

BMTA Implementation in the Lawrence School District (2004-06): Preliminary Technical Report

This report presents the results of a preliminary evaluation of the implementation of the Behavior Management Through Adventure (BMTA) model in a Lawrence (Mass.) public school serving special education students. The evaluation identified both student and organizational outcomes using data gathered by the participating school or the Lawrence School District. From an organizational perspective, the results documented improvement in classroom and group management, increased time on task, and improved staff culture. At the same time, it provided evidence of greater student engagement and improved academic performance. Preliminary results justify continued and expanded use of BMTA with these students.

Overview of the BMTA Model

Behavior Management Through Adventure (BMTA) is a structured, research-based model developed by Project Adventure to adapt its successful concepts, strategies, and tools for use with youth and children who struggle with behavioral, psychological, and learning disabilities. The model was originally developed during the 1980's under the leadership of Cindy Simpson in Project Adventure programs operating in Georgia. It grew out of work by Simpson and Project Adventure in adventure-based counseling but has evolved considerably over the last two decades to incorporate research and practice from a variety of sources.

The *first essential characteristic* of the BMTA model involves the use of the *Full-Value Contract*. This represents the explicit rules or norms that govern the regular operation of group, classroom, school, program, or site. The Full-Value Contract is developed in a collaborative manner by all members of the “community”, including administrators, professional and non-professional staff, and students/clients. Development is a continuous and on-going process with the contract being an evolving product.

The *second essential characteristic* of the BMTA model involves a focus on development and assessment of *social/emotional skills* by all. The model provides structured activities for use by school/agency staff with students/clients and with other adult staff. These activities will build core social/emotional competencies among children, youth, and adults, including self-awareness, social awareness, self-management, relationship skills, and responsible decision-making. In the process, adult staff model these competencies for children, youth, and each other – and demonstrate a shared commitment to developing these competencies.

The *third essential characteristic* of the BMTA model emphasizes *effective goal-setting* by children, youth, and adults. The model provides structured activities that encourage the creation of attainable goals in all areas of life, including intellectual, behavioral, and home. These activities link short- and long-term goals and build the ability to see what needs to be done to accomplish a goal and then follow those steps. It encourages the use of the goal-setting process to take responsibility for and exercise control over learning and behavioral change. Staff will both model this behavior and guide students/clients through the process.

The *fourth essential characteristic* of the BMTA model employs *adventure-based activities* for experiential learning. The model provides staff with adventure-based activities that can be used

in a wide variety of settings depending upon the nature, resources, and facilities of the site to engage students in learning. Activities can be planned or spontaneous in response to emerging learning opportunities for children and youth. Activities will support both social/emotional and intellectual development of students/clients and can also be targeted on the delivery of specific academic content.

The *final essential characteristic* of the BMTA model involves the use of a *group process to empower students*. “Control to Empowerment” was a methodology created by Cindy Simpson during her original development of the BMTA model. The model defines different types of group meetings which are called under a variety of circumstances – some routine and some reactive to specific positive or negative events or issues. All meetings are guided by the norms of the Full-Value Contract and are characterized by their participatory and purposeful nature. These meetings serve a variety of purposes – to communicate and clarify expectations, to model positive behavior, and as forums for appropriate reflection.

The “Control to Empowerment” methodology is a powerful tool that enables staff to shift the management of student/client groups from staff-led to student-led. At the same time, it provides a natural environment for staff to observe student behavior (both positive and nature). Finally, it promotes self-efficacy among participating students/clients as well as positive peer culture.

As implemented by Project Adventure staff in the Georgia-based program, BMTA had several important positive outcomes for participating students. This included greater pro-social behavior and reduced anti-social behavior, greater student engagement with school or related direct service activities, more effective decision-making, and improved academic performance.

BMTA implementation also had a positive impact from an organizational and program perspective. The model contributed to improved classroom and group management by teachers and other program staff, increased “time on tasks” by students on learning or other direct services activities, reduced reliance by staff on the use of physical restraints with students, increased staff collaboration, and improved organizational culture.

BMTA Training Program

Based upon its success in the Georgia programs, Project Adventure has developed a structured, but flexible program that enables schools, youth service agencies, and youth residential facilities implement the BMTA model in their programs. BMTA is particularly appropriate for adoption by other programs because it does *not* need to operate as an exclusive model. Rather, BMTA can co-exist and even complement other education and treatment models already in use by the programs.

Effective implementation of the BMTA model requires a collaborative effort between Project Adventure trainers and school/agency leadership and key staff. Implementation begins with a *joint needs assessment and planning* by Project Adventure and the school/agency. This allows the identification of relevant organizational conditions and specific needs and the adaptation of training and support activities in response to these conditions and needs.

To support implementation, Project Adventure provides a *training program for all staff* and a *train the trainer program* for selected staff. The training program includes both basic and

advanced courses. The basic course enables staff to begin active implementation of the BMTA model while the advanced course identifies challenges and opportunities and help staff begin to master the elements of the model. The train the trainer program allows the school/agency staff to share responsibility with Project Adventure staff for conducting these courses and ensures long-term sustainability of the BMTA model at the site.

