NATIONAL INVENTORS HALL OF FAME
CAMP INVENTION
SUMMER 2018

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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 lack the capacity to measure the impact of their work. Increasing technical capacity in a small nonprofit can be costly. Other organizations have the technical capacity to collect and analyze data, report program impacts and direct community efforts to areas of need, but they do not provide direct services to students. These organizations are known as *backbone organizations*.

Through partnerships and shared funding streams, backbone organizations support the tasks of data collection and program evaluation for nonprofit partners working with students. When backbone organizations provide this support, those working with students can focus attention on the quality of their work, with fewer distractions. This collective approach has the added benefit of generating shared measures of outcomes and impact across a variety of 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. SEI has established research partnerships with schools to analyze and report on 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. SEI and many OSPTs are financially supported by the same philanthropic organizations in the region. SEI does not charge partners for small-scale program evaluations, as such costs would simply change the dispersion of grant funds from one nonprofit to another. Philanthropic organizations in the community view their investments in SEI 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 aggregate 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.

NATIONAL INVENTORS HALL OF FAME AND CAMP INVENTION

ABOUT NATIONAL INVENTORS HALL OF FAME

We believe our role as a Hall of Fame is to not only honor the individuals whose inventions have made the world a better place, but also to ensure that American ingenuity continues to thrive in the hands of coming generations. This belief is what drives our mission: to recognize inventors and invention, celebrate our country's rich innovative history, inspire creativity and advance the spirit of innovation and entrepreneurship.

True to our mission, we don't just talk the innovation talk, we walk the innovation walk. Beyond embodying and embracing the characteristics of a traditional Hall of Fame, we are reinventing what a Hall of Fame, a museum and even what a monument can be and do. Instead of being defined by the past, we invest in the future. Instead of being content as a static brick-and-mortar museum, we continue to push the limits and challenge ourselves to be a dynamic monument that comes to life in classrooms, curricula and competitions throughout the country.

In partnership with over 2,600 schools and districts nationwide, we connect inventors to creative minds of all ages to provide these future leaders with the experiences and tools they need to help them realize their innovative potential. We are the National Inventors Hall of Fame: the driving force behind lifelong innovation, paying forward America's rich history of invention and securing our country's competitive advantage for the future.

ABOUT CAMP INVENTION

In summer 2018, NIHF is partnering with the United Way of Summit County (UWSC) to impact 1,000 children and 75 teachers in Akron Public Schools (APS) through the APS Innovation 365 program, aligning with UWSC's Bold Goals 1 and 2 initiatives.

In 2017, APS collaborated with NIHF to provide Camp Invention in six schools, representing five of the eight APS Clusters (East, Garfield, Kenmore, North, and Specialty Schools). As a result of the UWSC grant, NIHF expanded to a total of 13 sites in 2018 with at least one site in each cluster (11 sites funded by UWSC). APS Innovation 365 is running two program models during Summer 2018: ten traditional one-week sites running from June 5 through July 27 and an afterschool model to begin running at the I Promise School in August. Each one-week site is running for five days, 6.5 hours per day for a total of 32.5 contact hours. I Promise students will also receive 32.5 contact hours in the afterschool format (start/end dates are TBD).

In addition to student participation, APS educators received two hours of intensive hands-on professional development on the core curriculum in May 2018 and will receive an additional two hours in October 2018.

PROGRAM GOALS
- Improve Spring to Fall MAP assessment scores for participating APS students, particularly in reading and math (with SEI help).
- Improve in-school APS student attendance rates through program engagement (measuring in school attendance and OST programming attendance, with help from the SEI portal).

EVALUATION FOCUS

DATA SOURCES

- Student MAP Test reading and math percentile rank scores, spring and fall of 2018
- Student Grade Point Average (GPA) from the 2017-2018 school year, and from the first marking period of the 2018-2019 school year
- Student absences from the 2017-2018 school year, and from the first marking period of the 2108-2019 school year
- Names of students from your summer program provided to SEI, so that we could match their participation information from the summer to their academic outcomes from spring and fall.

