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# A PRELIMINARY EVALUATION OF BAYSIDE HIGH SCHOOL

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Research and Accountability

Pinellas County Schools

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Prepared in partnership with

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## EXECUTIVE SUMMARY

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Bayside High School opened in the Fall of 2004 with the goal of fostering academic achievement among students at high risk for dropout as a result of excessive truancy, being overage for their grade level, or being off track for graduation. This preliminary evaluation examines existing state-level data used to evaluate Bayside. Additional analyses are also performed using existing student data to determine if attendance at Bayside has been associated with improved levels of achievement.

Review of Bayside's state-level data suggested that its "declining" school improvement rating may be questionable in terms of validity. Small sample size and the highly mobile nature of Bayside's student population presented doubts regarding the data upon which the "declining" rating was based. Attempts to independently analyze student data were also met with difficulties associated with Bayside's high turnover rate. Analyses suggested that attendance at Bayside may be associated with modest gains in achievement as assessed through student grade-point average (GPA). However, only a small group of students reached the 2.0 grade-point threshold associated with standard graduation requirements. Examination of student credit ratios did not provide evidence that students were more likely to successfully complete a higher percentage of their classes following enrollment at Bayside. Independent analyses of student FCAT results were consistent with those reported for AYP in that 11.6% of Bayside students met reading standards and 17.5% of students met math standards. Bayside reported a 50% graduation rate for the 2008-2009 school year. This represented an improvement from rates that had been in the 20% range in prior years. We were unable to provide an independent analysis of Bayside's graduation rates due to unreliability in district level student records regarding graduation.

Results of this preliminary study highlighted difficulties inherent in evaluating Bayside. Future evaluation efforts must address difficulties inherent in evaluating outcomes of this highly mobile student population. Evaluation data must be agreed upon and gathered prospectively in order to successfully track student outcomes. Similarly, the content and goals of student programming must be agreed upon prior to commencement of a useful formative evaluation. Recommendations are offered concerning potential avenues through which to develop and evaluate programming and goals based upon best practices in dropout prevention.

## TABLE OF CONTENTS

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Executive Summary.....	1
Introduction .....	3
Method.....	3
School Accountability Data.....	3
Data Analysis.....	4
Sample.....	4
Outcomes .....	4
Results .....	5
School Accountability Data.....	5
Preliminary Outcome Analysis .....	6
Cumulative Grade Point Average (GPA).....	7
Credit Ratio .....	8
FCAT Reading and Mathematics Proficiency .....	8
Conclusions and Recommendations.....	9
Scope of Evaluation .....	9
Findings.....	10
Questionable Validity of State-Level Assessment.....	10
Modest Gains in Achievement.....	10
Recommendations .....	11

## INTRODUCTION

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In 1997, Pinellas School Board members committed to building Pinellas County's first alternative high school designed specifically to address the needs of students at increased risk for high school dropout. The School Board purchased the site in Clearwater following the Pennies for Pinellas referendum in November, 2002. Construction began in 2003 and Bayside High School opened in the Fall of 2004.

The stated mission of Bayside is to offer its students the opportunity to earn a diploma and to be prepared for continued success. Bayside serves students who are behind in credits as a result of excessive truancy, are overage for their grade level, and are off track for graduation. Students may also have a history of poor grades, lack of achievement on standardized assessments, and a high number of disciplinary referrals. Students may transfer to Bayside from secondary discipline school settings.

Bayside is intended to offer approximately 400 students in grades 9-12 a challenging and supportive learning environment in which the needs of individual students are addressed through smaller, personalized classes. Bayside offers several programs that other high schools do not including the Performance Diploma Option, Credit Recovery, Co-Enrollment with PTEC, course modification, and flexible scheduling. Each of these is intended to maximize students' opportunity to earn a high school diploma.

