



Program Report: Cradle Beach School Based Program



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Program Overview

In Western New York, the Cradle Beach name is strongly associated with a popular camp-based program that serves the needs of children with special needs and children who are economically disadvantaged from across the region. The program enjoys broad community support and is considered by many in the area to be a model for addressing the developmental needs of the children it serves. The camp program is focused on enhancing 40 Developmental Assets commonly recognized by child development experts and early childhood educators as essential building blocks for healthy and productive children.

In 2009, Cradle Beach staff sought to expand their success in working with at-risk children by partnering with the Buffalo Public Schools, creating a school-based program designed to enhance academic performance and the promotion of positive attitudes and behaviors. The program places Cradle Beach staff in the schools to work alongside teachers and other school personnel, providing a variety of services including individualized tutoring, cultural activities, active learning experiences, group work and enrichment activities. Additional programming occurs outside of traditional schools hours. For instance, Cradle Beach staff conducts weekend retreats that are used to provide experiential learning opportunities for students, enhance their classroom learning, conduct individualized programming, and enhance science and math development. Weekend retreats are held throughout the year at our facility in Angola where students experience educational stations that include but are not limited to sports, computers, culinary arts, dance, music, beach and nature, photography, sensory, and theater. Weekend retreats are incorporated into the program to provide an off-site experience that many of these students have never experienced. Furthermore, the weekend retreats strengthen students' commitment to their education and the program, increasing the overall impact on their educational and personal lives.

As an initial strategy, Cradle Beach chose to focus their program on students in the 3rd and 4th grades at one school in the Buffalo District. Approximately 37 students participated in the program.

Cradle Beach Staff

The program is staffed by four full-time professionals who are trained by Cradle Beach in the areas of program delivery, student support, student engagement, and how to establish a trusting and professional relationship with students, teachers and school administrators. In addition to receiving training, the Project SOAR staff are finger-printed and full background checks are conducted. Finally, all staff are trained by evaluators on how to administer program evaluations.

Cradle Beach staff work closely with teachers and administrators in the school and participate in joint meetings about student needs, exchanging ideas about educational practices and

consultations regarding the best behavioral modification techniques for individual students. The goal is to develop strong bonds of trust and cooperation among staff, teachers and administrators for the good of the children.

Program Objectives

The ultimate goal of the school-based program is to promote academic performance, the acquisition of skills that promote academic and life success, and positive behavior in the children it serves. A number of the program activities (e.g. tutoring) directly address the current academic needs of the children, while other activities (e.g. enrichment and cultural activities) are designed to foster positive attitudes toward learning and school. Consistent with their traditional camp based programs, Cradle Beach staff seek to help children throughout the program expand their developmental assets.

Buffalo Public Schools (BPS) Overview

In 2010, the Buffalo Public Schools failed as a district to make AYP in Math and English Language Arts with 7 of 10 ethnic groups failing to make AYP for ELA at the elementary level and 8 of 8 or 100% failing at the secondary level. In mathematics, 7 of 8 groups failed to make AYP in mathematics at the secondary level, with only Caucasian students achieving AYP. At the elementary and secondary levels, students with disabilities, Limited English Proficiency, and economically disadvantaged all failed to make AYP. Furthermore, none of these groups made AYP in mathematics at the secondary level. Overall, in Grades 3 through 8, no grade achieved above a 32% of its students scoring at a level that demonstrated they met minimal standards in ELA or Mathematics. Finally, at both the elementary and secondary level, only single digit percentages achieved mastery of subject in ELA and Mathematics, greatly below NYS averages that averaged 20% of its students achieving mastery level (NYS Report Card, 2009 to 2010).

The Buffalo Public Schools, like many urban school districts, struggles to sustain higher levels of academic achievement in its students. The downward trend is apparent in the 2009 – 2010 NYS District Report Card that demonstrates a downward spiral, each year over the past 3 years, in academic achievement. Fewer BPS students scored above 85% and more students scored below 55% in Comprehensive English, Mathematics A, and Mathematics B each year over the past three years (NYSED Report Cards: 2007-08, 2008-09, 2009-10). Additionally, in the 2009-10 academic year, BPS students continued to show decline from 4th Grade to 8th Grade in both Reading and Mathematics.