OUTCOME MEASURES

ATTENDANCE

- Median absences for the 2017-2018 school year, and for the first marking period of the 2018-2019 school year
- Percentage of students with annual absences in three categories:
  - Excellent attendance: 8 or fewer absences in a school year
  - Acceptable attendance: 9-11 absences in a school year
  - High Risk attendance: 12 or more absences in a school year
- Percentage of students with first marking period 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) across the 2017-2018 school year.
- Average and median GPA for the first marking period of the 2018-2019 school year.
- Percentage of students with GPA in three categories:
  - Less than 2.5
  - 2.5 – 3.0
  - 3.0 or higher (at least a B average)

ACADEMIC PERFORMANCE ON NATIONALLY-NORMED TESTS OF READING AND MATH

- Average and median math and reading percentile rank scores from spring 2018
- Average and median math and reading percentile rank scores from fall 2018
- Percentage of students scoring below, at or above district norms

DEFINITIONS

ATTENDANCE

Students who miss fewer than eight days of school earn higher grades, better state test scores and have a higher probability of college readiness.

- Students who miss 16 or more days of school in a year - or more than 4 in a marking period - are considered to have **high risk attendance**.
- Students who miss 8 or fewer days of school in a school year - or about 2 days each marking period - are considered to have **excellent attendance**.
- All other students are considered average. This means their attendance should not negatively affect their achievement. These students are considered to have **acceptable attendance**.

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 postsecondary journey.

- Students with a grade point average **above 3.0** are earning a B or better in most classes. This is considered **high achievement** and are at **low risk** for failure.
- Students with a grade point average **under 2.5** are demonstrating **low achievement** and are at **high risk** for future academic struggles.
- All other students, who are earning a GPA from **2.5 to 3.0** are considered **average**.

MEASURES OF ACADEMIC PROGRESS (MAP) – MATH AND READING

Normed "benchmark" assessments predict scores on future state accountability tests. MAP percentile rank scores are normed for each grade level. These scores can range from 1 to 99. 1 is the lowest; 50 is average; 99 is the highest. This means that a student in first grade with a percentile rank score of 50 is a "typical" or average first grade student, compared to all the other first graders in the country.

- Students who performed exceedingly well (top 17%) scored **significantly above average** relative to their peers in Akron Public Schools.
- Students who performed poorly (bottom 17%) scored **significantly below average** relative to their peers in Akron Public Schools.
- All other students are considered to 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. For example, the **average** of the numbers 5, 10 and 15 is 10.
  - Averages are an accurate description of data in many cases, but they can be influenced by extreme values. 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. For example, the **median** value in the numbers 5, 10 and 42 is still 10.
  - 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 were related to another outcome or characteristic. The example below can help you interpret many of the results you will see in this report.
  - When you read these tables, it is helpful to read from *left to right*.
  - 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, which can show you the "path" of students from *pre* to *post*.

		Distribution of student characteristics from the *post-program* data (in this case, from fall 2018)		
		High Risk	**Acceptable**	**Excellent**
Distribution of student characteristics from the *pre-program* data (in this case, from spring 2018)	**High Risk**	20%	60%	20%
	Acceptable	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 **Acceptable** column heading, and 20% under the **Excellent** column heading.
  - *This means that 20% of your students who were high risk in the spring (before your program) were 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 all the way to the excellent level.*
  - 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

Only students enrolled school in Akron Public Schools during the 2017-2018 and 2018-2019 school years were included in this analysis. Using these parameters, your total student population was **748**.

	Gender		Ethnicity						
	F	**M**	**American Indian**	**Asian**	**Black**	**Hispanic**	**Multi-Race**	**Pacific Islander**	**White**
DISTRICT	48%	52%	0%	9%	47%	4%	9%	0%	32%
NIHF Camp Invention	50%	50%	0%	7%	41%	3%	12%	0%	37%

	Grade											
	KG	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
DISTRICT	8%	7%	7%	7%	8%	7%	7%	7%	7%	8%	8%	8%
NIHF Camp Invention	3%	14%	16%	17%	16%	20%	14%	1%	0%	0%	0%	0%

ATTENDANCE

Absences Outcomes Before and After Summer 2018

	Absences Across the 2017-2018 School Year	Absences in Marking Period 1 of 2018-2019 School Year
	Median	**Median**
DISTRICT	7.0	1.0
NIHF Camp Invention	5.0	0.5

District Attendance Levels from 2017-2018 to First Marking Period 2018-2019

		Distribution of Student Attendance Patterns in Marking Period 1 2018-2019		
		High Risk	**Acceptable**	**Excellent**
Distribution of Student Attendance Patterns in the 2017-2018 School Year	**High Risk**	43%	14%	43%
	Acceptable	16%	10%	74%
	Excellent	6%	5%	89%

Attendance Levels for Students in Your Program from 2017-2018 to First Marking Period 2018-2019

