

B3: Brain, Body, Behavior



Exploratory Study Review

Developing Fundamental motor skills to spark the brain, build the body, and improve student behavior to increase academic performance.

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Executive Summary

Charlotte-Mecklenburg Schools (CMS) Health and Physical Education (HPE) Department have created a program called B3 (Brain, Body, Behavior) which is designed to help students develop the brain and body systems for academic and behavioral improvement through participation in movement, physical exercises, and sensory activities. The program has grown organically over the past three years mainly at schools where administrators buy-in to the benefits of movement integrated with teaching and learning. To date, there are twelve known schools that are implementing or in the process of implementing school wide B3 not only in classrooms but also in hallways, as labs, and in other areas of the school. B3 staff provide district training for anyone interested and has principal approval, but also directly to schools with onsite training and assistance with program set up.

In October 2018, the new Chief Academic Officer at CMS requested that data be collected on the B3 program to determine the usefulness and/or success of the program. Therefore, an exploratory study ensued using observations, interviews, surveys, and focus group methodologies. Observations and interviews were conducted at five schools and two trainings. For teachers and staff, survey data were collected from professional development trainings in the form of a retrospective pre/posttest survey. Results from an existing CMS survey, Insight, were analyzed on ten constructs that were developed to measure the school instructional culture and environment. An implementation survey was administered to staff of B3 schools and to those who had participated in district-training regardless of whether they work at a B3 school to determine the level of implementation of B3 among the staff and teachers at the schools. Student focus groups were conducted at four schools.

Results were consistently positive across all data collection methodologies. Interviews with staff at schools who implement B3 revealed high levels of buy-in and support for the program. Each school implements B3 in their own way; some schools have money to purchase materials while others use donations and whatever materials they can transform into B3 tools. However, the levels of enthusiasm were high no matter what type of resources the school had or didn't have. In the training survey, seven sets of items were tested around intentions to implement B3 once back at their school. All sets of items were statistically significant at $p < .05$. These results indicate that the training is having an impact on beliefs, perceptions, and knowledge of movement in the context of student learning and behavior. The implementation survey indicated high levels of

implementation among those who have had the training. Results of the Insight survey compared aggregate information of the implementing schools to the district average on ten instructional and cultural constructs. In all instances, the B3 schools staff scored higher than the district average. Lastly, the student focus groups not only revealed the components of B3 the students liked, but also benefits beyond the actual activity that result in social constructs such as no bullying, acceptance of peers, and less stressed students.

Introduction

Charlotte-Mecklenburg Schools (CMS) Health and Physical Education (HPE) Department have created a program called B3, which is an acronym for Brain, Body, Behavior. The program is designed to help students develop the brain and body systems for academic and behavioral improvement through participation in movement, physical exercises, and sensory activities. The program was designed by three staff members in collaboration with participating CMS school staff. This type of program is supported by scholarly research.

Martin & Murtagh (2017) conducted a meta-analysis to review the literature and synthesize findings across studies to determine effectiveness of similar programs that incorporate physical activity and movement with academics. Fifteen studies met the inclusion criteria and were analyzed. All were elementary school levels. Ten studies reported physical outcomes, of which 6 had medium to large effect sizes. Four studies that measured learning outcomes also showed positive effects of varying proportions. Lastly, teachers were satisfied with the programs and increased on-task behavior by students. In another review, Norris, et. al. (2015) found that programs such as these had either great significant outcomes to no differences. None of the studies indicated the activities and programs were detrimental to students; which is just as important as stating positive effectiveness since one of the reasons commonly cited for not implementing such activities is the loss of academic time. Additional studies found that incorporating a movement program increased on-task behavior by students (Stoepker, Dauenhauer, & McCall, 2018; Kolbo, et. Al, 2017).

The CMS version of movement and physical exercise incorporation into the classroom and school culture include a variety of activities such as labs, structured lessons, and environmental factors. The CMS schools that are implementing B3 are in various stages of incorporating the program, but in all instances, an observer can see some levels of consistency and fidelity of implementation within the various participation stages.

Almost all schools that implement B3 use a sensory lab as a special rotation or incorporate sensory exercises within the classroom structure. "Brain Dances" are used to get students ready to learn. "Brain Breaks" is a common word used in the B3 schools. These breaks can take on different forms such as a student leaving the classroom to go into a hallway to jump rope or exercise on their own to structured breaks inside the classroom as directed by the teacher. Every teacher and school have a different way of implementing the variety of B3 components, but in the grand scheme of things, they are all incorporating the philosophy of movement and physical activity for the purposes of enhanced teaching and learning.

Overview

B3 activities, in whatever form used, focus on one of four areas:

- Cardiovascular: A specific set of aerobic activities to help students by
 - Increasing their cognitive responses
 - Increasing their attention span
 - Improving their mood
 - Developing their position in space
 - Self-regulating their hyperactivity
 - Raising their endorphin levels
- Sport Training: Sport Related activities focused on
 - Cross lateralization activities
 - Hand, eye, foot coordination activities
 - Bi-lateral integration
 - Self-regulation
- Balance and Flexibility: Specific set of core activities to help students who
 - Bounce a lot
 - Fidget and wiggle
 - Spin, rock, sway, or roll
 - Hang upside down on chairs or furniture

- Muscular Strength and Endurance: Specific set of upper and lower body exercises to help students who
 - Crave heavy lifting
 - Have “Noodle” bodies
 - Sit in a “W” position
 - Have difficulty knowing how much pressure is needed to perform a task (Ex: holding a cup of water or turning a page in a book)

To assist schools with implementation of the components of B3, “Task Cards” (appendix C) were made specially for each grade level and provided to teachers upon completion of B3 training. The task cards can be used by placing them around the classroom for students to use as a station during a movement break or as a classroom activity led by the teacher (or by projection on a screen).

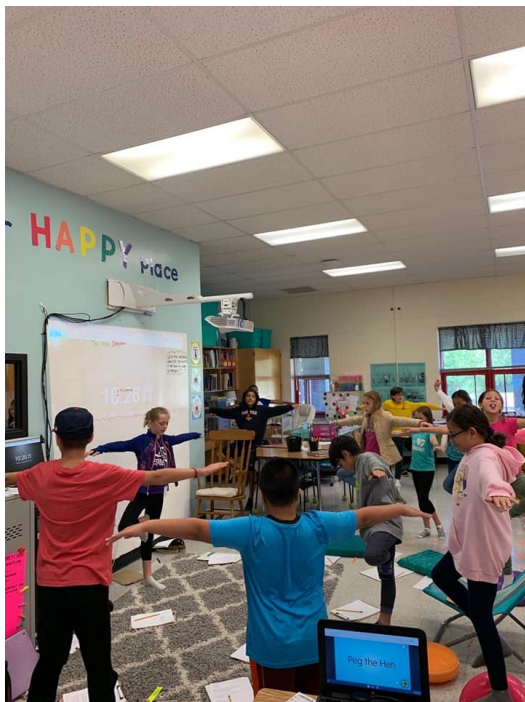
B3 staff have also provided videos that can lead the movement activities such as a “Brain Dance.” Resources are freely available to schools who choose to integrate movement into the daily classroom and school experience.

Because of the immediate benefits, according to teachers, in on-task behavior and student focus, B3 is a welcomed program in schools in varying degrees. Some schools’ entire culture incorporates the B3 philosophy whereas newer schools are slower to incorporate all components that could be used.