Essentially, BPS students would be recognized as achieving academic success if they maintained their level of academics or improved, going against the current trend of decreasing academic achievement over time. Therefore, an academic intervention, measured purely on academic grades, should be considered successful if it stabilizes the falling academic achievement of students while building student characteristics and skill-sets attributed to long-term academic achievement and strong personal growth.

Program Assessment Methodology and Rationale

Program evaluation involved assessment of students’ performance and development using a variety of measures. Some involve the direct measurement of academic performance, while other measures assess what we call “Outcome Catalyst Variables”, or factors that have been demonstrated to support successful academic achievement. In addition, teachers were asked to provide feedback on the academic and behavioral performance of students participants.

Demographic Characteristics of the Participants

The tables below illustrate the distribution of program participation by gender and grade level. A slightly larger portion of the students were male. Twenty of the students were enrolled in 3rd grade and seventeen were 4th graders.

Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	20	54.1	54.1	54.1
Female	17	45.9	45.9	100.0
Total	37	100.0	100.0	

Grade

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Grade 3	20	54.1	54.1	54.1
Grade 4	17	45.9	45.9	100.0
Total	37	100.0	100.0	

Methodology & Results

Academic performance of the students was tracked throughout the school year and is reported in the following table. Overall academic performance across subjects was recorded, as were grades from specific subjects (English, Math, Science and Social Studies).

As can be seen from the figures in the table, overall grades as well as grades in each of the key subject areas declined from the 1st quarter to the 4th quarter during the school year. While the

decline was relatively small (ranging from 1.6 in social studies to 3.2 in math), the differences were statistically significant.

While the decline in grade averages is perhaps frustrating, they should be put in context. First, the final averages would not be considered by most to be poor grades. Almost all of the averages were in the mid-80's, suggesting a reasonable level of academic performance. Declines were marginal with most only falling approximately a single percentage point. Furthermore, the Buffalo School District, like many other large, urban, public school systems, has struggled for many years in its effort to produce consistent levels of academic achievement among its students. It is conceivable, given historical trends in the Buffalo Public Schools, that without the intervention of the Cradle Beach program, observed declines in academic performance would have been much greater.

Academic Outcomes

Grades – By Quarter

	N	Minimum	Maximum	Mean	Std. Deviation
Overall Grade average 1st quarter	37	76.00	95.75	85.9459	5.14010
Overall Grade average 2nd quarter	36	72.50	95.50	85.1597	5.75176
Overall Grade average 3rd quarter	35	71.75	97.25	85.0500	6.58563
Overall Grade average 4th quarter	35	73.00	93.25	83.3429	6.07341
Final Grade Avg	35	75.31	92.19	84.6743	5.27698
English grade 1st quarter	37	75.00	98.00	86.1081	5.77727
English grade 2nd quarter	36	70.00	96.00	85.0000	6.33358
English grade 3rd quarter	35	70.00	95.00	85.1714	6.64426
English grade 4th quarter	35	70.00	96.00	83.7429	6.43676
Final English Avg	35	73.00	94.00	84.8571	5.51545
Math grade 1st quarter	37	70.00	98.00	86.0000	5.74940
Math grade 2nd quarter	36	70.00	95.00	84.5000	6.72522
Math grade 3rd quarter	35	70.00	95.00	83.9143	7.19629
Math grade 4th quarter	35	70.00	96.00	82.2571	7.15107
Final Math Average	35	72.00	93.00	84.0286	6.02683
Science grade 1st quarter	37	72.00	98.00	85.9189	6.16161
Science grade 2nd quarter	36	73.00	100.00	85.5833	7.22446
Science grade 3rd quarter	35	70.00	100.00	84.6000	8.86566
Science grade 4th quarter	35	70.00	94.00	83.3143	6.55193
Final Science Average	35	73.00	92.00	84.8571	5.87188
Social Studies grade 1st quarter	37	75.00	98.00	85.8378	6.62702
Social Studies grade 2nd quarter	36	72.00	98.00	85.5278	6.85976
Social Studies grade 3rd quarter	35	70.00	99.00	86.5143	7.80034
Social Studies grade 4th quarter	35	70.00	99.00	84.0571	7.16176
Final Soc. Studies Avg.	35	73.00	95.00	85.6286	5.94131

In addition to school grades, absenteeism was tracked throughout the year and is reported in the following table.