In addition to the formal training courses, Project Adventure trainers also provide consultation, conduct observations, and offer on-going support to administrators and staff in the implementation of the BMTA model. This can include activities designed to promote “buy-in” to the BMTA model by all staff or to identify organizational-level changes needed to support implementation of the BMTA model. Observations, demonstrations, and targeted individual assistance will build on the formal training to address individual staff challenges and needs.

BMTA Project in Lawrence

In October 2004, Project Adventure began to work in Lawrence, Massachusetts to train and support staff in two public schools to use the BMTA model. Currently, the Lawrence School District enrolls about 12,200 students – making it the 8th largest school district in Massachusetts. The demographics of its student population are somewhat unique for Massachusetts. The vast majority of these students are Hispanic (87%), spoke a first language other than English (83%), and were eligible for free/reduced lunch (83%). Only two other school districts (both much smaller) have similar demographic profiles.

Academically, the district faces major challenges. Over the last four years, almost as many students dropped out of high school (39.5%) as graduated (41%). Its four-year graduation rate is the lowest among school districts in Massachusetts while its dropout rate is the highest. Its annual suspension rate was almost twice the statewide average. Only 30% of its students scored proficient or above on the English section of the state standardized assessment and only 13% scored proficient or above on the Math section. Those percentages were considerably below the statewide rates (62% in English and 44% in Math).

The two Lawrence public schools involved in the implementation of the BMTA model both primarily serve special education or other special needs students from across the district. New Beginnings at the Rollins School serves elementary and middle school students, while the School for Exceptional Studies serves high school students. Although the two schools operate from different sites, they have the same principal (Dr. Paul Koppenhaver). The schools share a common goal – to develop the academic and social competence of their students so that they can be reintegrated into their neighborhood school or successfully graduate from high school. The schools are particularly focused on providing a safe therapeutic environment to meet the needs of the “whole child” and particularly to enable students to become more socially responsible and to effectively manage their persona choices and behaviors. The BMTA model was seen by the schools’ leadership as an appropriate strategy for advancing these goals.

BMTA is now in its third year of implementation in the two schools. During the first two years, approximately 80% of the staff in the two schools had completed the basic BMTA training course conducted by Project Adventure staff. Thirteen staff had participated in advanced training in order to become certified BMTA trainers for the school. Two Project Adventure staff had also

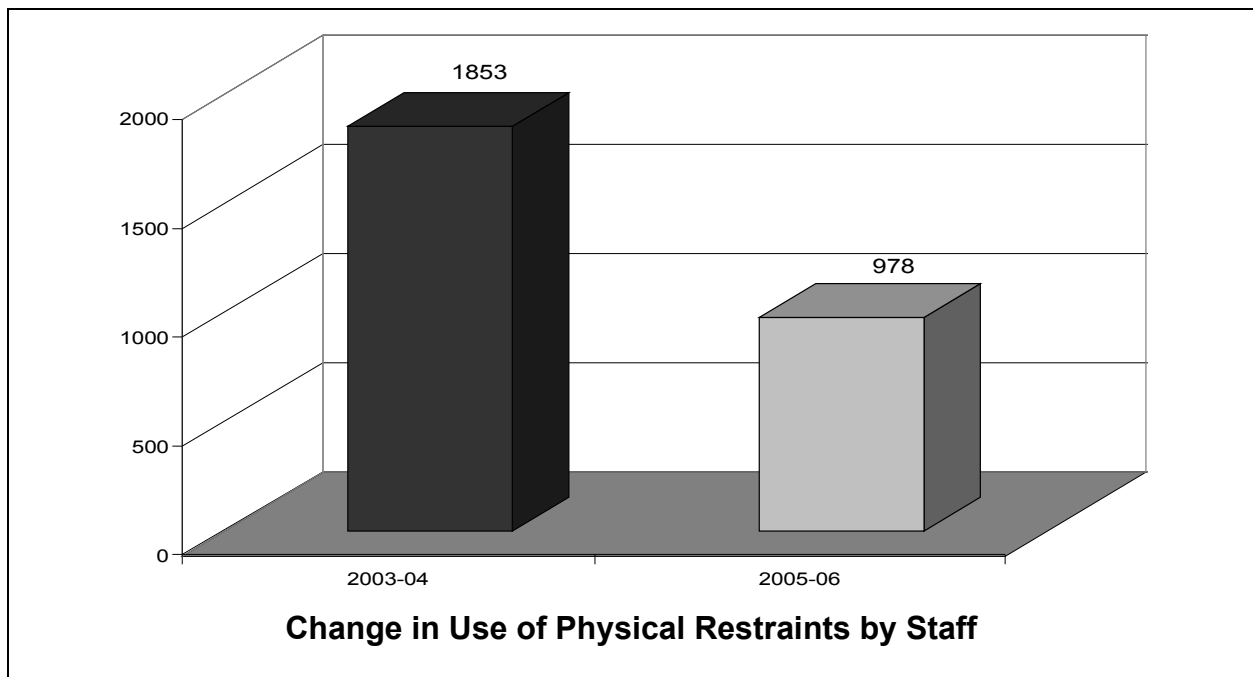
provided ongoing consultation, observation, and technical assistance throughout the implementation period.