This evaluation will examine indices of academic success for students attending Bayside in its initial years of operation. Initially, a more comprehensive evaluation of Bayside was planned to examine program fidelity and outcome data. However, several factors prohibited a more thorough evaluation at this time. High student turnover and low sample sizes precluded a fair assessment of student performance, while evolving program content also proved too much of a moving target to afford the opportunity to obtain a reliable assessment. Given these limitations, a preliminary analysis of available data is provided in conjunction with recommendations for continued improvement in the manner with which Bayside may be evaluated going forward.

## METHOD

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Data analysis includes examination of both existing school accountability data as well as original data analyses conducted in conjunction with the present evaluation.

## SCHOOL ACCOUNTABILITY DATA

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Information concerning student performance is collected yearly through FCAT testing. Data concerning the percentage of students at Bayside performing at or above grade level in reading and math are presented. The graduation rate for Bayside submitted in accord with AYP reporting is also presented along with the 2007-2008 School Improvement Rating for Bayside. The School Improvement Rating was instituted in 2007-2008 in lieu of school grades for the purpose of evaluating schools serving students with special needs.

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## DATA ANALYSIS

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### SAMPLE

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During the initial years of operation at Bayside, student enrollment has been fluid. Students are very likely to attend Bayside for a period of time less than one year. They may enter at a midpoint of one semester and then exit at the midpoint of another. This presents a considerable challenge in terms of data analysis.

Students were chosen for inclusion in this evaluation if they attended Bayside for a period of 90 days or more. This timeframe was chosen based upon the requirement that a student must be enrolled at Bayside for a minimum of 90 days in a given school year to qualify for FTE. Ideally an evaluation would examine outcomes based upon enrollment in a school for more than a three month timeframe. However, selection of a longer timeframe would result in exclusion of a large section of the sample based upon the high rate of student turnover at Bayside.

Given the high turnover rate, it was not possible to construct a single sample of students who were present during a single 90 day period. Therefore, nine subsamples were selected in which students were enrolled for 90 days or more at Bayside during different timeframes. These samples are presented in Table 1 along with the year in which enrollment for the subsample began and ended.

Years of Enrollment	Number of Students	Percent of Total Sample
2004-2005	58	9.7%
2004-2006	21	3.5%
2004-2007	14	2.3%
2005	37	6.2%
2005-2006	179	29.8%
2005-2007	74	12.3%
2006	17	2.8%
2006-2007	191	31.8%
2007	10	1.7%
TOTAL	601	

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### OUTCOMES

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Academic performance for each subgroup is examined across four outcomes. These include Grade Point Average, Credit Ratio, and FCAT reading and math proficiency standards.

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#### GRADE POINT AVERAGE

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The mean cumulative Grade Point Average for each cohort is examined. For each cohort, GPA is examined prior to, during, and following enrollment at Bayside. Differences in mean GPA are examined across these three intervals.

## CREDIT RATIO

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The ratio of credits earned versus credits attempted is then examined. Differences in credit ratios prior to, during, and following enrollment are compared.

## FCAT STANDARDS

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The percentage of students in each cohort meeting FCAT high school proficiency standards for reading and math are then examined.

## RESULTS

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### SCHOOL ACCOUNTABILITY DATA

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School accountability data submitted in accord with FCAT testing provide one measure of school performance. While these results may provide a standardized means of comparing the performance of students across schools, the validity and utility of these data are compromised considerably when applied to schools such as Bayside who serve high risk students.

The first notable finding presented in Table 2 is that Bayside has never met the requirement to test 95% of students enrolled. This finding highlights difficulties inherent in providing an assessment of student performance at Bayside. Students choose to enroll at Bayside because they have had difficulties with attendance. Following enrollment, some will continue to have difficulties with attendance. The effect of non-attendance on student performance complicates any attempt to draw conclusions that are comparable to those derived from tests where the student population shows a more consistent attendance pattern.

