NATIONAL INVENTORS HALL OF FAME
AKRON PUBLIC SCHOOLS
INNOVATION 365 (I365): WRAPAROUND
SUMMER 2022

Prepared by:

SUMMIT EDUCATION INITIATIVE

120 E MILL ST, SUITE 330, AKRON, OH 44308
WWW.SEISUMMIT.ORG

SYSTEM OVERVIEW

Supporting student success from cradle to career is a complex challenge. No single person, policy, or initiative can drive transformation. Only collective action can lead to system change. Individuals and organizations across the community have different skills and resources, and each plays a role in supporting student success. Some organizations provide direct services to students but cannot measure the impact of their work. Increasing technical ability in a small nonprofit can be costly. Other organizations have the technical capability to collect and analyze data, report program impacts, and direct community efforts to areas of need. Still, they do not provide direct services to students. These organizations are *backbone organizations*.

Backbone organizations support data collection and program evaluation tasks for nonprofit partners working with students through partnerships and shared funding streams. When backbone organizations provide this support, summer programs can focus on their work quality with fewer distractions. This collective approach has the benefit of generating shared outcomes and impact measures across various community programs.

ABOUT SUMMIT EDUCATION INITIATIVE

Summit Education Initiative (SEI) is a research-based nonprofit backbone organization working to support personal and regional prosperity through educational attainment in Summit County, Ohio. SEI does not directly operate programs. Instead, SEI has established research partnerships with schools to analyze and report trends in student success across the region. SEI measures cradle to career educational outcomes across the region, identifying inequities and opportunities for improvement.

SEI also works with *Out of School Time Partners* (OSTPs) that support students beyond the school day. While OSTPs work directly with students, SEI coordinates and manages their program evaluations. Same philanthropic organizations in the region financially. SEI does not charge partners for small-scale program evaluations. Philanthropic organizations view their SEI investments and these OSTPs as a mutually reinforcing activity to drive system change.

BACKBONE SUPPORT FOR MEASURING IMPACT

SEI supports official 501(c) (3) and other recognized nonprofits, provided the majority of the served youth reside in and attend school in Summit County, Ohio. The intent is to help partners measure the impact of out-of-school programs on students' academic outcomes. OSTPs working with SEI meet general criteria regarding program design and length. Additionally, parents must provide written consent for their student's outcome data to be included in program evaluations. SEI only shares aggregated and de-identified results with OSTPs unless parents explicitly authorize sharing personally identifiable information.

Results of SEI's program evaluations do not necessarily represent an endorsement of any specific organization, program, or product.

THE VALUE OF SUMMER PROGRAMMING ACROSS ALL PROGRAMS

QUALITY MATTERS

Students' summer learning opportunities play a significant role in academic gains or losses[1].   Low-income and minority students who live in urban settings are less likely to have access to summer learning opportunities. As a result, existing gaps at the end of each school year can widen over the summer months.

When summer opportunities exist, programs' structure, consistency, focus, and quality become critical factors determining their impact. Programs should generally operate for at least half the summer and consistently include high-quality academic instruction. A longitudinal study on summer learning programs uncovers short- and long-term benefits among students who continuously attended voluntary, five- to six-week summer learning programs[2]. The findings from this study by RAND corporation imply that similar summer programs can be an essential component for school districts to support learning and skills development among children in low-income communities. The findings from a research report by America After 3 PM, August 2021, reiterates that summer programs provide hands-on learning opportunities and a natural space for students to explore, learn and grow, thereby reducing the achievement and opportunity gaps between low-income students and their peers.[3]

SUMMER 2022 PROGRAM EVALUATIONS

The purpose of this evaluation is to better understand the impact your program had on the students you serve. We evaluated 12 summer programs that serve students enrolled in Akron Public Schools. We studied relationships between summer program participation and school attendance, grade point average (where applicable), and reading and math achievement. Across all summer partners, we researched academic outcomes Spring 2022 and Fall 2022 data for over 800 Akron Public School students compared to students who did not participate in the programs. In general, positive gains in student success are consistently associated with participation in summer programs.