		Distribution of Student Attendance Patterns in Marking Period 1 2018-2019		
		High Risk	**Acceptable**	**Excellent**
Distribution of Student Attendance Patterns in the 2017-2018 School Year	**High Risk**	29%	15%	56%
	Acceptable	13%	8%	79%
	Excellent	3%	7%	90%

GRADE POINT AVERAGE

GPA Outcomes Before and After Summer 2018

	GPA Across the 2017-2018 School Year		GPA In Marking Period 1 of 2018-2019	
	Mean	**Median**	**Mean**	**Median**
DISTRICT	2.2	2.5	2.2	2.5
NIHF Camp Invention	2.3	2.8	2.6	3.0

District GPA Levels from 2017-2018 to First Marking Period 2018-2019

		Distribution of Student GPA Levels in Marking Period 1 2018-2019		
		Under 2.5	**2.5 to 3**	**3.0 or Higher**
Distribution of Student GPA Levels Across the 2017-2018 School Year	**Under 2.5**	69%	16%	14%
	2.5 to 3	40%	23%	37%
	3.0 or Higher	10%	13%	78%

GPA Levels for Students in Your Program from 2017-2018 to First Marking Period 2018-2019

		Distribution of Student GPA Levels in Marking Period 1 2018-2019		
		Under 2.5	**2.5 to 3**	**3.0 or Higher**
Distribution of Student GPA Levels Across the 2017-2018 School Year	**Under 2.5**	62%	23%	15%
	2.5 to 3	34%	19%	47%
	3.0 or Higher	8%	11%	81%

MEASURES OF ACADEMIC PROGRESS (MAP) – MATH & READING

MAP Test Outcomes Before and After Summer 2018

	MAP Reading Percentile Scores				MAP Math Percentile Scores			
	Spring Average	Fall Average	Spring Median	Fall Median	Spring Average	Fall Average	Spring Median	Fall Median
DISTRICT	43	43	42	41	41	43	38	40
NIHF Camp Invention	58	61	59	63	58	64	58	63

MAP Reading Performance Levels for Students in Your Program from Spring to Fall 2018, Compared with District Averages

		Student Performance Levels in Fall		
		Significantly Below Average	Within Average Range	Significantly Above Average
Student Performance Levels in Spring	Significantly Below District Average	100%	0%	0%
	Within the Average Range of District Performance	14%	79%	7%
	Significantly Above District Average	0%	0%	100%

MAP Math Performance Levels for Students in Your Program from Spring to Fall 2018, Compared with District Averages

		Student Performance Levels in Fall		
		Significantly Below Average	Within Average Range	Significantly Above Average
Student Performance Levels in Spring	Significantly Below District Average	58%	42%	0%
	Within the Average Range of District Performance	6%	79%	15%
	Significantly Above District Average	1%	30%	70%

CONCLUSION

SUMMARY OF THE RESULTS

Just over half (56%) of the students in your program who left the 2017-2018 school year with high-risk rates of absences demonstrated excellent attendance at the start of this school year, which is 13% above the district rate. The median GPA among all district students remained stable from spring to fall. Your students' median GPA climbed during that time, from 2.8 to 3.0. This means that roughly half the students who participated in your summer program are earning a B or better average in their classes, and are on track for success. Also, 38% of your students who had the lowest GPAs last school year earned mid-range or higher GPAs at the start of this school year. On standardized assessments, your students' average and median scores rose in both reading and math, widening the gap between your students and their peers who did not participate in the program. None of your lowest-preforming students on the reading test made gains over the summer, in comparison with district norms. In math, however, almost half (42%) of the lowest-achieving students improved to an average range in the fall.

RECOMMENDATIONS

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*. Did you move a noticeable percentage of students from "high risk" to acceptable or high levels of achievement? Were there certain groups of students or certain outcomes where you expected more favorable results?

Have internal conversations with members of your organization. These numbers only tell part of the 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 change one or more aspects of your program model, consider talking with other community organizations that are doing similar work. You don't have to come up with solutions on your own. You have partners and colleagues who can help.

IMPLICATIONS

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

Early results of our analyses have been quite promising. We believe that high quality summer programs that focus on both academic and personal development have the power to reduce or eliminate achievement gaps that occur from summer learning loss. Were it not for your participation in this work, we would not be able to measure the power of positive summer experiences.

With your continued engagement and support, we will advocate for the importance of summer programming with schools, families, government agencies and funders in our community. Together, we can prevent the traditional summer learning losses that occur among low-income and disengaged students. In the future, we believe summer will become a time to accelerate student learning and achievement by providing engaging opportunities and experiences for all Summit County students.