Description of Preliminary Results

In assessing the impact of BMTA implementation, the evaluation considered outcomes related to organizational change and student performance. Seven specific outcome criteria were examined, including four related to organizational change (use of physical restraints by staff with students; time on task; types of student suspensions; and staff attendance) and three related to student behavior (student attendance; results on the state academic assessment – the MCAS; and results on a standardized academic assessment instrument – the MAP – administered by the district for its own purposes).

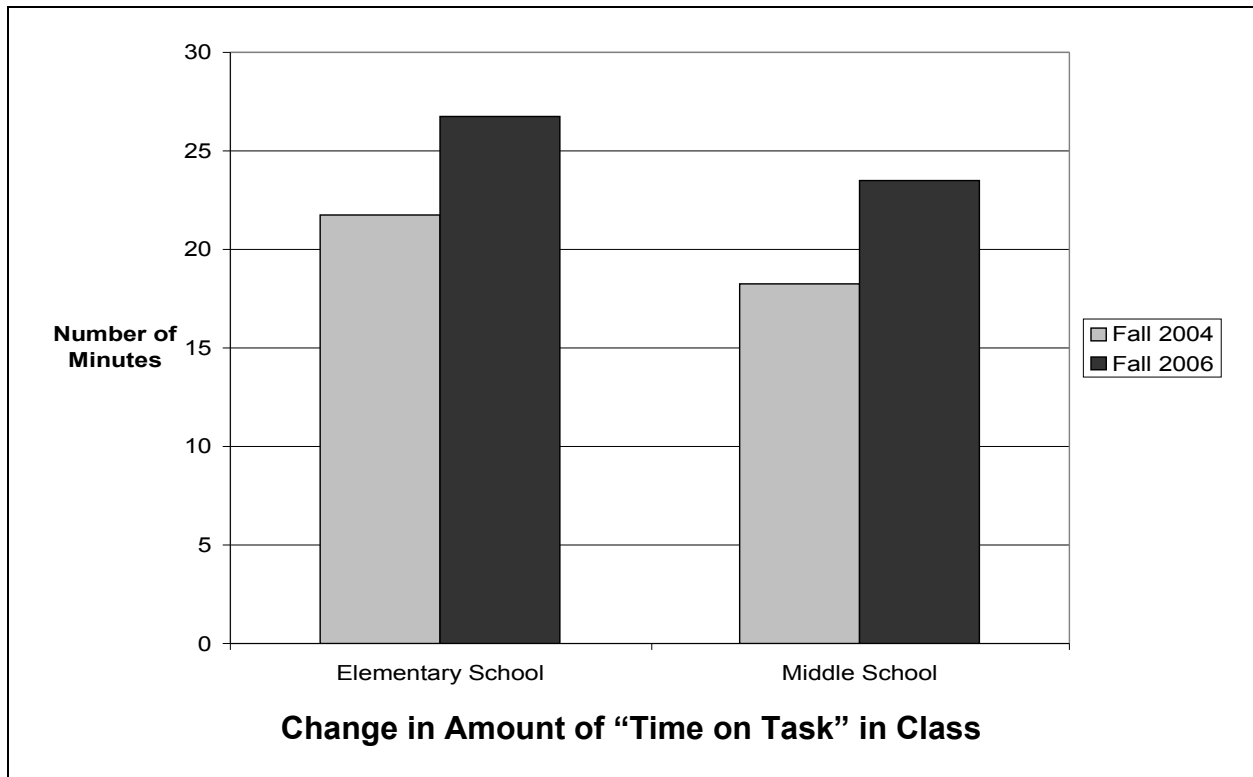
The evaluation of BMTA implementation in this site focused primarily on New Beginnings at the Rollins School (the elementary/middle school) because more extensive outcome data was available for this student population. In its analysis, the evaluation relied exclusively on data generated by the school or school district. Most of this data was generated to meet external government reporting or assessment requirements (including restraint use, staff and student attendance, suspensions, and MCAS results). However, the administration of the MAP was a district initiative, while the time on task observational measurement was an initiative of the school’s principal.

In conducting its analysis, the evaluation sought to provide a context for interpreting the results. For all criteria, this involved the use of baseline data to determine the magnitude of change over time during the course of this project. For other criteria, this also involved external comparisons to district-wide or statewide results. Although the evaluation did not use formal control groups, the external comparisons served an equivalent purpose.