Days Absent – By Quarter

	N	Minimum	Maximum	Mean	Std. Deviation
Number of days absent 1st quarter	37	.00	9.00	2.2432	2.29014
Number of days absent 2nd quarter	36	.00	20.00	3.6111	3.78174
Number of days absent 3rd quarter	35	.00	10.00	2.6571	2.37565
Number of days absent 4th quarter	35	.00	18.00	4.4286	3.90539
Valid N (listwise)	34				

Absenteeism fluctuated throughout the school year ranging from a low of 2.2 days/quarter in the 1st quarter to 4.4 days/quarter in the final term. This rate of absenteeism is 15 percentage points lower than the district average over the past three academic years with almost ½ of the days missed compared to the average Buffalo Public Schools student. In other words, the participants in the Project SOAR program spent 10 more days or 2 weeks more in the classroom compared to the typical student in the Buffalo Public Schools.

Outcome Catalyst Variables

Students responded to a number of written surveys during the first and fourth quarters. These surveys were designed to measure a variety of attitudes and behavioral predispositions on factors related to academic achievement and/or positive school behaviors.

Conflict Resolution

Scale ranges from 1 = low conflict resolution to 5= high conflict resolution.

	N	Minimum	Maximum	Mean	Std. Deviation
PreConflict	37	1.25	4.38	3.2095	.96017
PostConflict	36	1.25	4.63	3.3368	1.06185

Students responded to a number of items designed to elicit their reaction to situations where they could choose conflict oriented solutions or non-conflicted oriented solutions. High scores are indicative of the students' ability to identify strategies for conflict resolution. At the beginning of the year, average student scores were 3.2 (on a 1 – 5 scale). At the end of the year, scores increased to 3.3. While the average conflict resolution scores show a slight improvement, the difference between pre and post measurements are not statistically significant.

Student attitudes toward school, homework and a variety of academic subjects were measured. Attitudes are a reflection of how positive or negative an individual feels toward an objective,

activity or behavior. Student responded to individual items on the survey by indicating that they felt negative, neutral or favorable toward the target concept (e.g. going to school, doing math homework, etc.) Scale scores ranged from a low of 0 (unfavorable attitude) to 6 (favorable attitude). Average attitude scores are reported in the following table.

Attitude Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Sum all attitude items PRE	37	12.00	32.00	23.6486	5.12194
Sum all Attitude items POST	36	11.00	36.00	21.2222	5.25417
Pre Attitude Toward School	37	2.00	6.00	4.4595	1.19244
Post Attitude Toward School	36	2.00	6.00	3.6667	1.12122
Pre Attitude Toward Math	37	2.00	6.00	3.9730	1.16634
Post Attitude Toward Math	36	.00	6.00	3.5278	1.23024
Pre Attitude Toward Reading	37	2.00	6.00	3.8649	1.03178
Post Attitude Toward Reading	36	2.00	6.00	3.8056	1.14191
Pre Attitude Toward Write	37	.00	6.00	3.8378	1.51865
Post Attitude Toward Write	36	.00	6.00	3.2222	1.24467
Pre Attitude Toward Science	37	2.00	6.00	3.9459	1.20060
Post Attitude Toward Science	36	2.00	6.00	3.8889	1.11555
Pre Attitude Toward Homework	37	2.00	6.00	3.5676	1.21428
Post Attitude Toward Homework	36	2.00	6.00	3.1111	1.30445

Overall attitudes (aggregated across subject areas) declined approximately 2.3 points. This difference was statistically significant. While all areas showed declines in average attitude scores, only the declines in attitudes toward school and attitudes toward writing were statistically significant. Furthermore, because there is no historical data on attitudes like there is on academic achievement, there is no way of knowing whether or not there would be a greater decline if the students had not participated in Project SOAR. Given the marginal decline in academic achievement and the positive outcomes around absenteeism, the possibility remains open that these small declines in attitude were in fact, a positive outcome of Project SOAR. Additional efforts should be made to assess “typical” BPS students along these measures.