ATTENDANCE

Overall, we compared the first marking period absences of students who participated in summer programs with those who did not. There was a statistically significant relationship between summer program participation and fewer absences during the first marking period of the 2022-2023 academic year compared to students who did not participate. Students who participated in a summer program had, on average, nearly half the absences than students who did not participate during marking period 1 (i.e., an average of 3.3 days absent for non-participating students compared to 1.7 days absent for those that did). Three-fourths of all students (75%) who participated in summer programs had excellent attendance (2 or fewer absences) during the first marking period of the 2022-23 academic year, compared to 59% of students who did not participate.

---

[1] http:bit.ly/WallaceSummerLearning
[2] http://bit.ly/EverySummerCounts
[3] https://bit.ly/STEMLearninginAfterschool

ACADEMIC ACHIEVEMENT

Summer program participation statistically significantly contributed to higher GPAs during the first marking period of the 2022-23 school year (where applicable). The academic achievement analysis indicated that students who participated in at least one of the twelve summer programs studied had slightly higher GPAs (2.4 vs. 2.2). In general, almost 50% of students who participated in summer programs had a 3.0 GPA (at least a B average) or above during the first marking period of the 2022-23 school year post-summer.

NATIONAL INVENTORS HALL OF FAME AND APS INNOVATION 365: WRAPAROUND (I365: WRAPAROUND) SUMMER 2022

NATIONAL INVENTORS HALL OF FAME

NIHF operates education and outreach programs nationwide, including partner schools and community organizations located in northeast Ohio. Co-founded in 1973 by the United States Patent and Trademark Office (USPTO), NIHF was established to recognize the world's greatest inventors. In 1990, NIHF's mission expanded to acknowledge those whose innovations have impacted our world and inspire future generations through local and national education programs.

NIHF recognizes the value of early exposure to innovation and is committed to providing all children opportunities to engage in the invention process. NIHF has over 30 years of experience developing and delivering education programs and independent evaluation data confirming both the short- and long-term benefits of their programs. Further, NIHF seeks to empower all children with partner organizations, closing the achievement gap between underserved populations who often lack access to enrichment opportunities and their more affluent peers.

MISSION

The National Inventors Hall of Fame (NIHF) mission is to be a catalyst for change by recognizing inventors and inventions, promoting creativity, and advancing the spirit of innovation and entrepreneurship.

ABOUT APS INNOVATION 365 WRAPAROUND (I365: WRAPAROUND) SUMMER 2020

Camp Invention is a summer enrichment program with curricula specifically designed around hands-on approaches to learning, emphasizing scientific inquiry, engineering design, creative problem solving, cooperation, and collaboration through STEM content. In addition, camp Invention incorporates history, arts, entrepreneurship and collaboration, and teamwork - learning skills essential to success in the global workforce of the 21st Century. APS Innovation 365: Wraparound (I365: Wraparound) is an enhanced ELA, four-week program modeled after Camp Invention. Aligned with United Way of Summit County's Bold Goal 1 initiative to improve 3rd-grade reading, I365: Wraparound includes two components: (1) Camp Invention with enhanced Literacy/English Language Arts (ELA) and Math activities and (2)Teacher Professional Development (PD). The program provides children with increased opportunities to enhance their innate creativity and connect those engaging creative experiences to real-world literacy applications. In addition, it aims at transforming their attitudes to traditional schooling, enhance their innovative natural abilities, and build upon ELA and STEM skills as valuable applied skills. This mental shift furthers the objective to increase student achievement and improve reading scores by instilling a joy of learning and using learned skills to solve problems. The program ran for five days, 7 hours a day, with at least 6 hours of academic enrichment each day.

PROGRAM GOALS

The goals of Camp Invention and APS Innovation 365: Wraparound are to improve 3rd-grade reading outcomes, decrease chronic absenteeism, and increase overall student academic achievement.

EVALUATION FOCUS

OUTCOME MEASURES

The data used in this evaluation reflect academic outcomes for students enrolled in Akron Public Schools during the 2021-2022 and 2022-2023 school years. Students who participated in summer programs were matched to their academic data. When applicable, comparisons are drawn between students who participated in programs compared to those who did not.