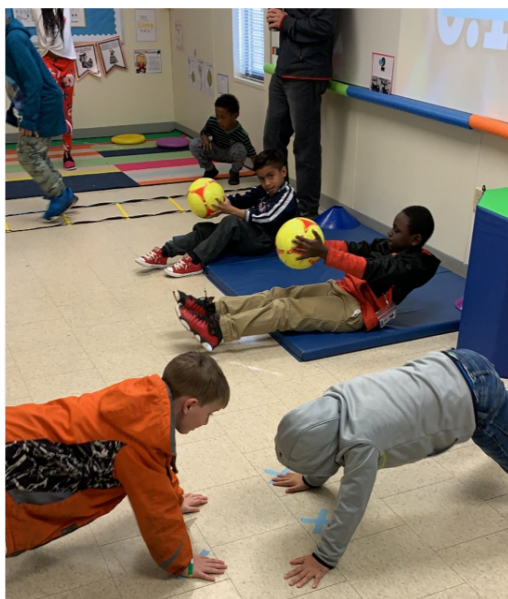
The newer schools are building the foundations for a school-wide culture and are taking steps to move the teachers, staff, and environmental supports in that direction. In all schools, it appears that the physical education teacher or B3 teachers (whatever their background) are elevated among the teaching staff...often sought after for intervention assistance or used as a resource for the classroom teacher.

B3 Activities

B3 in the Classroom



B3 Lab



B3 in the Gym



B3 Sensory Hallways



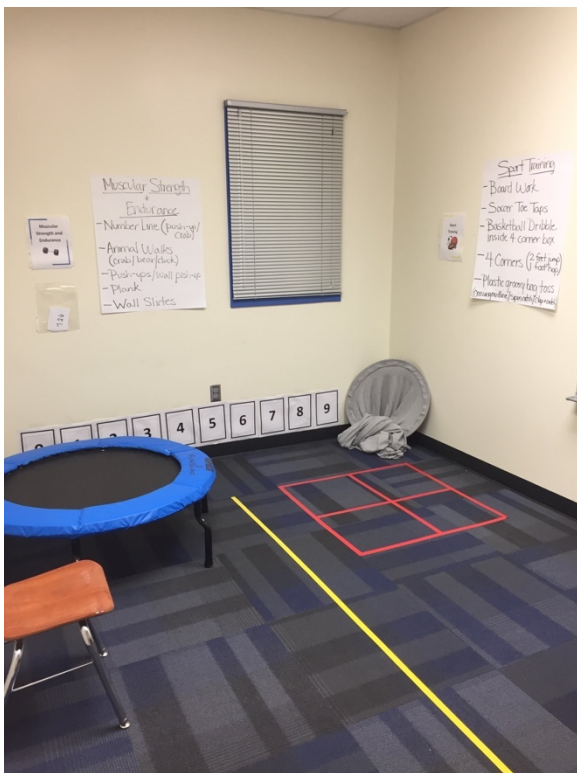
B3 in the Hallway



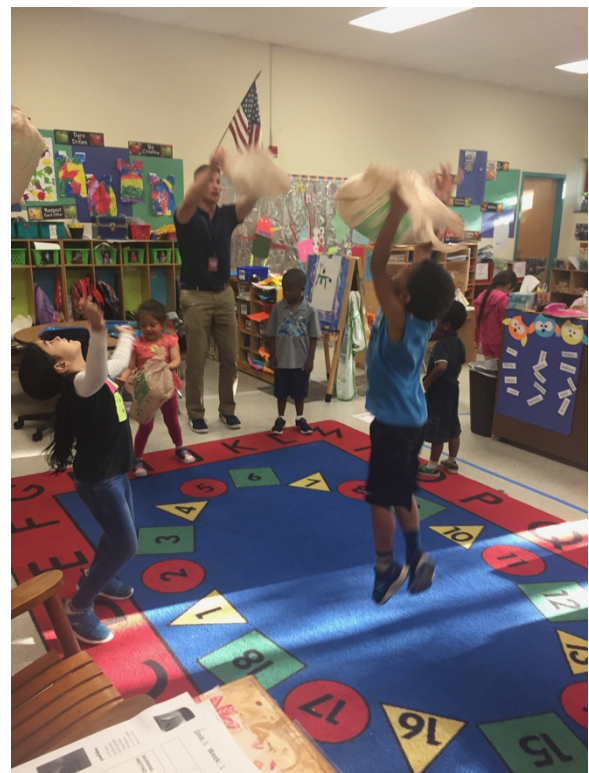
B3 in a Tutor Room



B3 in PreK



B3 in the Media Center



Context

For the start of the school year 2019-2020, CMS has adopted a new strategic plan to guide teaching and learning moving forward. Along with this new strategic plan, CMS has adopted new curricula for English Language Arts and Math. Prior to this adoption, there was no standard curriculum being implemented across the district. In 2018-2019 a new Chief Academic Officer was hired and was wanting to understand the various programs/initiatives underway. To that end, an evaluation of the B3 program was requested in October 2018.

Given the school year was already in progress, the evaluation was limited as to what controls and structures could be set in place. Therefore, an exploratory type evaluation was conducted to understand the program, the perceptions of teachers, the usefulness of B3 training, and the student experience with a B3 school and classroom. Student outcomes were not part of the exploratory study because: 1) no common curriculum was being used in the classrooms thereby introducing variance that would not be able to be explained in any student results, 2) control or comparison groups were not identified to be able to use in contrasts with the B3 schools, and 3) there was no baseline context or data for the schools that were considered to be implementing B3. The results of the data that were examined were positive and warrants a more controlled, structured, and formal research study, if CMS administrators decide that B3 should be an option as part of the teaching and learning tools available to teachers and school staff.

The new 2024 strategic plan encompasses a trio of documents that guide our commitments, goals, strategies, and actions for our work. In one of the trio CMS publications, "We Are Ready," the B3 program as a teaching and behavioral school and classroom strategy, aligns with components "We demonstrate independence," "We collaborate effectively," "We are socially, emotionally, and mentally healthy," "We use our skills and knowledge to maintain and enhance our physical health," and "We find meaning and purpose through the arts, including dance, music, theatre, and visual arts."

The B3 program has grown organically over the past three years. B3 staff and some school administrators embraced the teachings of Mike Kuczala, author of several books relating to teaching and learning through movement. They began creating and developing B3 activities and materials (appendix C). B3 staff started offering formal training and several schools began going school-wide with a movement culture. One

school received a grant in which different types of seating options were purchased and made available to classrooms, including bike desks whereby students can peddle a bike while working or listening to the teacher. Training has been offered for several years with full day and half day offerings throughout the entire 2018-2019 school year. As of this school year, several schools have a culture of B3 throughout including in the hallways, media centers, recess areas, specialty areas, as well as classrooms. Principals have traded positions to hire full time staff to focus on training throughout the school for teachers and to lead specials such as sensory labs. Additionally, in several schools' entire spaces have been devoted to B3 including a lobby area, a mobile unit, classrooms, and areas in media centers.

It is important to note that implementing the B3 program or components of the B3 program are completely optional. There has been no push from central office for B3 in CMS schools. Nevertheless, the growth of the program has been rapid now extending to 12 schools where the principal supports the concept with on-going training, resources, and positive attitudes towards students moving around a classroom. More schools have been reached through training with teachers, but that does not necessarily change into a school-wide culture without administrator buy-in. B3 staff continues to promote the program and word of mouth drives many teachers asking for the training.

Methods

Data was collected from teachers, staff, and students through observations, interviews, surveys and focus groups. Observations and interviews were conducted at five schools and two trainings. The informal observations in classrooms and interviews were conducted at the beginning of the evaluation to gain an idea of level of implementation for baseline purposes and to determine school specific strategies. Additionally, matters related to buy-in and levels of enthusiasm toward implementing the program were also inquired of administrators, staff, teachers, and students.

For teachers and staff, survey data were collected from professional development trainings in the form of a retrospective pre/posttest survey. The rationale behind using a retrospective methodology was based upon the premise that novice B3 teachers don't know what they don't know. For instance, a teacher with no B3 training may very well believe they integrate movement into their day or that they understand the relationship with movement and learning until they attend the B3 training. After receiving training, they may then become aware they didn't know what they thought

they did. Therefore, a traditional pre-test, post-test survey would not work. A “Strongly Agree” response in a traditional pre-test would have a different meaning on the post-test following B3 training because the participant’s frame of reference has been altered. All items were presented at the end of the training using a “Prior to...” and “After...” type questioning in seven sets of items. Movement in levels of agreement were tested in the seven sets of items using dependent t-tests.