Results presented in Table 2 indicate that the percent of students at or above grade level in both reading and math are low and have not increased from 2004 to 2008. This finding highlights the high risk status of Bayside's population. Given that learning difficulties are evident among a majority of students enrolled at Bayside, the climbing graduation rate is promising. It is not clear from these data how the graduation rate was calculated. However, given that students who enroll at Bayside are at high risk of dropping out of school, a graduation rate near 50% would represent a significant accomplishment. We attempted to replicate assessment of Bayside's graduation rate using existing student data files collected by the district. We were unable to successfully track Bayside's students across years using these files. Due to the high mobility of Bayside's population students would often 'disappear' from the records with no indication of their ultimate disposition.

	% Tested	Percent at or above grade level in:		Graduation rate
		Reading/Math	Reading	
2008-2009	90/89	NA	16	51
2007-2008	90/92	15	13	28
2006-2007	87/89	9	28	22
2005-2006	Incomplete			
2004-2005	90 (overall)	9	22	NA

After receiving a school grade of “F” in its first year and “I” in its second year, Bayside shifted to a metric in which it receives a school improvement rating rather than a school grade. This alternative was provided by the Department of Education as a means to assess schools who serve students with special needs. As indicated in Table 3, Bayside received a “Declining” rating in 2007-2008 because the percent of students who made learning gains in math dropped to 36%, whereas 52% had made learning gains the year prior.

An assessment of the percentage of students making learning gains may provide a fairer test of school quality for schools with special populations who score lower on standardized tests of achievement. However, in this case the alternative method also does not appear to provide a valid test of school quality. Did Bayside’s performance with respect to educating students “decline” from 2006-2007 to 2007-2008? We cannot be sure from these data due to limitations in the sample. First, the samples on which these percentages are based consisted of approximately 100 students each. So each percentage point represents a student. The difference between the 52% making learning gains in math in 2006-2007 and the 36% making learning gains in math in 2007-2008 is 16%. With samples near 100 students each, this means that approximately 16 more students achieved learning gains in 2006-2007 than in 2007-2008.

Given this relatively small sample size, any variation in aptitude or attendance pattern across years could account for this difference in learning gains in math. Given Bayside’s high turnover rate, the population in 2006-2007 could have easily consisted of 16 more students who had a higher math aptitude relative to the 2007-2008 sample. The 2006-2007 sample also could have attended Bayside for a longer duration of time, or could have been less mobile in terms of switching schools midyear than the 2007-2008 sample. Either of these differences in aptitude or attendance could have produced this “declining” result. With a larger sample size and less fluid population, a meaningful comparison might be made across years. However with a small sample size and a fluid population of students with special needs, there is too much variability to have confidence in the validity of this “declining” rating.

Table 3: School Improvement Rating 2007-2008: DECLINING			
Percent making learning gains in:			
Reading		Math	
2006-2007	2007-2008	2006-2007	2007-2008
28	33	52	36

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### PRELIMINARY OUTCOME ANALYSIS

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Our initial intention was to provide a more rigorous data analysis in which the academic performance of students attending Bayside would be compared to that of control sample matched on initial academic performance. When reviewing the data it became apparent that student mobility compromised any attempt at a more rigorous post-hoc data analysis. The samples were so fluid in terms of their enrollment patterns that we could not reliably select a matched sample. We then focused upon three analyses to include in this preliminary study. We examined changes in Bayside students’ GPA and credit ratios through time, as well the percentage of Bayside students meeting FCAT Reading and Math standards.

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## CUMULATIVE GRADE POINT AVERAGE (GPA)

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A student's Cumulative Grade Point Average (GPA) is calculated throughout a student's high school career by dividing the sum of the final grade for every course taken by the number of courses. The unweighted course grade is based upon a scale from 0 to 4, with a grade of 'F' counting as 0 and a grade of 'A' counting as 4. Additional points for Honors or Advanced Placement courses are not included. A student must have an unweighted GPA of 2.0 or more to graduate from high school.