ATTENDANCE
- Average and median absences from the fourth marking period of the 2021-2022 school year
- Average and median absences from the first marking period of the 2022-2023 school year
- Number and percentage of students with first marking period 2022-2023 absences in three categories:
  - Excellent attendance: 2 or fewer absences in a marking period
  - Average attendance: 3 absences in a marking period
  - High-Risk attendance: 4 or more absences in a marking period

SCHOOL-BASED ACADEMIC ACHIEVEMENT
- Average and median Grade Point Average (GPA) from the fourth marking period of the 2021-22 school year
- Average and median Grade Point Average (GPA) from the first marking period of the 2022-23 school year
- Number and percentage of students with a first marking period 2022-2023 GPA in three categories:
  - High achievement: 3.0 or higher (at least a B average)
  - Average achievement: 2.5 – 3.0
  - Low achievement: Less than 2.5

ACADEMIC PERFORMANCE ON NATIONALLY-NORMED TESTS OF READING AND MATH
- Average and median math and reading percentile rank scores from Spring 2022 and Fall 2023
- Percentage of students scoring below, at, or above district norms

DATA SOURCES
- Student marking period absences before and following the summer program
- Student marking period GPAs before and following the summer program
- Student Reading and Math scores in nationally normed benchmark assessments

ATTENDANCE

Students who miss fewer than eight days of school earn higher grades, have higher passing rates on state assessments, and have a higher probability of graduating from high school college-ready.

- Students who miss 16 or more days of school in a year - or more than four in a marking period – are **high-risk attendance**.
- Students who miss eight or fewer school days in a school year - or about two days each marking period - are considered to have **excellent attendance**.
- All other students are of average attendance. Their attendance should not negatively affect their achievement. Therefore, these students' attendance is **average**.

SCHOOL-BASED ACADEMIC ACHIEVEMENT

GRADE POINT AVERAGE (GPA)
Grade point average is a global measure of student success, and it is a strong predictor of future success. Students earning a B or higher in most classes score higher on college readiness exams and are more likely to have a successful post-secondary journey.

- Students with a grade point average **above 3.0** are earning a B or better in most classes. Thus, they are at **low risk for failure** and have **high achievement**.
- Students with a grade point average **under 2.5** demonstrate **low achievement** and are at **high risk** for future academic struggles.
- All other students earning a GPA from 2.5 to 3.0 have **average achievement and some failure risk**.

NATIONALLY NORMED MATH AND READING ASSESSMENTS

I-READY READING AND MATH SCORES
Nationally normed assessments provide information about student performance and growth compared with local and national peers. For these evaluations, all comparisons were made with local peers. In addition, Akron Public School students who participated in summer programs are compared with outcomes for Akron Public School students who did not participate in summer programs.

Students were grouped into three performance categories based on test outcomes from the spring of 2022 and the Fall of 2022. These groupings can show the percentage of students who performed at different levels before and after the summer program. Student groups are defined as:

- Students who performed exceedingly well (top 17%) scored **significantly above average** relative to their Akron Public Schools peers.
- Students who performed poorly (bottom 17%) scored **significantly below average** relative to their Akron Public Schools peers.
- All other students have scored within the **average range**.

Below are a few tips for interpreting the data you will see in this report.

- When you see the word **average** used, this is the traditional, mathematical mean. To find the **average**, we add up all the values in a set of numbers and then divide that sum by the number of values in the set. So, for example, the **average** of the numbers 5, 10, and 15 is 10.
  - o Averages are an accurate description of data in many cases, but extreme values can influence them. For example, if you have one student in your program who missed 29 days of school, that student will *pull* the average days missed higher.

- A **median** value is the "middle" value in a set of numbers. When you see the **median**, it means half the students in a group had scores above that number, and half had scores below that number. So, for example, the **median** value in the numbers 5, 10, and 42 is still 10.
  - o The **median** is not influenced or *pulled* by extreme values and can be helpful when interpreting outcomes in small groups of students.