Toward the end of spring 2019, an email survey was sent to participants in the trainings and all teachers at the 12 B3 schools, even though the 12 schools are at varying levels of implementation, to determine the level of implementation of B3 among the staff and teachers at the schools. The survey was emailed to the CMS email account using a survey platform entitled K12 Insight. The survey was anonymous, but a follow-up feature within the K12 Insight platform allows for follow-up emails to be sent to non-responders without the survey administrator knowing with whom the survey is being sent. Three reminders were sent to non-responders.

Using the Insight survey results, an existing instructional culture and environment school survey that is completed by teachers, comparisons were made between the aggregate of the B3 schools to the district aggregate on ten constructs. The survey is implemented three times a year; however, the Fall and Spring results are presented.

Student data were collected in the form of focus groups from four schools (three high implementing schools and one emerging implementing school). School administrators organized the focus groups with students ranging in grades from 3 – 5 from different classrooms. The questions were the same across the groups except when further explanation was needed related to student responses. Two to three interviewees were part of each focus group.

B3 Training Results

Professional development was offered in half day and full day increments throughout the 2018-2019 school year. At the end of the training, an online survey was administered for participant’s who had not received prior B3 training. The first section of the survey used a retrospective pre-test methodology, with an “Agreement” Likert scale. The rationale behind using a retrospective methodology was based upon the premise that novice B3 teachers don’t know what they don’t know. Movement in levels of agreement were tested in the seven sets of items using dependent t-tests (Figure 1). All seven sets of items were statistically significant at $p < .05$ (Table 1). These results

indicate that the training is having an impact on beliefs, perceptions, and knowledge of movement in the context of student learning and behavior. Having a positive impact on beliefs, perceptions, and knowledge is a precursor to the lessons learned being implemented in the classrooms and schools; subsequently, an implementation survey was administered later in the school year to those who had attended the training. There was also a section of the training survey where open-ended comments were allowed. The overwhelming majority of comments were positive about the training and the B3 staff. Unedited comments are presented in Appendix A. Below are a few comments to highlight the level of enthusiasm of the trainees:

- AMAZING is not even the word. I've been to hundreds of trainings and I can say this is definitely top 5! Everyone needs this training.
- I didn't really know what I was signing up for, but I am so glad I did. I have boys who are very active. Now, I don't have to fuss, but implement these strategies into my daily routine. I believe it.
- This was one of the best PDs I've ever attended. It was very positive, informative and useful. I will definitely use this in my classroom starting on Monday!
- I LOVED the team that presented to us! They are very engaging and entertaining. I appreciated learning about all of the planes of the body. Doing the Brain Dance felt invigorating. Kids will love it!
- I enjoyed the training. I fully understand how important movement is for kids. I will definitely incorporate B3 into my classroom.
- Very beneficial and informative! Made me look again at some of my students with a different perspective!
- Those 3 were amazing and definitely set the stage to engage!

Table 1

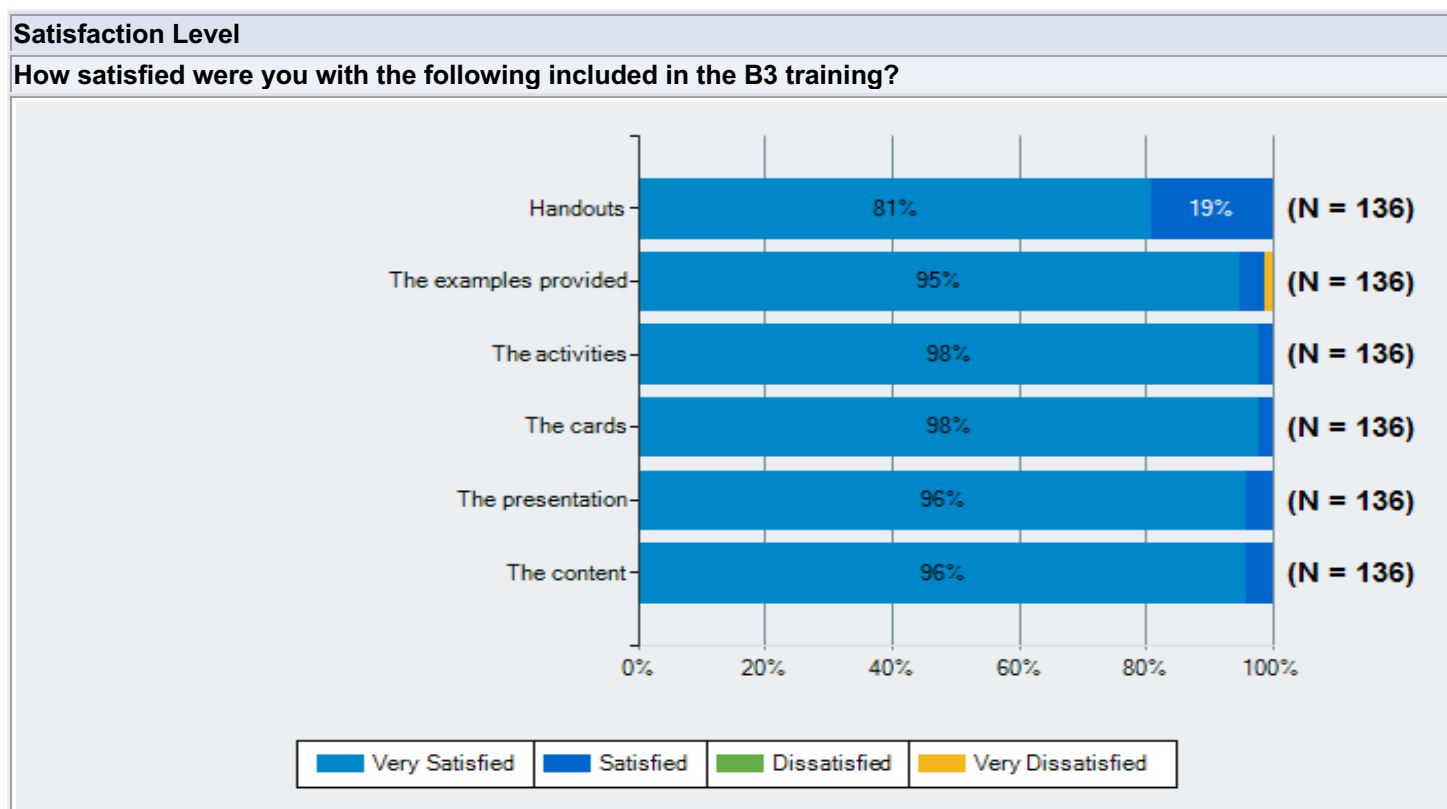
Table 1 Retrospective Pre-Test/Post-Test Training Results for Novice Teachers and Staff				
*Items	Strongly Agree	Agree	Disagree	Strongly Disagree
Prior to participating in B3 training, I integrated movement into my lesson plans.	13.3%	52.6%	27.4%	6.7%
After receiving B3 training, I intend to integrate movement into my lesson plans.	91.1%	8.9%	0.0%	0.0%
Prior to participating in B3 training, I understood the positive relationship between physical activity and brain function.	25.9%	52.6%	17.8%	3.7%
After receiving B3 training, I understand the positive relationship between physical activity and brain function.	95.6%	4.4%	0.0%	0.0%
Prior to participating in B3 training, I incorporated activities that made students cross the midline.	12.7%	32.8%	44.0%	10.4%
After receiving B3 training, I plan to incorporate activities that made students cross the midline.	91.8%	7.5%	0.7%	0.0%
Prior to participating in B3, I allowed my students to take brain breaks as needed.	16.4%	54.5%	26.1%	3.0%
After receiving B3 training, I plan to allow my students to take brain breaks as needed.	86.7%	13.3%	0.0%	0.0%
Prior to participating in B3, I understood the causes of student fidgeting.	10.4%	37.3%	44.8%	7.5%
After receiving B3 training, I understand the causes of student fidgeting.	85.9%	14.1%	0.0%	0.0%
Prior to receiving B3 training, I believed there was a correlation between exercise and brain functioning.	23.7%	58.5%	16.3%	1.5%
After receiving B3 training, I believe there is a correlation between exercise and brain functioning.	94.0%	6.0%	0.0%	0.0%
Prior to receiving B3 training, I believed that exercise decreased distractability in students.	24.4%	57.0%	17.0%	1.5%
After receiving B3 training, I believe exercise decreases the distractability in students.	95.6%	4.4%	0.0%	0.0%

*All pre-post tests were statistically significant at $p < .01$.