Results presented in Table 4 track the mean GPA for each subgroup of students prior to, during, and after attending Bayside. This permitted each subgroup to serve as their own control. Improvement in GPA through time could provide some support for the effectiveness of Bayside in terms of student achievement. Results presented in Table 4 indicate modest improvement overall in terms of unweighted GPA from a mean of 1.18 prior to Bayside to a mean of 1.45 after attending Bayside for the Total group of 601 students in the sample.

The only group whose mean exceeded 2.0 following Bayside consisted of the 14 students with the longest tenure at Bayside, with an average attendance of 410 days. This sample size is too small to draw firm conclusions. However, it is possible that characteristics of these individual students predisposed them to both attend Bayside longer and to improve academically through time. Alternatively, a longer period of enrollment at Bayside could have a stronger effect upon academic performance. The lack of transitions may facilitate higher levels of achievement among Bayside students. In contrast, among the group of 37 students who attended Bayside for an average of just 108 days in 2005 there was almost no difference between their GPA of 1.21 prior to Bayside and 1.26 after Bayside. The overall matrix of data suggests that a relationship may exist between the amount of time enrolled at Bayside and improvement in GPA. However, the results were too variable across subgroups to draw any firm conclusions.

Table 4: Grade Point Average (GPA)					
			Unweighted GPA		
Years of Enrollment	Number of Students	Average Length of Enrollment (days)	Before Bayside	During Bayside	After Bayside
2004-2005	58	166	0.79	1.32	1.29
2004-2006	21	294	0.76	1.16	1.54
2004-2007	14	410	0.66	1.77	2.18
2005	37	108	1.21	1.21	1.26
2005-2006	179	164	1.23	1.29	1.27
2005-2007	74	318	1.31	1.48	1.61
2006	17	100	1.09	1.09	1.21
2006-2007	191	157	1.30	1.30	1.60
2007	10	90	1.04	1.04	1.44
TOTAL	601		1.18	1.31	1.45



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## CREDIT RATIO

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For graduation, a student must also earn at least 24 credit hours during his/her high school career (i.e., 6 credits per year x 4 years). Additionally, a minimum number of credits are needed for promotion from one grade to the next. Every course not passed must be made up in order to meet the 24 credit requirement. A variable was calculated to gauge student efficiency in earning sufficient credits for promotion and graduation. Dividing the cumulative number of credits earned by the number of credits attempted was used to monitor student efficiency in earning credits. Table 5 shows the ratio of credits earned to credits attempted for students in the Bayside cohorts. A ratio of 1.0 indicates earning 1 credit for each credit attempted.

The rate of credit acquisition did not improve appreciably across subgroups with the exception of the 14 students attending Bayside for the longest duration. The mean credit ratio for this group of students increased from 0.48 in 2003-2004 to 0.82 in 2006-2007. In contrast to the GPA findings above, other subgroups did not show a trend toward achievement of better outcomes associated with longer duration of enrollment at Bayside.

Table 5: Credit Ratio <sup>1</sup>						
			Credit Ratio			
Years of Enrollment	Number of Students	Average Length of Enrollment (days)	2003-2004	2004-2005	2005-2006	2006-2007
2004-2005	58	166	0.43	0.58	0.55	0.56
2004-2006	21	294	0.42	0.54	0.55	0.52
2004-2007	14	410	0.48	0.69	0.76	0.82
2005	37	108	0.54	0.54	0.53	0.55
2005-2006	179	164	0.62	0.53	0.55	0.53
2005-2007	74	318	0.66	0.51	0.61	0.64
2006	17	100	0.57	0.49	0.44	0.48
2006-2007	191	157	0.75	0.70	0.61	0.66
2007	10	90	0.45	0.61	0.53	0.61
TOTAL	601		0.63	0.59	0.58	0.59

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## FCAT READING AND MATHEMATICS PROFICIENCY

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In order to graduate, all students must show proficiency in reading and math by passing the 10th grade FCAT assessment. Students not passing this assessment in the 10th grade are provided additional academic resources to strengthen their skills. Additionally, unsuccessful students have 3 annual testing windows for retaking the assessment until the summer after their senior year. An FCAT Scale Score of 300 or better is considered to show proficiency at grade level or above and has been used as a multi-year standard. Table 6 provides FCAT Reading and Math proficiency results for each subgroup in the study.