- A **cross-tabulation** table, also known as a cross-tab, can show how groups from one outcome or with one characteristic related to another outcome or marker. The example below can help you interpret many of the results you will see in this report.
  - o When you read these tables, it is helpful to read from *left to right*.
  - o The values you see in each "box" on the table show what percent of students from the left (pre) row ended up in each column (post) outcome.

Sample Cross-Tabulation table with some kind of student outcomes from two different points in time, showing you the "path" of students from *pre* to *post*.

		Distribution of student characteristics from the *post-program* data (in this case, from fall 2022)		
		High Risk	**Average**	**Excellent**
Distribution of student characteristics from the *pre-program* data (in this case, from spring 2022)	**High Risk**	20%	60%	20%
	Average	16%	70%	14%
	Excellent	2%	5%	93%

- Practice: If you start with the **High-Risk** box in the first row of data and slide your eyes from left to right, you will see 20% under the **High-Risk** column heading, 60% under the **Average** column heading, and 20% under the **Excellent** column heading.
  - o *This means that 20% of your high-risk students in the spring (before your program) were at high risk in the fall (after your program). But 60% of your high-risk students improved to the acceptable level, and 20% of your high-risk students rose to an excellent level.*
  - o You can repeat this with each row of data to understand the "impact" of your program on different *types* of students, based on how they were performing *before* and *after* your program.

RESULTS

DEMOGRAPHICS

Your program participants enrolled in Akron Public Schools during the 2021-2022 and 2022-2023 school years were included in this analysis. With these parameters, **508 students was the pool of matching students used for the examination**. Your program's student gender, ethnicity, and grade level distributions compared to the district and all other summer programs are below.

	Gender		Ethnicity					
	F	M	Asian	Black	Hispanic	Multi-Race	Pacific Islander	White
All Students in Akron Public Schools	49%	51%	9%	47%	6%	10%	0%	27%
Students in All Summer Programs	49%	51%	6%	54%	5%	11%	0%	25%
% (No.) of Students in Students in APS I365: Wraparound Summer 2022*	50% (255)	50% (253)	1% (7)	47% (239)	3% (15)	13% (64)	0% (0)	36% (183)

	Grade												
	KG	1	2	3	4	5	6	7	8	9	10	11	12
All Students in Akron Public Schools	8%	9%	7%	8%	8%	8%	7%	7%	8%	8%	8%	7%	7%
Students in All Summer Programs	9%	16%	14%	15%	11%	15%	8%	4%	3%	3%	2%	1%	0%
% (No.) of Students in Students in APS I365: Wraparound Summer 2022*	5% (23)	21% (108)	17% (85)	19% (96)	14% (72)	18% (90)	6% (30)	1% (3)	<1% (1)	0% (0)	0% (0)	0% (0)	0% (0)

ATTENDANCE

Results below highlight absence events – average and median absences from school – and attendance patterns. Categorized below are attendance patterns in line with the definitions provided earlier.

Absences Before and After Summer 2022

	Absences in Marking Period 4 of the 2021-2022 School Year		Absences in Marking Period 1 of the 2022-2023 School Year	
	Mean	**Median**	**Mean**	**Median**
All Students in Akron Public Schools	5.3	3.0	3.3	2.0
Students in All Summer Programs	3.0	2.0	1.7	1.0
Students in Students in APS CAMP INVENTION	3.2	2.0	1.9	1.0

District Attendance Patterns from the end of 2021-2022 and the beginning of 2022-2023

		Distribution of Student Attendance Patterns in Marking Period 1 of the 2022-2023 School Year		
		High Risk	**Average**	**Excellent**
Distribution of Student Attendance Patterns at the end of the 2021-2022 School Year	**High Risk**	50%	11%	40%
	Average	23%	10%	67%
	Excellent	14%	7%	79%

All Summer Program Attendance Patterns from the end of 2021-2022 and the beginning of 2022-2023

		Distribution of Student Attendance Patterns in Marking Period 1 of the 2022-2023 School Year		
		High Risk	**Average**	**Excellent**
Distribution of Student Attendance Patterns at the end of the 2021-2022 School Year	**High Risk**	31%	11%	58%
	Average	18%	12%	71%
	Excellent	7%	5%	88%