For improvement purposes, survey items were included to provide feedback to B3 staff related to training materials, handouts, and resources provided to the attendees

(Figure 2). The scale used was a "Satisfaction" Likert scale. Over 95% of the participants were "Very Satisfied" with the activities, examples, presentation, content, and the set of task cards provided to each individual attendee. While participants were satisfied with the handouts when the "Very Satisfied" and "Satisfied" categories are combined, there is a difference in the level of "Very Satisfied" from the other items, prompting conversation and handout review by the B3 staff. With the exception of "The examples provided," all other items received 100% combination of "Very Satisfied" or "Satisfied" responses. All content materials were provided to the attendees, as well as a library of resources, videos, references, and contact information for future collaboration.

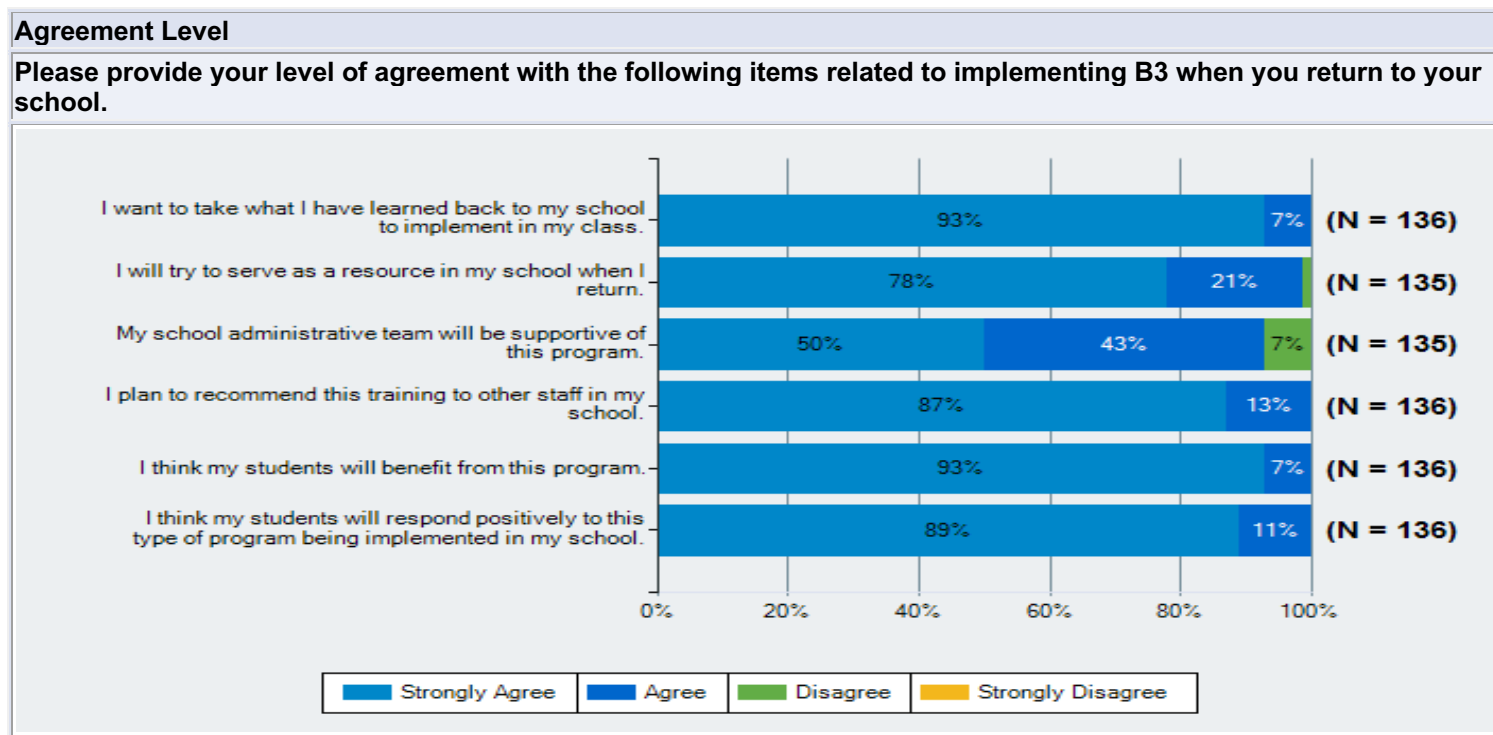
Figure 1



In an effort to gauge intention to implement B3 after the training, a section of items was devoted to what will take place once the participant returns to their school (Figure 3). An "Agreement" Likert scale was used. The results were consistently positive, but there was some variance in the degrees of positive responses. Desire to take what they have learned back to their class and the belief that their students would benefit from the program were the highest. While still a positive result overall (93% "Agree" or

“Strongly Agree”), “My school administrative team will be supportive of this program,” received the least percent of “Strongly Agree” responses with 7% responding “Disagree.” Of interest, the administrator of the school had to give permission to the teacher to participate in this professional development and obtain a substitute for the teacher absence in class.

Figure 2



Insight Survey Results

Each year, The New Teacher Project (TNTP) administers an Insight survey three times a year that measures the instructional culture and environment of the school. Ten constructs are created by combining a series of items that represent that aspect of the instructional culture. The constructs are:

- Workload
- Observation & Feedback
- Professional Development
- Leadership
- Evaluation
- Learning Environment
- Academic Expectations
- Instructional Planning for Student Growth
- Diversity, Equity, and Inclusion
- Peer Culture