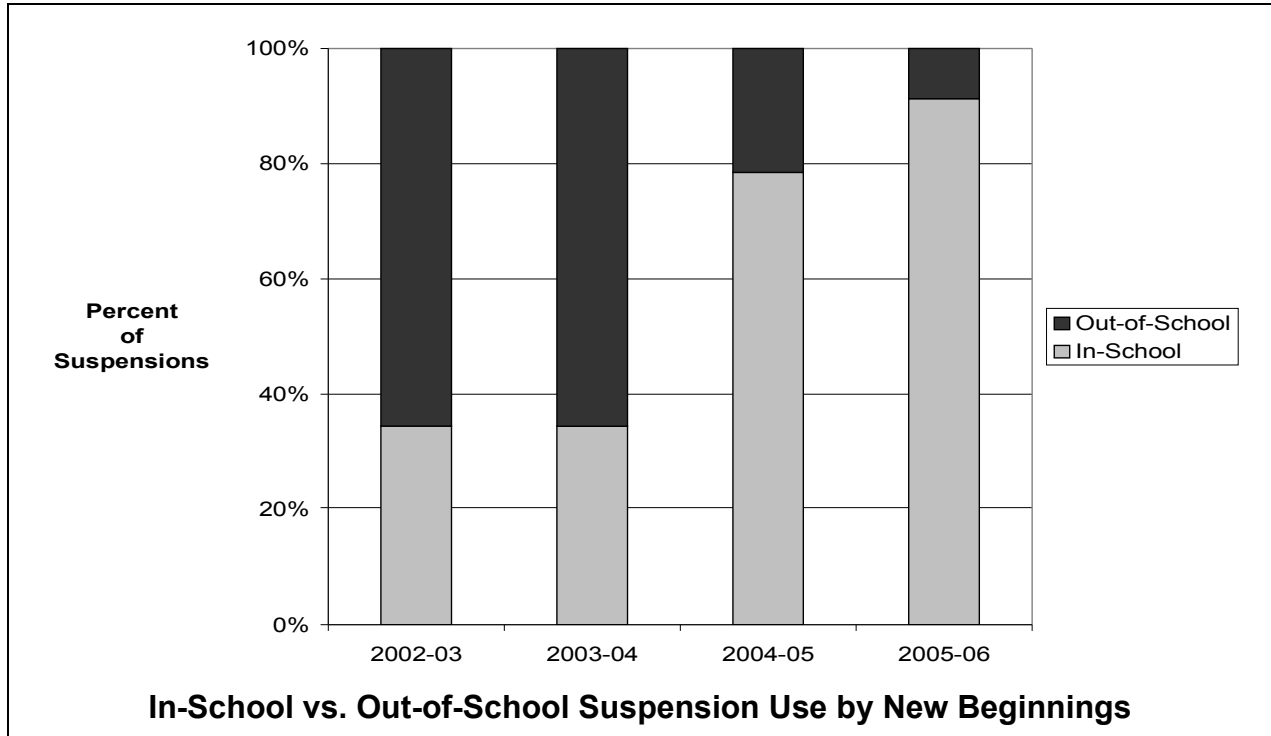
Organizational Change Criteria: Use of Physical Restraints. Because the BMTA model emphasized personal responsibility and self-control by students/clients, the model discouraged the use of physical restraints of students by staff and provided alternatives to the use of restraints. Baseline data taken from the last school year prior to BMTA implementation (2003-04) indicated that there were 1,853 incidents involving physical restraints reported by the school. Two years later (2005-06 school year), the incidents involving physical restraints reported by the school had declined by 47% to 978. Moreover, school staff reported that most of these uses of physical restraints involved a smaller number of students.

Organizational Change Criteria: Time on Task. The BMTA model emphasized improvement in group management and student behavior in the classrooms. One measurable result of this improvement would be an increase in the amount of time spent on academic tasks in classrooms. For several years, the principal of New Beginnings has determined time on task through structured classroom observations in all classes. Observations were conducted directly by the principal using 30-minute time samples. Multiple classroom visits were conducted each school year.



Baseline data was taken from Fall 2004 (beginning of the first year of BMTA implementation). Average time on task was 21.75 minutes (per 30 minutes) for elementary school classrooms and 18.25 minutes (per 30 minutes) for middle school classrooms. Outcome data was taken from Fall 2006 (after two years of BMTA implementation). Average time on task was 26.75 minutes (per 30 minutes) for elementary school classrooms and 23.5 minutes (per 30 minutes) for middle school classrooms. This represented a 23% increase in elementary school classrooms and 29% in middle school classrooms.

Organizational Change Criteria: Student Suspensions. The BMTA model encouraged students to take greater responsibility for addressing their own behavioral issues and provided staff with strategies for promoting such student empowerment. One measure of staff commitment to this effort would be an increased reliance on in-school suspension in comparison to out-of-school suspension.



Baseline data was taken from the 2003-04 school year. In that year, the school reported that 34% of its suspensions were in-school. This percentage was the same during the previous school year. After BMTA implementation, there was a dramatic shift in the types of suspensions imposed on New Beginnings students. In 2004-05, in-school suspensions accounted for 79% of the suspensions. In 2005-06, in-school suspensions accounted for 91% of all suspensions. Overall, the number of suspensions remained relatively consistent across all four school years.