Intrinsic & Extrinsic Motivation for Class Performance

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Intrinsic	37	3.00	9.00	7.4595	1.60891
Post-Intrinsic	36	4.00	9.00	7.6111	1.31535
Pre-Extrinsic	36	3.00	9.00	7.3333	1.65616
Post- Extrinsic	36	5.00	9.00	7.8056	1.32707
Pre-Intrinsic Proportion	36	.40	.63	.5028	.05082
Post- Intrinsic Proportion	36	.33	.62	.4936	.05504

Students responded to questions designed to evaluate if they were primarily motivated by intrinsic rewards (e.g. feelings of achievement, pride in ability to accomplish something, etc.) and extrinsic rewards (e.g. to avoid getting in trouble, because teacher made them do something, etc.) Intrinsic motivations are more likely to produce consistent and enduring behaviors associated with academic achievement.

While average scores related to intrinsic motivation to perform well in class increased, the average scores related to extrinsic motivation increased even more. To evaluate the relative influence of each type of motivation, an intrinsic motivation proportion was calculated $[(\text{intrinsic score} / (\text{intrinsic score} + \text{extrinsic score}))]$. This proportional variable declined slightly, but the change was not statistically significant. In conclusion, it does not appear that intrinsic motivation (relative to extrinsic motivation) increased in this group of respondents. Again, as is the case for many of the variables for Project SOAR students when compared to “typical” Buffalo Public Schools students, the question remains whether or not “no decline” means a successful outcome for students. Similar to the Attitude scores, it is likely that a demonstrated constant score is a positive outcome for these students. Long-term analysis will either reinforce or discredit this assumption.

Intrinsic & Extrinsic Motivation for Homework Performance

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Intrinsic	37	3.00	9.00	7.4595	1.64308
Post-Intrinsic	36	4.00	9.00	7.6111	1.31535
Pre-Extrinsic	36	3.00	9.00	7.3333	1.65616
Post- Extrinsic	36	5.00	9.00	7.8056	1.32707
Pre-Intrinsic Proportion	37	.36	.62	.4849	.05402
Post- Intrinsic Proportion	36	.33	.57	.4911	.04992

Teacher Survey Results

In addition to grades and student surveys, teachers were asked to complete subjective evaluations regarding changes in student performance on a variety of dimensions including class participation, turning homework in on time, student classroom behaviors, and so on. (see Appendix I for a listing of these results). Teachers reported that across the various performance factors, approximately 1/3 of the students were performing at an acceptable level. Of those students who were not performing at an acceptable level, teachers reported that the overwhelming majority demonstrated moderate to significant levels of improvement. Only a very small portion of the sample (1 or 2 students -- 2.7% or 5%) was reported to have demonstrated declines in performance.

The overall impression left by these findings is positive and reinforces the assumptions made regarding the fact that along most research variables, Project SOAR students remaining constant and not declining is actually a positive outcome. Even when a decline was observed, it was largely

insignificant. These results reinforce another significant outcome that typical academic scores do not measure but which are most often tied to education and career success.

In a recent analysis by the University at Buffalo Regional Institute entitled: *Connecting Higher Education and the Region's Growing Industries*, several variables were identified as critical to career success but often missing in today's college student. Furthermore, this "skills gap" was tied to the educational system throughout the P-16 continuum. Meaning, the same skills gap identified in college graduates are the same skills gaps identified in high school students, middle school students, and even students in the early grades. The following list identifies several of the skills missing in today's students.