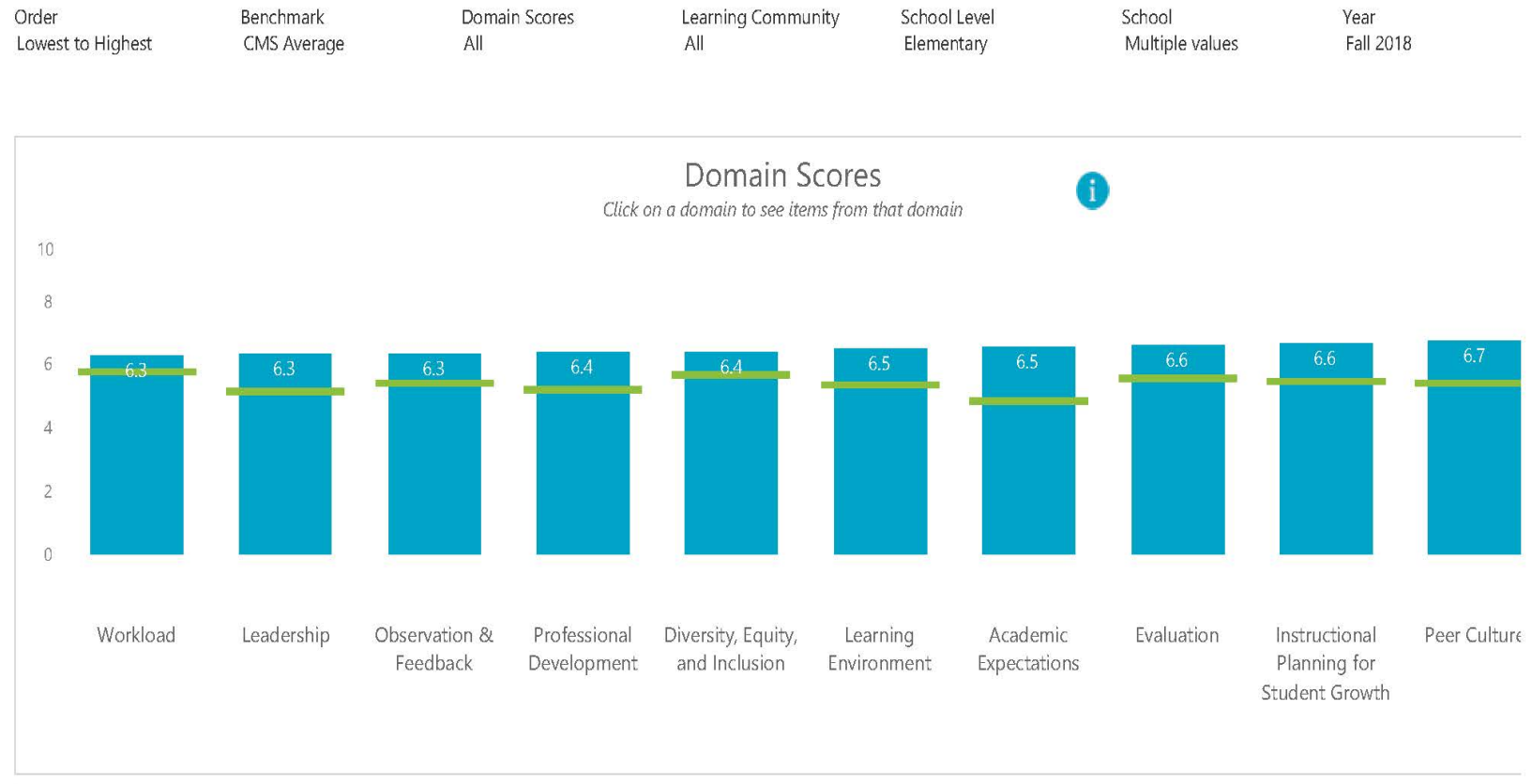
For the purposes of this exploratory study, the known B3 schools were combined and compared to the rest of the district on the ten constructs to determine if there was any discernable difference in the perceptions of teachers in a B3 school versus those who are not. In all instances, for both time periods, the B3 schools had higher instructional and environment scores for each construct when compared to the district results. Fall 2018 and Spring 2019 results are presented below. The line in each bar is the district mean for that construct.

B3 Schools versus District Fall 2018

Figure 3

Focus Areas

Understand your schools' instructional culture. This tab provides teachers' perspectives on different aspects of instructional culture, and how they compare to the perspectives of teachers at other schools.

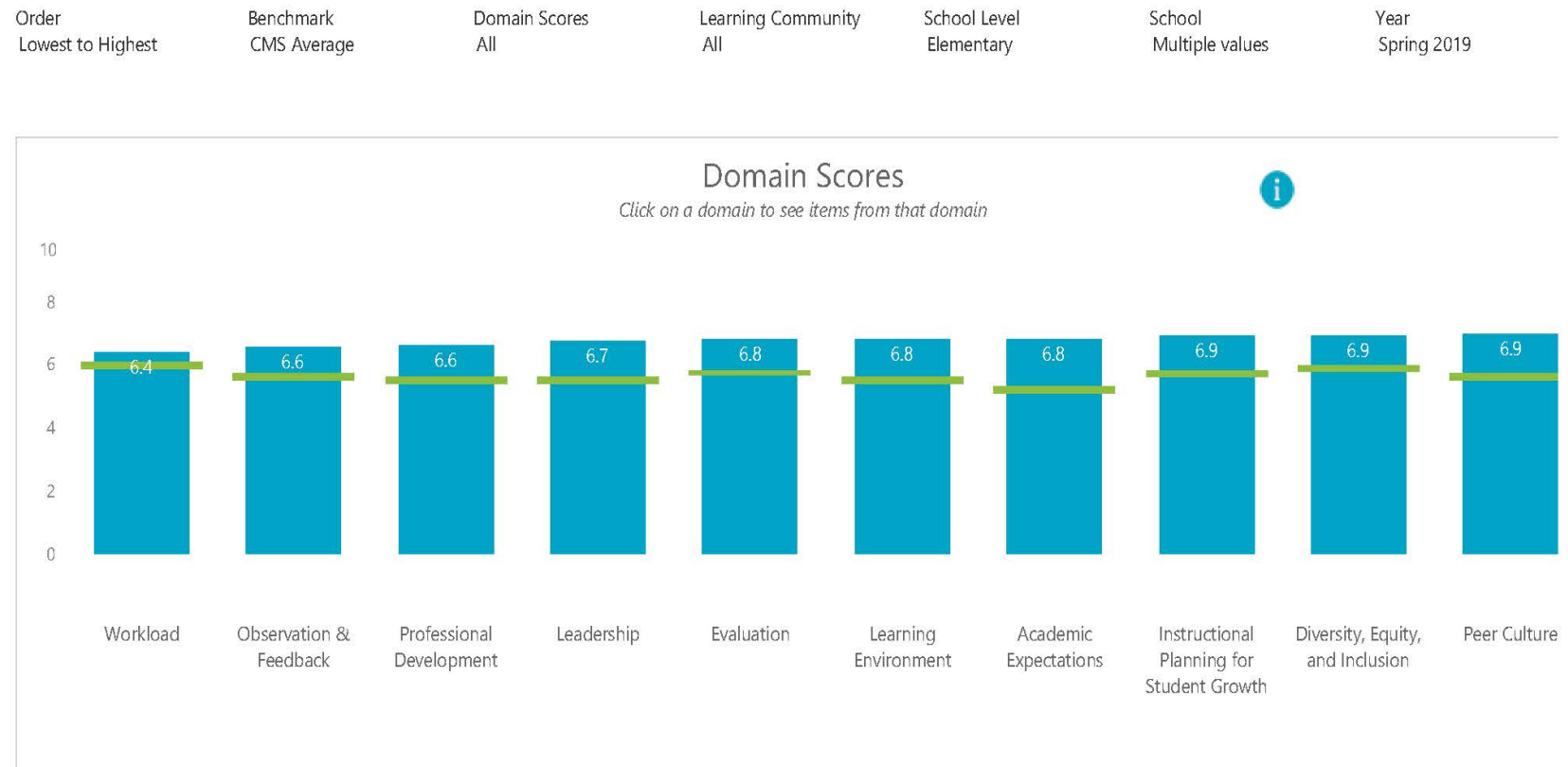


B3 Schools versus District Spring 2019

Figure 4

Focus Areas

Understand your schools' instructional culture. This tab provides teachers' perspectives on different aspects of instructional culture, and how they compare to the perspectives of teachers at other schools.