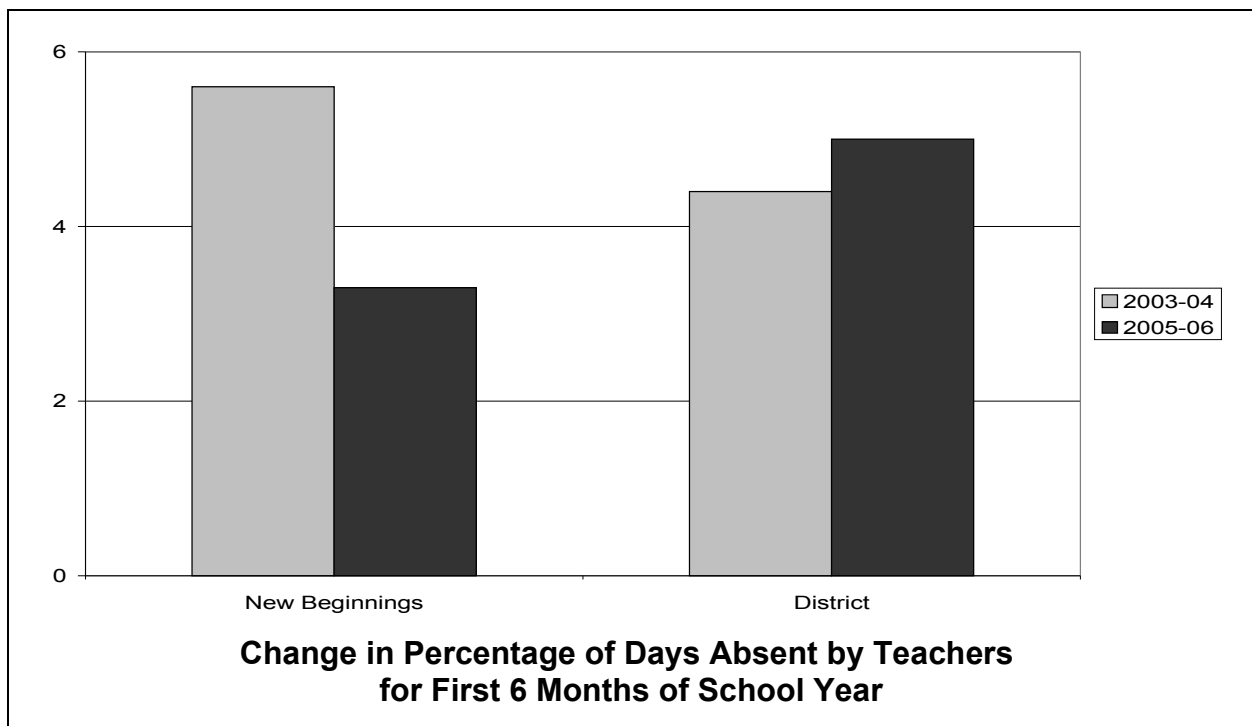
Percentage of Suspensions That Were In-School (2002-06)				
	2002-03	2003-04	2004-05	2005-06
New Beginnings	34%	34%	79%	81%
District	64%	65%	39%	41%
Statewide	41%	38%	37%	37%

For comparison purposes, both district-wide and statewide data was analyzed. For the Lawrence School District as a whole, the use of in-school suspensions declined rather than increased over the last two years from about 65% during the 2002-04 school years to about 40% during the 2004-06 school years. Statewide, the relative use of in-school suspensions was relatively consistent across all four years – at approximately 40%. These results indicate that the changes observed in New Beginnings were not reflective of either district-wide or statewide trends.

Organizational Change Criteria: Teacher Attendance. The BMTA model creates a more supportive and engaging environment for staff as well as students. One measurable result of this change would be an increase in staff attendance.

Baseline data was taken from the 2003-04 school year using teacher attendance data collected and reported by the Lawrence School District for each school and for the district. During the first six months of that school year, New Beginnings teachers were absent 5.6% of the school days. Outcome data was taken from the 2005-06 school year. During the first six months of that school year, New Beginnings teachers were absent 3.3% of the school days.

