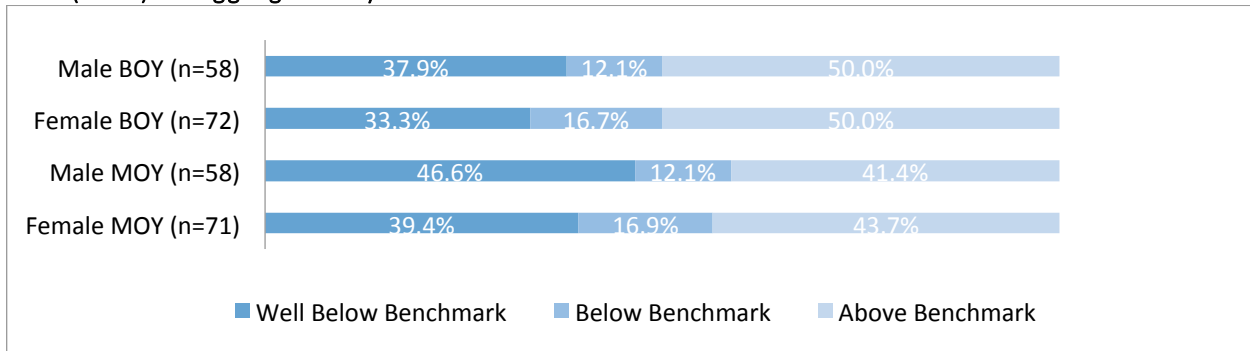


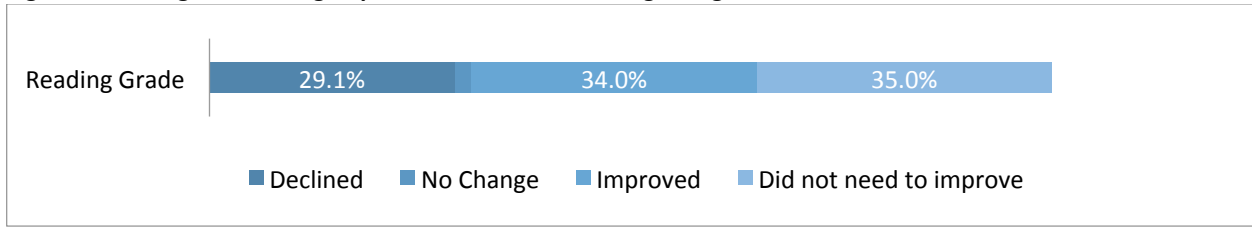
Figure 12. Local Reading Assessment Student Benchmark at the Beginning (BOY) and Middle of Year (MOY) Disaggregated by Male and Female



Grades

With regard to grades, findings were generally positive. Looking at students final reading grades, 26.2% (n=27) of students ended with an A, 35.0% (n=36) of student ended with a B, 20.4% (n=21) of students ended with a C, 13.6% (n=14) of students ended with a D, and 4.9% (n=5) of students ended with a failing grade. For reading, the highest percentage of students (35.0%, n=36) didn't need to improve. 34.0% of students (n=35) increased from the first to the last quarter of the year. Students who decreased within 90-100 range were categorized as "did not need to improve." 29.1% of students (n=30) decreased from the beginning to the end of the year. 1.9% of students (n=2) maintained the same grade, B or below, for the entire year.

Figure 13. Change in Reading Report Card Grades from Beginning to End of the Year

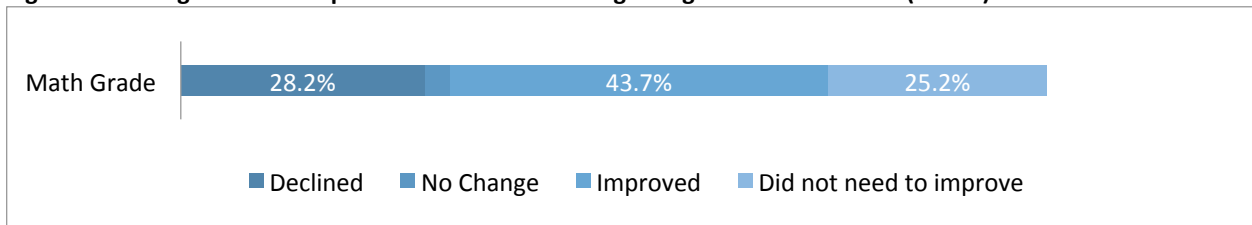


When analyzing the 35 students who increased their grades, 57.1% (n=20) of the students increased between 80 and 100. 14.3% (n=5) increased from 70 to the 80-100 range, and 4 (11.4%) students increased within the 70-79 range. 5.7% (n=2) increased from 60 to 80-100, and 5.7% (n=2) increased within the 60-79 range. There were two students (5.7%) who increased from failing to the passing, 60-80 range. Overall, 77.1% (n=27) of students who increased did so into the 80-100 range at the end of the year.