Survey Results: B3 Implementation

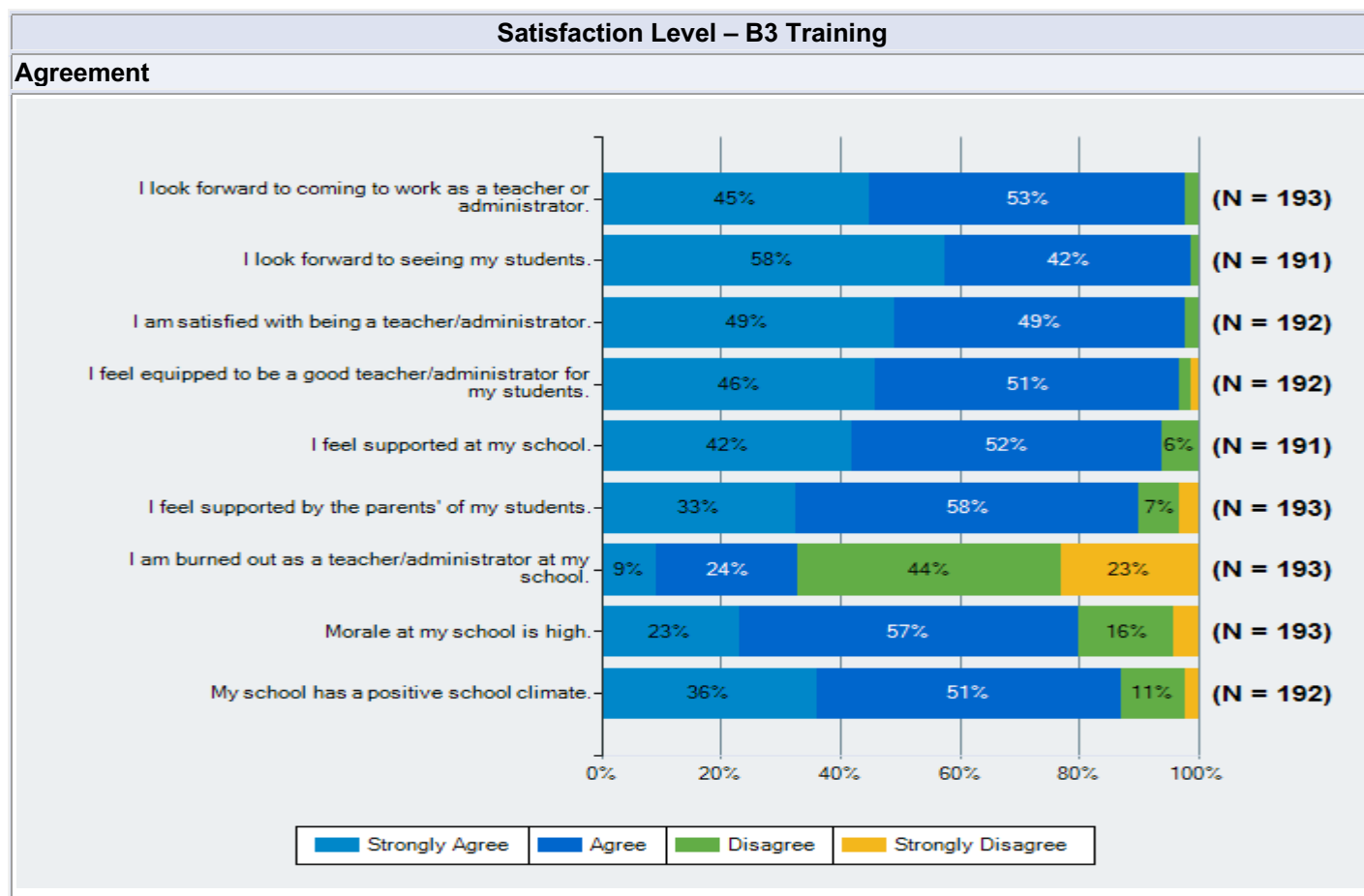
In the spring of 2019, an implementation survey was emailed to all teachers who had attended the training during the school year and to all teachers at twelve schools whose principals support a B3 environment. Out of 848 surveys sent, only 228 were completed (27% response rate). While the response rate is not high, the results are presented as part of this exploratory study to determine if there are any items that stand out that could be further investigated.

Figure 5



The levels of implementation at the twelve schools vary: 1) not all teachers at some schools have received the training, 2) not all teachers at some schools buy in to the B3 concept, and 3) it is a new program and staff are slowly incorporating B3 activities. Therefore, the survey results were disaggregated into 2 groups, those who had received B3 training (N = 193) and those who have not (N = 32). There were no extremely different responses between the groups for the items that were relevant to both groups. But it should also be noted, there weren't many respondents who completed the survey who had not received B3 training. In future studies, it might be worth pursuing administering the survey to teachers in schools with no B3 at all as a comparison.

Figure 6



The majority of both groups responded that they offer flexible seating in their classroom or school. This finding is not surprising as observations at the schools indicate that flexible seating options are abundant across classrooms and supported by

administrators of schools who are attempting to or are successfully implementing B3 across the school. There are varying levels of flexible seating where one class might have balls and painted tires versus another class that has desk bikes. The variation is due in large part to funding. Several schools have received grant money which they invested in equipment. Other schools depend on donations or make the best of items they can recycle, such as tires turned into seats or buckets that they fill with pillows and blankets.