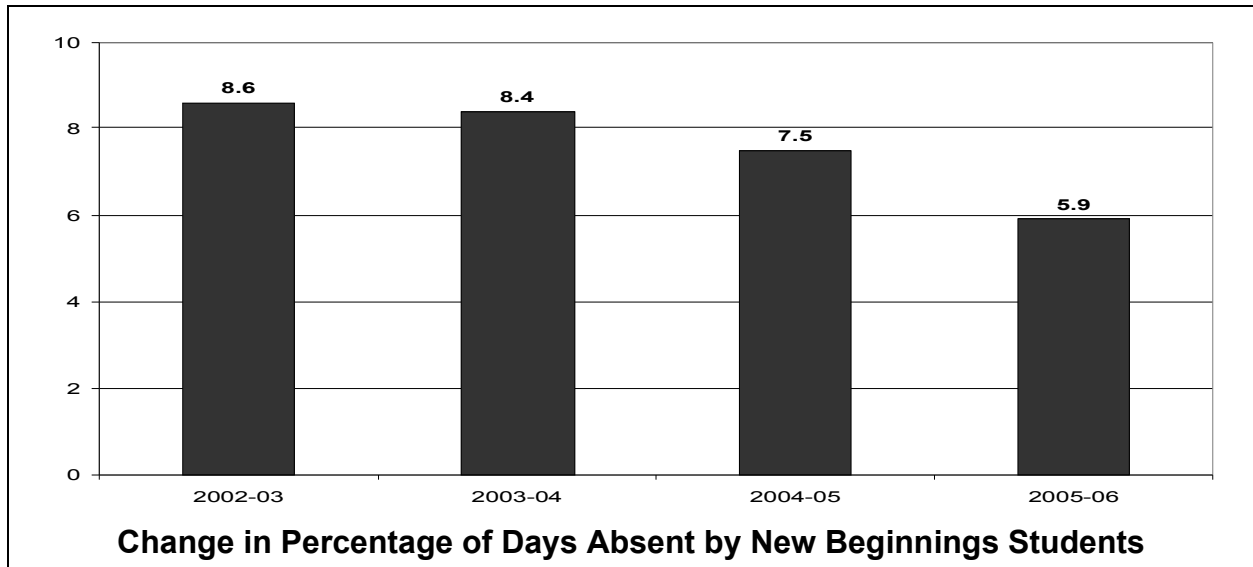
For comparison purposes, district-wide data was also analyzed. District-wide, teacher absences increased from 4.4% to 5% over the same period. This represented a 13% *increase* in teacher absences compared to a 41% *decrease* among teachers in New Beginnings. The changes observed at New Beginnings were substantial and were not reflective of any district-wide patterns.



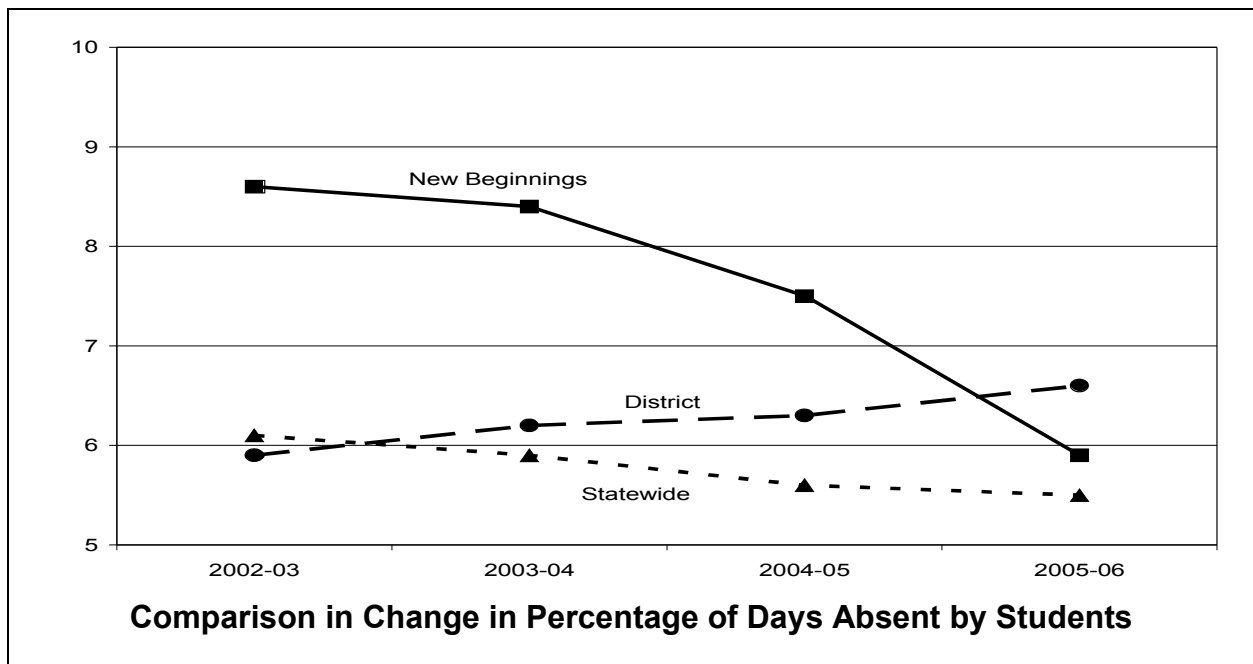
Anecdotal evidence indicates that absences among the non-professional staff at New Beginnings may have risen during the course of BMTA implementation – even as absences have declined among the teachers. This could actually be further evidence of the positive effect of BMTA implementation on staff culture because some of the non-professional staff have not yet participated in the basic BMTA training course. All teachers have completed the basic course and some have taken the advanced and the “train the trainer” courses.

Student Outcome Criteria: Student Attendance. The BMTA model provides activities designed to empower students and engage them more actively in their academic and social development. Adventure-based activities have proven to promote engagement and enthusiasm

for a wide variety of students/clients in a wide variety of settings. One measure of increased student engagement would be improved student attendance.