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<sup>1</sup> Olive-colored cells denote periods during which each subsample were in attendance at Bayside.

Outcomes presented in Table 6 are consistent with those reported in accord with AYP, with approximately 11.6% of students in the overall group meeting FCAT Reading standards and 17.5% meeting FCAT Math standards. While the percentage of students passing the FCAT was highest for the group of 14 students attending Bayside for the longest duration, the percentage passing the Reading and Math exams were below 25% for all other subgroups. These results may highlight the importance of continuing to provide alternative graduation options for students attending Bayside.

Years of Enrollment	Number of Students	Average Length of Enrollment (days)	Met FCAT Reading Standards		Met FCAT Math Standards	
			N	%	N	%
2004-2005	58	166	1	1.7%	7	12.1%
2004-2006	21	294	1	4.8%	1	4.8%
2004-2007	14	410	4	28.6%	5	35.7%
2005	37	108	1	2.7%	5	13.5%
2005-2006	179	164	18	10.1%	21	11.7%
2005-2007	74	318	11	14.9%	15	20.3%
2006	17	100	2	11.8%	3	17.6%
2006-2007	191	157	32	16.8%	45	23.6%
2007	10	90	0	0%	3	30%
TOTAL	601		70	11.6%	105	17.5%

## CONCLUSIONS AND RECOMMENDATIONS

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Bayside High School opened in the Fall of 2004 with the goal of fostering achievement among students at high risk for dropout due to excessive truancy, being overage for their grade level, or being off track for graduation. Bayside students may have a history of poor grades, low achievement on standardized assessments, or disciplinary difficulties. This evaluation was requested to examine the ability of Bayside to meet the academic needs of its students.

### SCOPE OF EVALUATION

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Initially, a much broader evaluation was planned that encompassed both formative and summative components. Individual programs designed to foster achievement among students at Bayside were to be evaluated both in terms of program fidelity and outcomes. Quantitative analyses of the effectiveness of Bayside in promoting positive academic outcomes were also planned. The presence of several difficulties that emerged during the planning phase of the evaluation suggested that a meaningful, broader evaluation was not advisable at this time for several reasons.

First, there had been changes in the leadership structure of Bayside. Patricia LaVoy Fuller had replaced Phil Wirth as principal. The structure and content of programs to promote learning at Bayside were being revised. The existing program structure represented too much of a moving target to adequately evaluate. A decision was then made to focus solely on existing quantitative data within an outcome evaluation while

deferring a more comprehensive formative evaluation of the structure of service delivery at Bayside. Quantitative analysis was then met with a similar dilemma. The sample of students attending Bayside consisted of a highly fluid sample. We were unable to perform a more rigorous matched control group analysis due to the degree of turnover among students at Bayside.

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## FINDINGS

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In this preliminary evaluation we examined existing state-level data concerning the performance of Bayside. We then performed a subgroup analysis in which we tracked the performance of subsamples of Bayside students through time to examine if improvements in indices of achievement were evident.

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### QUESTIONABLE VALIDITY OF STATE-LEVEL ASSESSMENT

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State-level data did not appear to overcome the inherent difficulty evaluating the performance of a school with the turnover rate of Bayside. Bayside initially received an “F” and an “I” within the school grading system. Receipt of an “F” in the original grading system was virtually ensured given the fact that students come to Bayside because they have academic difficulties. When the system was changed to track student improvement in reading and math over time, the results did not appear to become any more valid. A decline in the percentage of students achieving gains in mathematics from 2006-2007 to 2007-2008 resulted in a “Declining” performance rating for Bayside. Given the relatively small samples and the high turnover rate, the validity of this assessment of Bayside’s performance was highly questionable.