Figure 7

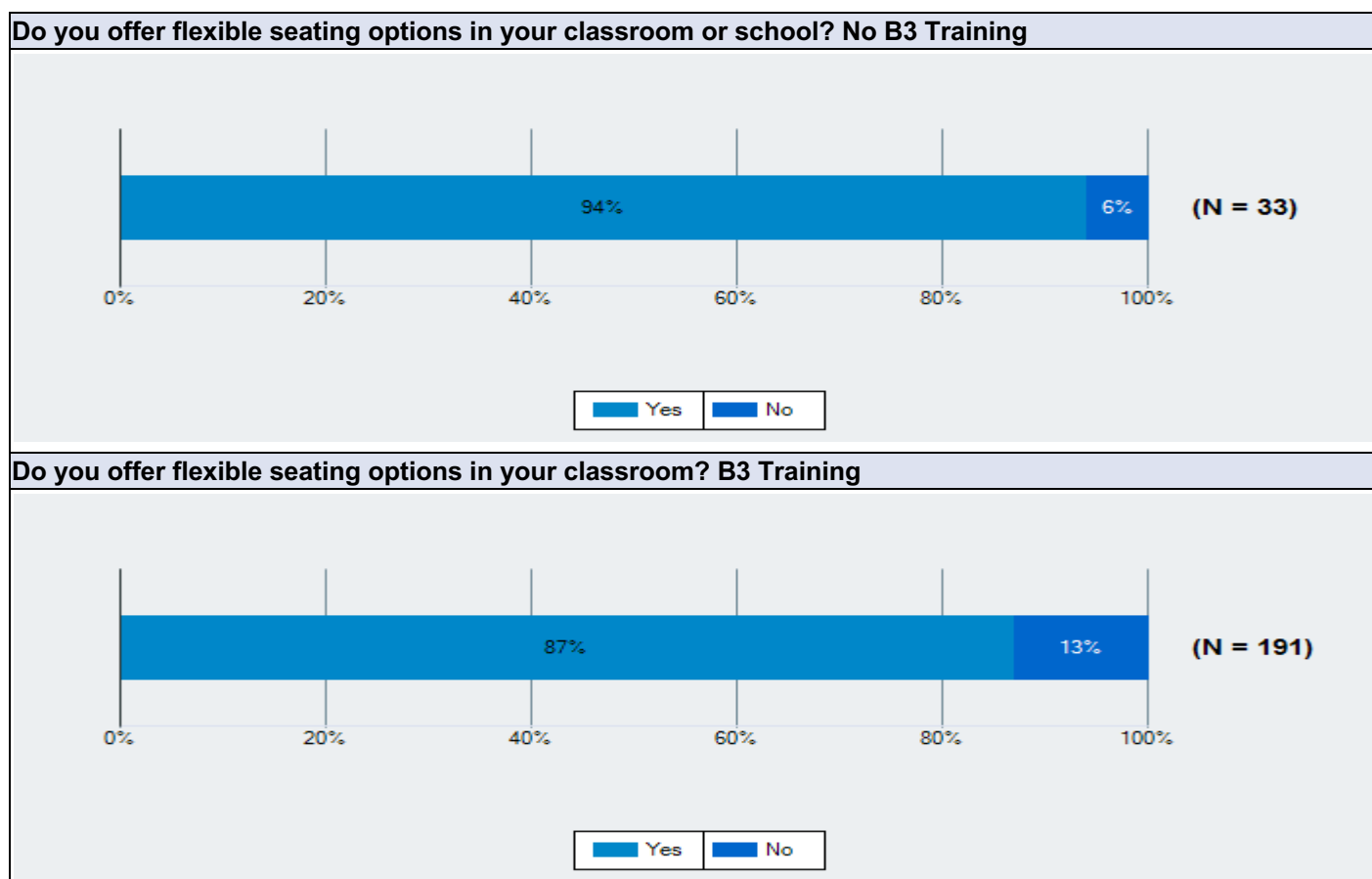


Figure 8

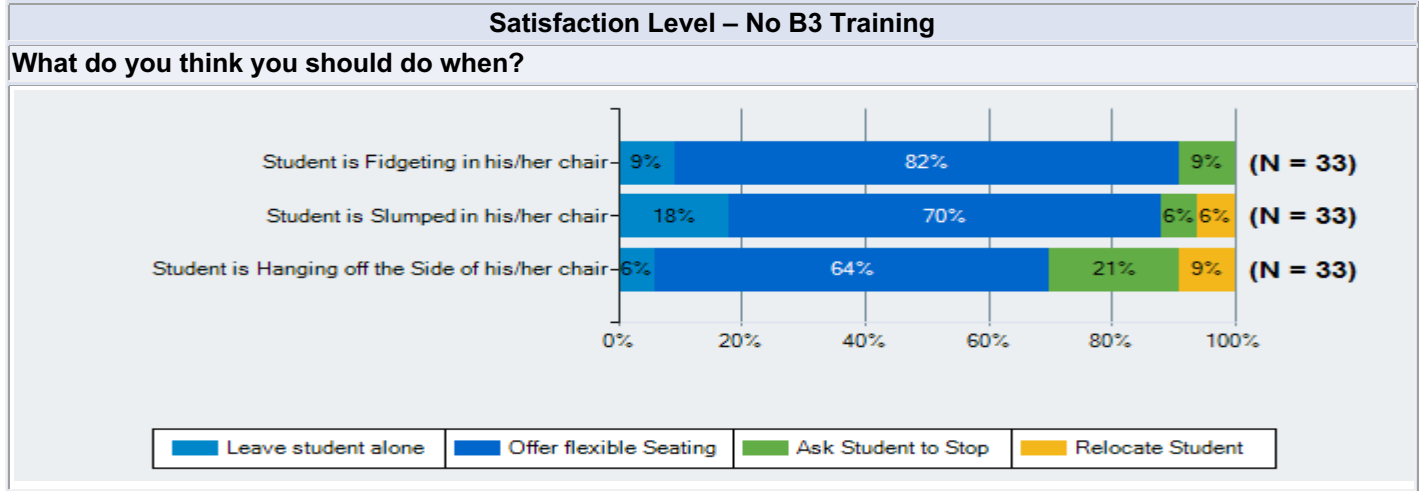


Figure 9

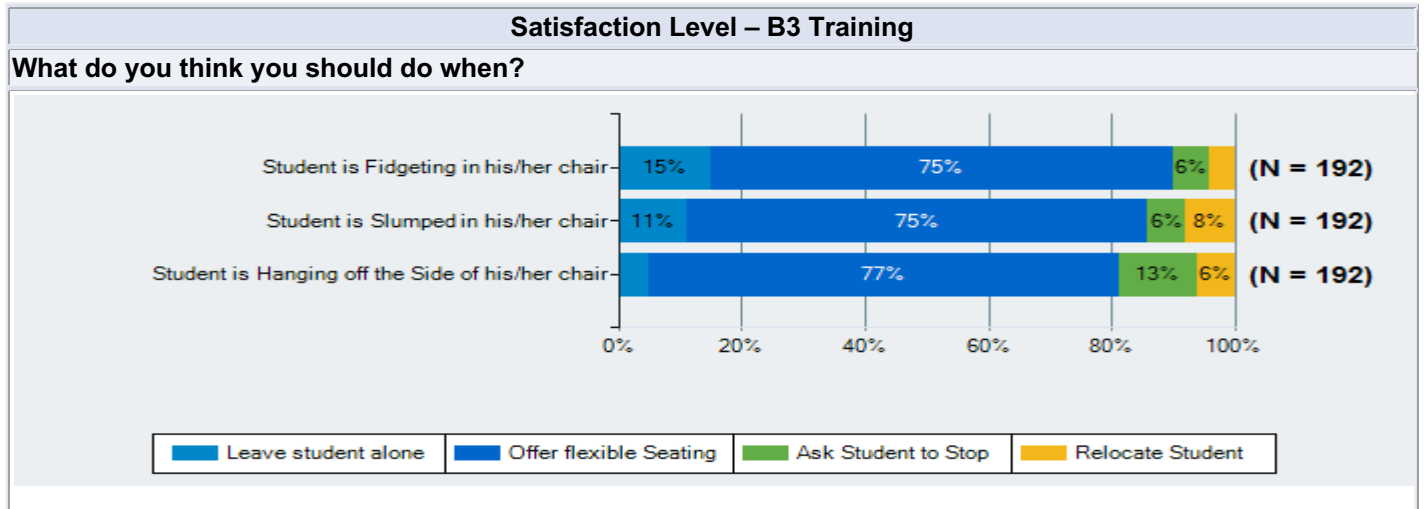


Figure 10

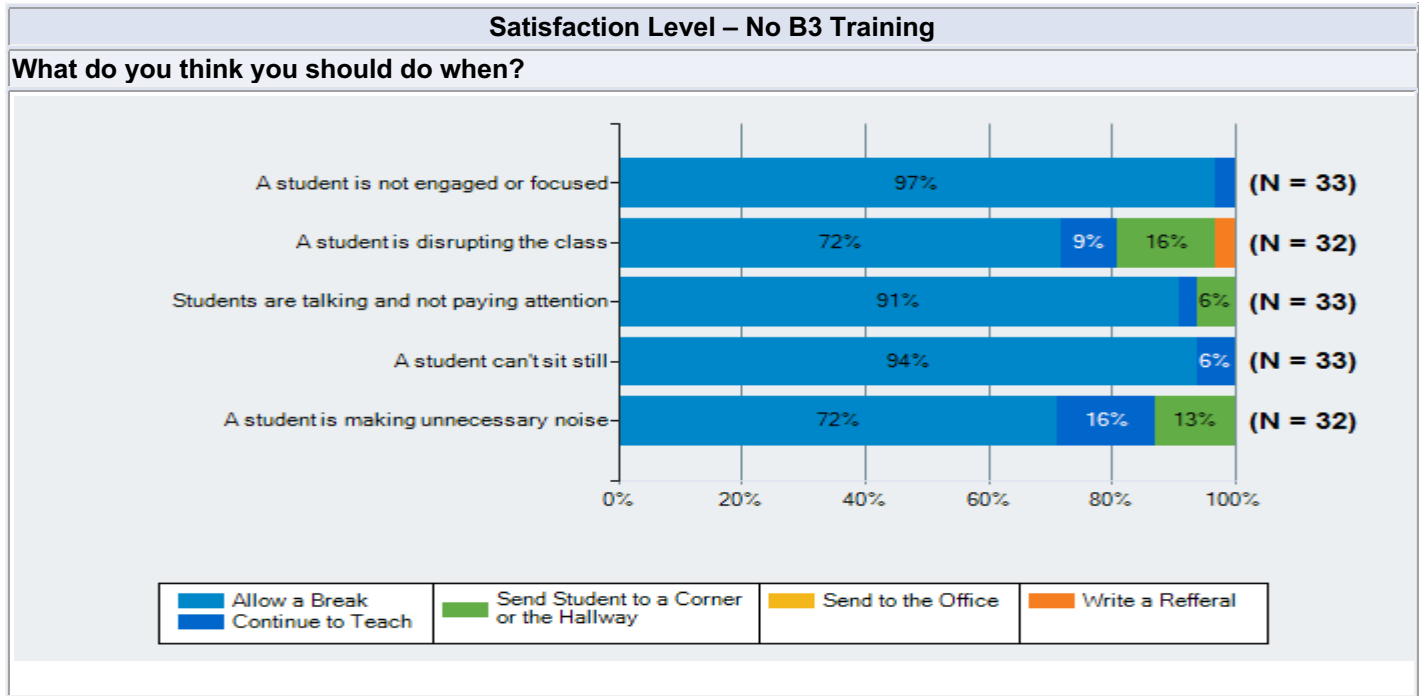
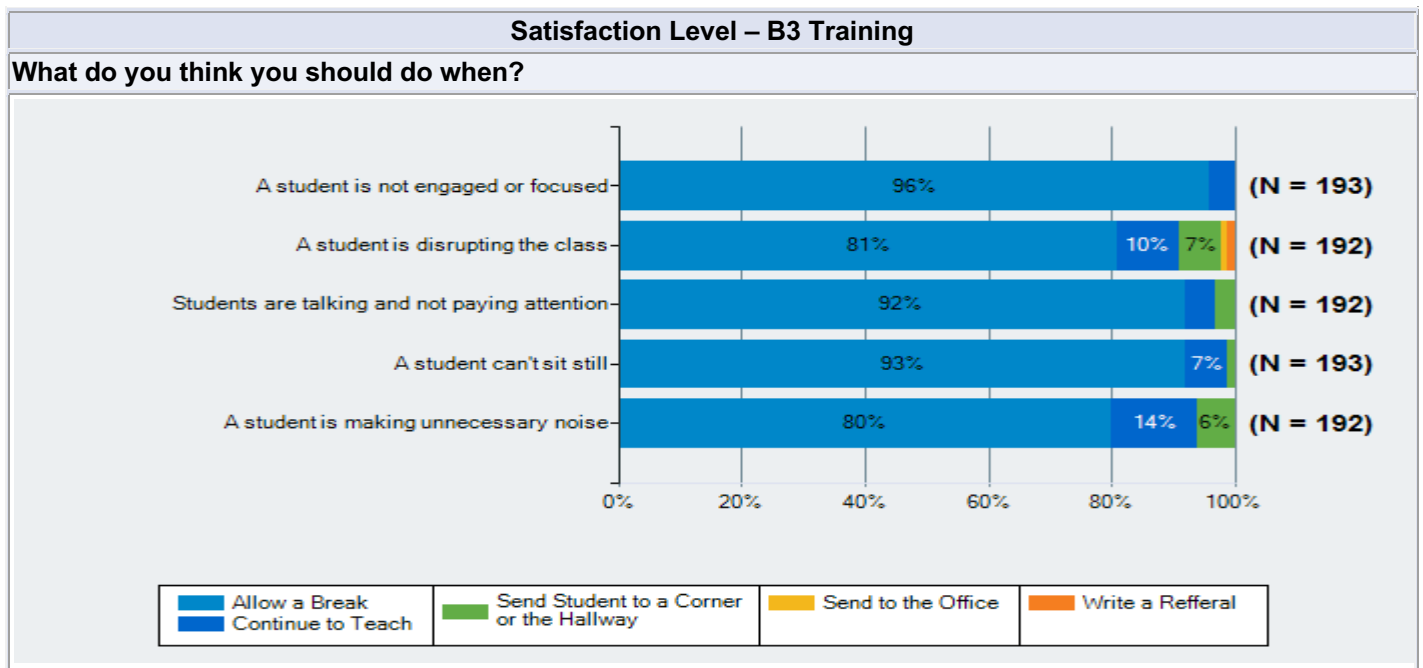


Figure 11



A section of the survey was visible to only those participants who have received B3 training. Items specific to B3 implementation were presented to get an idea of teachers' perceptions of the impact of B3 on the classroom as well as the level of implementation of activities used by the teacher. The results were overwhelmingly positive with respect to students enjoying the activities, being more focused, the teacher being supported, activities making teaching fun, and ease of B3 implementation.