Baseline data was taken from the 2003-04 school year. During that school year, New Beginnings reported that students were absent for 8.4% of the school days. This was similar to the student absentee rate for the previous school year. During the first year of BMTA implementation, the student absentee rate at New Beginnings declined by more than 10%. During the second year of BMTA implementation, the rate declined by an additional 19%.

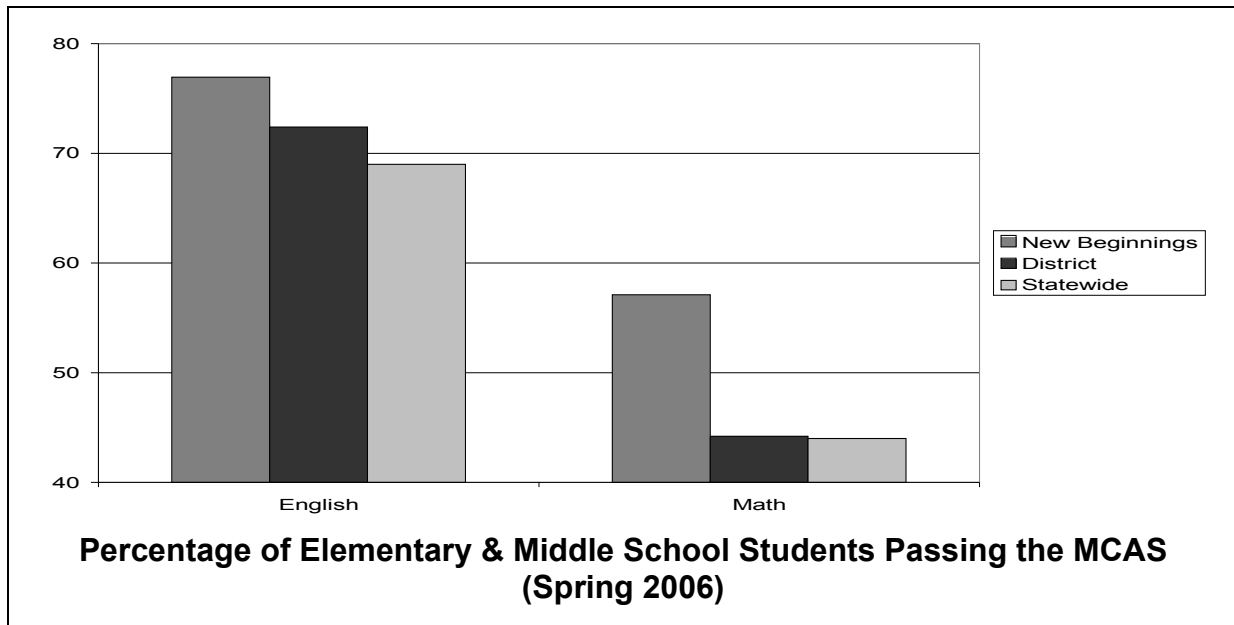


Comparable data was analyzed for both the district and the state. Neither displayed a trend similar to that observed at New Beginnings. Among all students in the Lawrence School District, the absentee rate increased by about 6% from the 2003-04 school year to the 2005-06 school

year. Among all students statewide, the absentee rate declined but only by about 7% over the same period of time. Moreover, the absentee rate in New Beginnings was considerably higher than either the district-wide or statewide rates in the years prior to BMTA implementation. After two years of implementation, the rate for New Beginnings students was below the district-wide rate and much closer to the statewide rate.

Student Outcome Criteria: MCAS Results. The BMTA model creates an environment that can contribute to improved academic development of students. In addition, anecdotal evidence suggests that BMTA activities (such as the group meetings and adventure-based activities) can directly improve crucial academic skills in students, such as inferential reasoning. One measure of these gains would be student results on the state standardized assessment test, the MCAS (Massachusetts Comprehensive Assessment System).

The MCAS was administered in the Spring of each school year. For this evaluation, the results from the Spring 2004 MCAS were used as the baseline data and the results from the Spring 2006 MCAS were used as the outcome data (reflecting almost two years of BMTA implementation). The 2006 MCAS was administered to all students in grades 3 to 8. Prior to that year, the specific MCAS tests were only submitted in selected grades. Thus, the English MCAS was administered in grades 3, 4, and 7, while the Math MCAS was administered in grades 4, 6, and 8. To ensure that the baseline and outcome data were comparable, the evaluation only used data from these grades for each test.



Student results on the MCAS were divided into four levels. Students scoring in the *three* highest levels were considered to have passed the test. However, only students scoring in the *two* highest levels were considered to have demonstrated “proficiency” on the test. The evaluation computed the percentage who passed and the percentage who demonstrated proficiency across all three grades for each set of tests (English and Math) for New Beginnings students and for two comparison groups – all students in the Lawrence School District and all special education students statewide.

Prior to BMTA implementation, baseline data indicated that the percentage of New Beginnings students who passed or demonstrated proficiency on both sets of tests (English and Math) was considerably less than the relative percentages for the two comparison groups. After two years of BMTA implementation, outcome data indicated New Beginnings students performed better than or equal to the two comparison groups on both criteria (passing and proficiency) for both sets of tests (English and Math). As a result, the increase in the proportion of New Beginnings students passing and demonstrating proficiency on both sets of tests was much greater than the changes observed among the two comparison groups.