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### MODEST GAINS IN ACHIEVEMENT

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In subgroup analysis of existing Pinellas data we tracked the performance of Bayside students in terms of GPA and credit ratio. Analysis of students’ GPA through time suggested that longer periods of attendance at Bayside may be associated with somewhat higher gains in GPA. However, only one of the nine subgroups achieved a GPA of 2.0 associated with standard graduation requirements.

Analysis of student credit ratios did not provide evidence that attendance at Bayside was associated with higher rates of successful course completion. The only group that showed a sizable increase in credit ratio was a selective subsample of 14 students who attended Bayside consistently over a three year period.

Examination of student FCAT reading and math proficiency scores provided results consistent with those reported in accord with AYP. Overall, less than 25% of students satisfied proficiency requirements across almost all subgroups with the exception of the same group of 14 students with longer enrollment, who performed slightly better.

The relatively higher levels of achievement among the 14 students enrolled for the longest duration at Bayside does suggest that a relationship may exist between stability of enrollment and achievement outcomes among students who attend Bayside. However, we cannot draw firm conclusions at this time based upon this small sample. Our data analysis primarily highlighted the difficulties inherent in evaluating outcomes among this highly mobile student population.

## RECOMMENDATIONS

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Currently, the problem of student dropout is a central concern of lawmakers at the national level. United States Department of Education Secretary Arne Duncan has embarked on a “Race To the Top” initiative designed to identify the most effective practices for improving achievement and reducing the dropout rate in America’s schools. Bayside has the potential to become a model dropout prevention program with continued improvement. While efforts must be modified to meet the particular needs of Bayside, existing programs and practices supported by the US Department of Education may provide useful guidance. These include:

- 1) **Rigorous/Relevant Instruction-** Existing dropout prevention centers have been highlighted by the USDOE as models in terms of providing instruction relevant to the needs of students at risk for dropout. These include the Foxfire Center for Student Success in Ohio, Sleepy Hollow High School in New York, and Western Hills University High School in Ohio. These schools have proven effective, with graduation rates of 97%, 92%, and 80% respectively among their high risk student populations. Examination of practices instituted at these schools may inform successful programming at Bayside<sup>2</sup>.
- 2) **Targeted Data-Systems-** The DOE identifies the critical role of maintaining data systems to track students at risk for dropout. Existing data systems, including those used in this preliminary evaluation have considerable room for improvement. When tracking students who are highly mobile it is preferable to develop a data collection strategy in conjunction with development of programming. A more comprehensive evaluation must determine which data to collect at the start of the evaluation period and then track students longitudinally.
- 3) **Adult Advocates-** Research has shown that sustained personal relationships between trained adults and at-risk students can help address students’ personal and academic needs. Data from the present study suggests that students who remain at Bayside long enough to build relationships may reap benefits in terms of achievement. Implementation of a structured adult advocacy system may provide a considerable benefit to all students at Bayside.
- 4) **Social-Emotional Supports-** Students who are disengaged from schooling and off-track for graduation may benefit from social-emotional supports that promote both skills development and establishment of relationships with community-based programs. A primary task of Bayside is to positively engage students who have become alienated from school. This requires a focus on the whole student. Innovative learning approaches and provision of academic supports are more likely to be effective in the context of a learning environment that promotes social-emotional development and connections with adults in both school and community settings.

A more detailed set of recommendations can follow a more thorough formative evaluation of programming at Bayside. Efforts to evaluate Bayside going forward must benefit from the ability to clearly define the structure and goals of Bayside’s programming. Future evaluation efforts must also address the issue of student mobility through development of prospective methods of data collection. As Bayside represents one component of a district-wide effort to reduce student dropout, its policies and practices should also both benefit from and inform dropout prevention efforts district-wide. These efforts, in turn must be aligned with best practices as defined by the USDOE. Through doing so, Pinellas can assume a strong role as an active partner in our nationwide effort to “Race To the Top”.

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<sup>2</sup> Descriptions of each of these schools can be found under ‘dropout prevention’ at <http://dww.ed.gov>