When analyzing the 30 students who decreased, 50.0% (n=15) of the students decreased between 60 and 70. 6.7% (n=2) decreased from the 60-70 range into the failing range. Another 33.3% (n=10) of students who's grades decreased fell from the 80-90 range to the 60-70 range. One student (3.3%) decreased from the 80-90 range into failing range. Overall, 11.7% (n=5) of students who decreased did so into the failing range at the end of the year.

Looking at student's final math grades, 28.2% (n=29) of students ended the school year with an A, 34.0% (n=35) of student ended with a B, 24.3% (n=25) of students ended with a C, 6.8% (n=7) of students ended with a D, and 6.8% (n=7) of students ended with a failing grade. When looking at math grades, the highest percentage of students (43.7%, n=45) increased their grade in math from the beginning to the end of the year, and 25.2% of the students (n=26) did not need to improve. 28.2% of the students (n=29) showed a decrease in their grade and 2.9% (n=3) of students did not change with a grade lower than 80.

Figure 14. Change in Math Report Card Grades from Beginning to End of the Year (n=103)



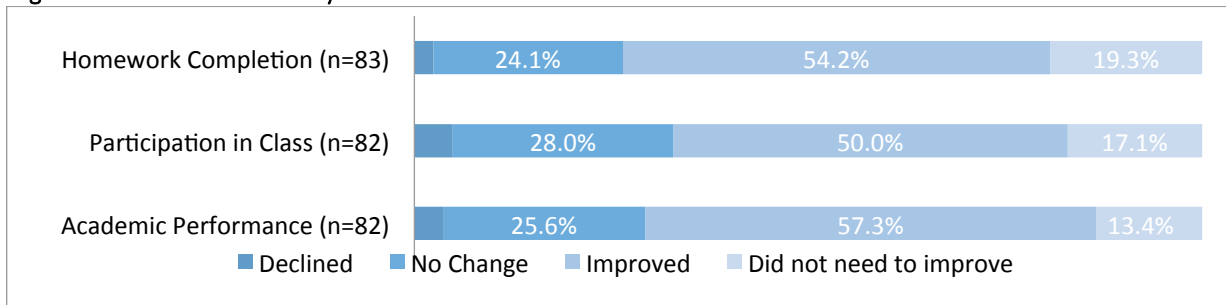
When analyzing the 45 students who increased their grades, 60.0% (n=27) of students increased between 80-100. 17.8% (n=8) increased from 70 to the 80-100 range, and 4.4% (n=2) increased within the 70-79 range. 6.7% (n=3) of students increased from 60 to the 80-100 range, and 6.7% (n=3) increased within the 60-69 range. One student (2.2%) increased from failing to the 60 range. Overall, 84.4% (n=38) of students who increased did so into the 80-100 range at the end of the year.

When analyzing the 29 students who decreased, 62.1% (n=18) of the students who decreased fell from the 80-100 range down to the 60-70 range. The second highest percentage (17.2%, n=5) was students who decreased in the range of 70 to 60. Overall, 6.5% (n=6) of students decreased into the failing range.

Teacher Survey

As a part of 21st CCLC, teachers complete an annual survey assessing a student's academic and classroom behavior. The three measures of a student's academic behavior are completing homework to the teacher's satisfaction, academic performance, and class participation. The scale ranges from declined (significant declined, moderate declined, and slight declined) to no change to improved (slight improvement, moderate improvement, and significant improvement), and did not need improvement. For all three academic behavior categories findings were very positive with more than 70% of students rated either improved or did not need to improve in these areas.

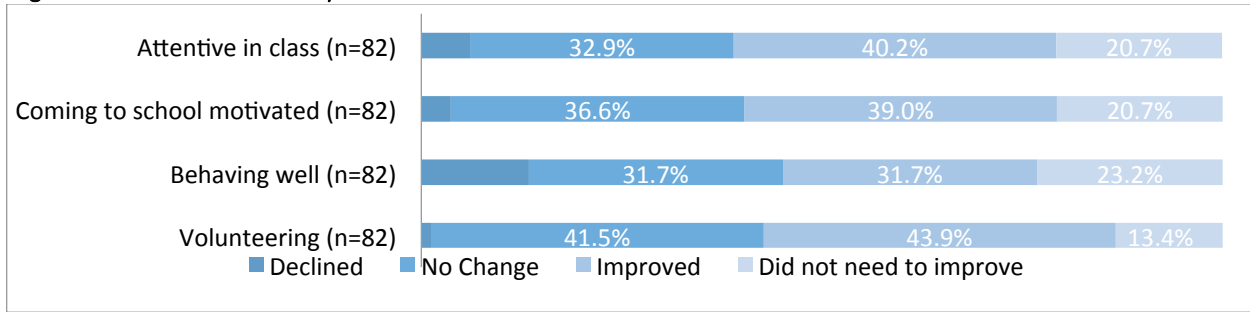
Figure 15. Teacher Survey on Student Academic Behavior



Behavior

With regard to classroom behavior, the four measures used are being attentive in class, coming to class motivated to learn, behaving well in class, and volunteering in class (e.g. for extra credit or more responsibilities). On these measure, findings were generally positive but less so than on academic behaviors. On three of four items (attentiveness, motivation, and volunteering) about 60% of students were rated either improved or did not need to improve. On the behaving in class item, teachers rated a slight lower amount of students as improved or did not need to improve (54.9%). This item had the highest number of students 11 (13.4%) rated as decline.