Attendance Levels for Your Students from the end of 2021-2022 and the beginning of 2022-2023 (N = 508 spring to fall matched students with attendance)

		Distribution of Student Attendance Patterns in Marking Period 1 of the 2022-2023 School Year		
		High Risk	**Average**	**Excellent**
Distribution of Student Attendance Patterns at the end of the 2021-2022 School Year	**High Risk**	33% (52)	13% (20)	55% (87)
	Average	19% (13)	11% (8)	70% (49)
	Excellent	9% (23)	8% (20)	83% (213)

GRADE POINT AVERAGE

Results below highlight average and median GPAs and GPA levels. The GPA levels are in line with the definitions provided earlier.

GPAs Before and After Summer 2022

	GPA in Marking Period 4 of the 2021-2022 School Year		GPA in Marking Period 1 of the 2022-2023 School Year	
	Mean	**Median**	**Mean**	**Median**
All Students in Akron Public Schools	2.2	2.6	2.3	2.6
Students in All Summer Programs	2.3	3.1	2.4	2.9
Students in Students in APS I365: Wraparound Summer 2022	2.2	3.0	2.4	3.0

District GPA Levels from the end of 2021-2022 and the beginning of 2022-2023

		Distribution of Student GPA Levels in Marking Period 1 of the 2022-2023 School Year		
		Under 2.5	**2.5 to 3**	**3.0 or Higher**
Distribution of Student GPA Levels in Marking Period 4 of the 2021-2022 School Year	**Under 2.5**	68%	14%	18%
	2.5 to 3	40%	25%	35%
	3.0 or Higher	14%	16%	71%

All Summer Programs GPA Levels from the end of 2021-2022 and the beginning of 2022-2023

		Distribution of Student GPA Levels in Marking Period 1 of the 2022-2023 School Year		
		Under 2.5	**2.5 to 3**	**3.0 or Higher**
Distribution of Student GPA Levels in Marking Period 4 of the 2021-2022 School Year	**Under 2.5**	62%	12%	26%
	2.5 to 3	34%	33%	33%
	3.0 or Higher	15%	15%	70%

GPA Levels for Your Students from the end of 2021-2022 and the beginning of 2022-2023 (N=27 spring to fall matched students with GPA)

		Distribution of Student GPA Levels in Marking Period 1 of the 2022-2023 School Year		
		Under 2.5	2.5 to 3	3.0 or Higher
Distribution of Student GPA Levels in Marking Period 4 of the 2021-2022 School Year	Under 2.5	62% (122)	8% (16)	30% (59)
	2.5 to 3	46% (17)	24% (9)	30% (11)
	3.0 or Higher	15% (35)	16% (37)	69% (161)

I-READY ASSESSMENTS – MATH

iReady Test Outcomes Before and After Summer 2022

	iREADY Math Percentile Scores			
	Spring Average	Spring Median	Fall Average	Fall Median
All APS students	31	24	30	23
All Summer Participants	39	34	41	35
Students in Students in APS I365: CAMP INVENTION	42	38	44	40

iREADY Math
Performance Levels for Students in Your Program from Spring to Fall 2022 (N= 21 spring to fall matched students with scores)

		Student Performance Levels in Fall		
		Significantly Below Average	Within Average Range	Significantly Above Average
Student Performance Levels in Spring	Significantly Below District Average	75% (95)	24% (30)	1% (1)
	Within the Average Range of District Performance	10% (26)	82% (222)	8% (23)
	Significantly Above District Average	3% (2)	21% (14)	76% (52)

I-READY ASSESSMENTS – READING

iReady Test Outcomes Before and After Summer 2022

	iREADY Reading Percentile Scores			
	Spring Average	**Spring Median**	**Fall Average**	**Fall Median**
All APS students	35	29	35	29
All Summer Participants	44	40	44	38
Students in Students in APS I365: CAMP INVENTION	47	45	47	43

iREADY Reading Performance Levels for Students in Your Program from Spring to Fall 2022 (N= 21 spring to fall matched students with scores)