- | | |
|-------------------------|------------------------------|
| ✓ Reading Comprehension | ✓ Judgment & Decision Making |
| ✓ Active Listening | ✓ Social Perceptiveness |
| ✓ Critical Thinking | ✓ Service Orientation |
| ✓ Speaking | ✓ Learning Strategies |
| ✓ Writing | ✓ Instructing |
| ✓ Monitoring | ✓ Active Learning |

Of these 12 variables, 10 are not directly linked to instructional strategies typically found in today's P-16 classrooms. Furthermore, these 12 "transferrable" skills have been identified as critical for the 7 growing industries in Western New York and the nation.

Examining the Teacher evaluations, a stronger picture of the impact of Project SOAR begins to take shape. Of the eleven variables reported on by teachers, 10 closely align with the above skills. For example, the following links may be drawn between what the teachers observed as Moderate to Significant improvement and the above skills.

Participating in Class [links to](#) *Active Learning and Active Listening*

Volunteering [links to](#) *Active Learning, Active Listening, and Service Orientation*

Attending Class [links to](#) *Active Learning and Active Listening*

Behaving Well in Class [links to](#) *Monitoring and Social Perceptiveness*

Coming to School Motivated [links to](#) *Active Learning*

Getting Along Well with Others [links to](#) *Social Perceptiveness and Judgment & Decision Making*

There is a clear link to what is being achieved by Project SOAR and what has been identified as critical needs of the business and educational community. This connection to the transferrable skills identified as critical by the UB Regional Institute report demonstrates the expanded importance of Project SOAR beyond what is being measured and the existing positive results identified in this report.

Conclusion and Recommendations

The Project SOAR program has, over the course of a year, demonstrated an impact on a number of variables. While the research alone does not paint a clear picture of the exact impact, couched within a deeper analysis of Buffalo Public Schools data, a stronger picture of the impact develops. Clearly, Project SOAR students demonstrated a greater attendance rate than the "typical BPS student," improved conflict resolution, improved on all 11 teacher variables, as

well as maintained a mid-80's average, albeit declining marginally from the first quarter. There are a number of conclusions that can be drawn about the programmatic impact of Project Soar. However, there are an equal number of questions that arise as a result of the research. First, teachers of the program participants clearly articulated a positive impact on multiple behavior choices and academic achievement. Second, students demonstrated an increase in their ability to resolve conflicts. Finally, grades did not slide as is often the case at the Buffalo Public Schools. More importantly, grades remained at a moderate to high level hovering around 85%. The questions that must be asked are equally important to the research. First, how did the students perform academically compared to a "control" or "comparison" group of fellow students? What positive influence can be drawn on the attitudes of the students toward school and individual subjects? Finally, what academic impact is attributed to the positive observations of the teachers? These questions can only be answered when the data from the participants is compared to a comparison or control group.

Recommendations

The following recommendations are being made in order to strengthen the research, program, and Cradle Beach's understanding of the impact of Project SOAR.

1. The research should include a comparison group that can be used to put the research results in a better context versus leaving the existing data as standalone results or in comparison to the overall district data.
2. There is a disconnect between what the teachers articulated in their evaluations and what appeared on the student report cards and surveys. It would benefit the research and the field to try and understand this disconnect more deeply.
3. Attitudes are a very strong predictor of future performance and behavior. The research should continue to monitor attitudes in relationship to the other research variables. If it appears that there is a direct correlation between student attitudes and any of the other variables, it is recommended that the program should enhance the work they do to influence the positive attitudes of participants and continue to track their effects.

While one may be inclined to draw conclusions on the effectiveness of Project SOAR, both positive and negative conclusions, the researchers caution against this type of interpretation. Project SOAR is a program intended to impact students over the long-term. This trajectory makes a longitudinal analysis much more valuable than a specific snapshot or what is presented in this first year of analysis. Future years will clarify exactly what the impact of Project SOAR is and how the program can continue to influence positive academic and behavioral results in students.