Figure 16. Teacher Survey on Classroom Behavior



Additionally, student behavior and engagement were measured with school level data. School day behavior/discipline data was collected and available for 106 of the regular attendees. Findings were overwhelmingly positive, with 90% (n=95) of regular attendees falling into the “did not need to improve” category, with another 6.6% (n=7) earning improved. Only two students did not fall into the positive categories, 1 at “no change” and 1 “declined.” Two students’ behavior/discipline outcomes were listed as unknown. Similarly, school attendance data was collected and collected for 104 of the regular attendees. Findings were very positive, with 62.5% (n=65) of regular attendees falling into the “did not need to improve” category and another 15.4% (n=16) earning improved. Eleven students’ school attendance fell outside of the positive categories, 6 at “no change” and 5 “declined.” Twelve students’ behavior/discipline outcomes were listed as unknown.

Parent Engagement

CANOES organized three family nights between October and April in hopes to engage parents in the program. The first of these was on October 17th and was Family Literacy/Science Night and there were 56 parents or adult family members in total. The second was Recycling Night on November 20th in which 35 guests attended. On December 13th, CANOES held its third family engagement night, Gingerbread House Decorating. Thirty-six adult family members attended the event. The next family night was schedule for late March; however the COVID-19 pandemic led to MASD school closure and move to remote learning on March 16th. Thus, the final the event was canceled along with the final two planned family engagement events of the school year.

Conclusions and Future Directions

The 2019-2020 school year was deeply affected by the COVID-19 pandemic. Like most school and districts, Twin Rivers and MASD worked hard in the spring of 2020 to move to remote learning. Although CANOES was not able to offer online after school programming at the end of the 2019-2020 school year, they were able to plan the 2020 summer camp to assist students in preparing for their return to school in the 2020-2021 school year. Findings from this year’s evaluation are consistent with years past. CANOES reads to have been on track to meet the quality standard of service that it has in the past. Few aspects of life went unchanged during

year of COVID-19. Schools were especially hard hit. All findings should be considered under the umbrella of these difficult times.

More broadly, when the world reaches the other side of the pandemic, CEAC recommends a few improvements to the evaluation next year. Additional data sets could enhance the understanding of CANOES with respect to attendance, academic performance, behavior, and engagement. These data could provide a more thorough context at both the local and state level. In particular, including class science grades and/or if possible standardized assessment measures would map well onto CANOES science focus.

To better assess program attendance rates, it would be informative if data were collected that could help explain reasons for reduced attendance. For example, students could have withdrawn from the school entirely or just stopped coming to the program. Another reason a student may not be attending the program is alternate afterschool activities in which they are involved. Since such activities may occur outside of the school environment, it may be informative to include items on parent surveys that collect data on additional activities their child is involved in and if these interfere with CANOES programming.

Perhaps the most critical element of an after school program is its effect on families and caregivers. Data collection from these folks is notoriously difficult in a normal year, much less the year of a pandemic. Additional data collection methods for parent/caregiver feedback would be very useful to investigating the overall impact of 21CCLC programs. Efforts need not be obtrusive but accessible to gain information from parent/caregivers that can help to improve the experience of students and describe the impact that after school program have families.

Overall, CANOES participants may have experienced slight academic improvement as evidenced by their performance on DIBELS and PSSA, observations from teachers and parents, and self-reported reflection. With respect to behavior, teachers and parents observed slight improvement in some behaviors. Lastly, students and parents indicated general satisfaction with the program.

Contact Information

For questions regarding the McKeesport Afterschool Programs, contact:

Dr. Amy Dellapenna
Project Director, CANOES
Elementary Literacy Coordinator
McKeesport Area School District
3590 O'Neil Boulevard
McKeesport, PA 15132
Phone Number: 412-948-1329
adellapenna@mckasd.net

Dr. Jane L. Coughenour

Director of State & Federal Programs
McKeesport Area School District
3590 O'Neil Boulevard
McKeesport, PA 15132
Phone Number: 412-664-3627
JCoughenour@mckasd.net

For questions regarding the evaluation or report, contact:

Keith Trahan, PhD
Interim Director, Collaborative for Evaluation and Assessment Capacity
Faculty, Department of Educational Foundations, Organizations, and Policy
School of Education, University of Pittsburgh
4321 Wesley W. Posvar Hall
230 South Bouquet Street
Pittsburgh, PA 15260
(412) 624-7240
keithtrahan@pitt.edu