Performance of Students on MCAS (Spring 2006 vs. Spring 2004)				
	Change in Passing Rate		Change in Proficiency Rate	
	English	Math	English	Math
New Beginnings	+19.6	+32.6	+28.9	+9.6
District	-0.7	+4.1	+0.1	+1.5
Statewide	-4.7	0	-3.3	+1.3

In analyzing MCAS results, the evaluation also used the Composite Performance Index (CPI). This index was computed by the Massachusetts Department of Education and used to determine Annual Yearly Progress by schools and school districts. The CPI uses a 100-point index to measure the extent to which students are progressing toward proficiency on the MCAS English and Math tests. It can combine students scores for individual grades and across multiple grades. The current CPI reported by the state was computed based on the MCAS scores from 2005 and 2006 – coinciding with BMTA implementation by New Beginnings. The baseline CPI was computed using the MCAS scores from 2003 and 2004.

Composite Performance Index (CPI) Based on MCAS Results				
	Outcome CPI ('05-'06)		Change from Baseline CPI	
	English	Math	English	Math
New Beginnings	65.3	50.3	+11.0	+19.3
District	63.9	47.0	+2.0	+4.8
Statewide	64.9	50.5	+0.7	+3.5

The evaluation analyzed current CPI and change in CPI from the baseline for the New Beginnings students and the same two comparison groups used previously. Current CPI was slightly higher for the special education students in New Beginnings than for the general student population in Lawrence district-wide and approximately equal to that of special education students statewide. However, the New Beginnings students made substantially higher gains from the benchmark CPI than did either of the two comparison groups.

Student Outcome Criteria: MAP Results. The Measures of Academic Progress (MAP) is a standardized academic achievement test developed by the Northwest Evaluation Association (NWEA). As with the MCAS, the MAP includes both English and Math tests – with results for each reported separately. The MAP has been administered by the Lawrence School District several times each school year since the 2004-05 school year (the first year of BMTA implementation). The research office for the Lawrence School Department has demonstrated a

strong correlation between student performance on the MAP and their performance on the MCAS.

The MAP uses a unitary point scoring scale across all grade levels tested. Thus, a 5-point gain in student performance within grade 3 is equal to a 5-point gain between grades 3 and 4. Similarly, a score of 200 on the MAP represents the same score in grade 3 or grade 6. This allows the district to track academic growth of individual students and groups of students during a single school year and across multiple years. While the MCAS allows comparisons of *different* groups of students in the same grade level across several school years, the MAP allows comparisons in academic performance of the *same* group of students over several years.

The evaluation conducted two analyses of change using the MAP data. The first analysis used the Winter 2004 test administration for the baseline, while the second analysis used the Fall 2005 test administration as the baseline. Both used the Fall 2006 test administration for outcome data. Each analysis had particular strengths. The first analysis used baseline data from near the beginning of the project but data was only available for a smaller number of students (33 on the English test and 15 on the Math test). The second analysis used baseline data taken one year after BMTA implementation began but data was available for a larger number students (51 on the English test and 49 on the Math test).

The evaluation used comparison data derived from the results of the NWEA normative study of MAP conducted in 2005. This study included 2.3 million students in 794 school districts from 32 states. NWEA reported average change at each grade level over different time intervals, including Fall to Fall and Winter to Fall. These results were used to compute expected gains for an average national student population with the same grade level composition as the New Beginnings students.

Change in Students on Measures of Academic Progress (MAP)				
	Winter '04 – Fall '06		Fall '05 – Fall '06	
	English	Math	English	Math
New Beginnings	+17.5	+16.3	+7.5	+8.1
Estimated National Comparison	+7.6	+10.2	+5.4	+7.5

In both analyses, the observed gains on the MAP by the special education students in New Beginnings consistently exceeded the expected gains of average national student population from the NWEA normative study. In the first analysis (Winter 2004 to Fall 2006), the gains of the New Beginnings students exceeded the expected gains of the national population by 133% on the English test and by 60% on the Math test. In the second analysis (Fall 2005 to Fall 2006), the gains of the New Beginnings students exceeded the expected national gains by 39% in English and 8% in Math.

Conclusion

The preliminary evaluation of BMTA implementation in New Beginnings at Rollins School documented positive organizational and student outcomes. After BMTA implementation, the reported use of physical restraints of students by staff declined substantially and the observed

time on task in the classroom increased substantially. During this same time period, there was a greater relative use of in-school rather than out-of-school suspension and an increase in teacher attendance. This was not reflective of any district-wide or statewide patterns. At the same time, these preliminary results documented student gains in two important areas. First, student attendance improved. Second, student academic performance improved on both the state standardized assessment (MCAS) and a standardized academic assessment used by Lawrence (MAP). These results provided compelling evidence for continuing and expanding BMTA implementation in the Lawrence School District.