		Student Performance Levels in Fall		
		Significantly Below Average	**Within Average Range**	**Significantly Above Average**
Student Performance Levels in Spring	**Significantly Below District Average**	86% (95)	14% (15)	0% (0)
	Within the Average Range of District Performance	8% (22)	84% (234)	8% (23)
	Significantly Above District Average	0% (0)	38% (30)	62% (48)

CONCLUSION

SUMMARY OF THE RESULTS

ATTENDANCE OUTCOMES

The average absences for your summer program post-summer (1.9) were lesser than the district absences (3.3), but slightly higher than all summer programs (1.7). Students in your program had good attendance patterns in school after your summer program. A significant majority (83%) of your students with a history of excellent attendance maintained that level during the first marking period of the 2022 school year. 55% of your students who had high-risk attendance before attending your program started the 2022 school year with excellent attendance. Maintaing and improving current attendance patterns among your students can enhance educational success during the course of the 2022-2023 school year.

SCHOOL-BASED ACADEMIC ACHIEVEMENT

GRADE POINT AVERAGE
The median and average GPA for your summer students was comparable to the APS averages and for all other summer programs. Fall 2022 outcomes suggest that more than half (69%) of your students had a high achieving GPA from spring to fall.

I-READY ASSESSMENTS –MATH
During the 2022-2023 school year, both average (44) and median (40) percentile scores in math for students in your program were higher than the district, as well as for all summer programs. Most of your students for whom iReady scores were available maintained their performance level on the assessment from spring to fall.

I-READY ASSESSMENTS –READING
Post-summer, both average (47) and median (43) percentile scores in reading for students in your program were higher than the district, as well as for all summer programs. Most of your students for whom iReady scores were available maintained their performance level on the assessment from spring to fall.

Program evaluations should be seen as a blueprint for future growth and success. Look over your results to find *bright spots* and *opportunities for improvement*. For example, did you move a noticeable percentage of students from "high risk" to acceptable or high levels of achievement? Were there particular groups of students or specific outcomes where you expected more favorable results? Have internal conversations with members of your organization. The numbers reported only tell part of the entire story. Talk about what parts of your program went well and what you could change. Check your thoughts and conversations against the data in this report. If you believe there is a reason to transform one or more aspects of your program model, consider talking with other community organizations doing similar work.

RECOMMENDATIONS – FROM SUMMER SITE VISIT

First and foremost, on behalf of Summit Education Initiative I would like to thank you for participating in the site visit portion of the 2022 Summer Program Evaluations. The following recommendations were observed for each age group of your programming:

Note: These recommendations are highlighted to be advantageous in future implementation of programming; these recommendations are NOT based on program quality.

Recruitment (APS Youth): Amazing seeing the wonderful programming in Green! Even with Mystery Camps being held, showcasing the amazing work each student can achieve by enrolling can go a long way. Recruiting techniques for youth are often looked at as a parental design process of being able to capture parents' attention in the community. In reality, the most effective recruiting tools have been linked to the usage of mobile marketing campaigns geared towards the youth.[4]In the US, specifically in young adults and minorities they're more likely to identify that their main source to the internet is their cellular device.[5]

IMPLICATIONS

Your organization was one of the twelve programs that worked collaboratively with SEI to measure the impact of summer learning experiences on student academic success. Together, these 12 programs supported over 800 students across Akron and Summit County in the summer of 2022. We pooled the data from all our summer partner programs together to better understand how, as a community, we can support student success through program evaluation.

We believe that high-quality summer programs that focus on both academic and social-emotional development have the power to reduce or eliminate achievement gaps that occur from summer learning loss. With your continued engagement and support, we will advocate for the

---

[4] Stern, MJ, Bilgen, I., Dillman, DA. The state of survey methodology: Challenges, dilemmas, and new frontiers in the era of tailored design. Field Methods 2014; 26: 284-301.
[5] Zickhur, K., Smith, A. 2012. Digital Differences: Pew Research Center. http://www.pewinternet.org/2012/04/13/digital-differences/.

importance of summer programming with schools, families, government agencies, and funders in our community.