Based on the results of the level of implementation of different activities, 89% of the respondents use "Brain Breaks" daily followed by 79% using sensory movements. There is high self-reported use of all the B3 activities across the board. The task cards have the highest percent of respondents stating they never use them; however, it is possible that some of the respondents may have received training at the school by a staff member and subsequently did not receive a pack of task cards that are given out at the formal training from B3 staff.

Figure 12

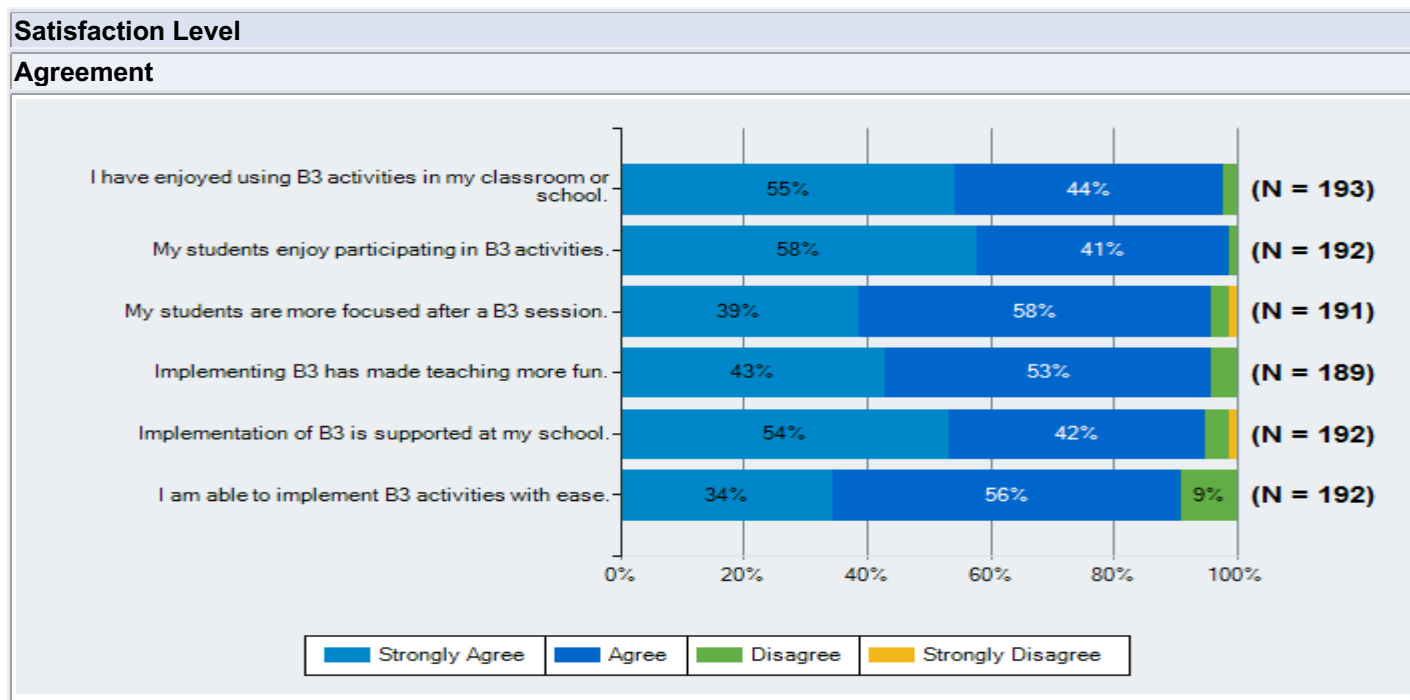
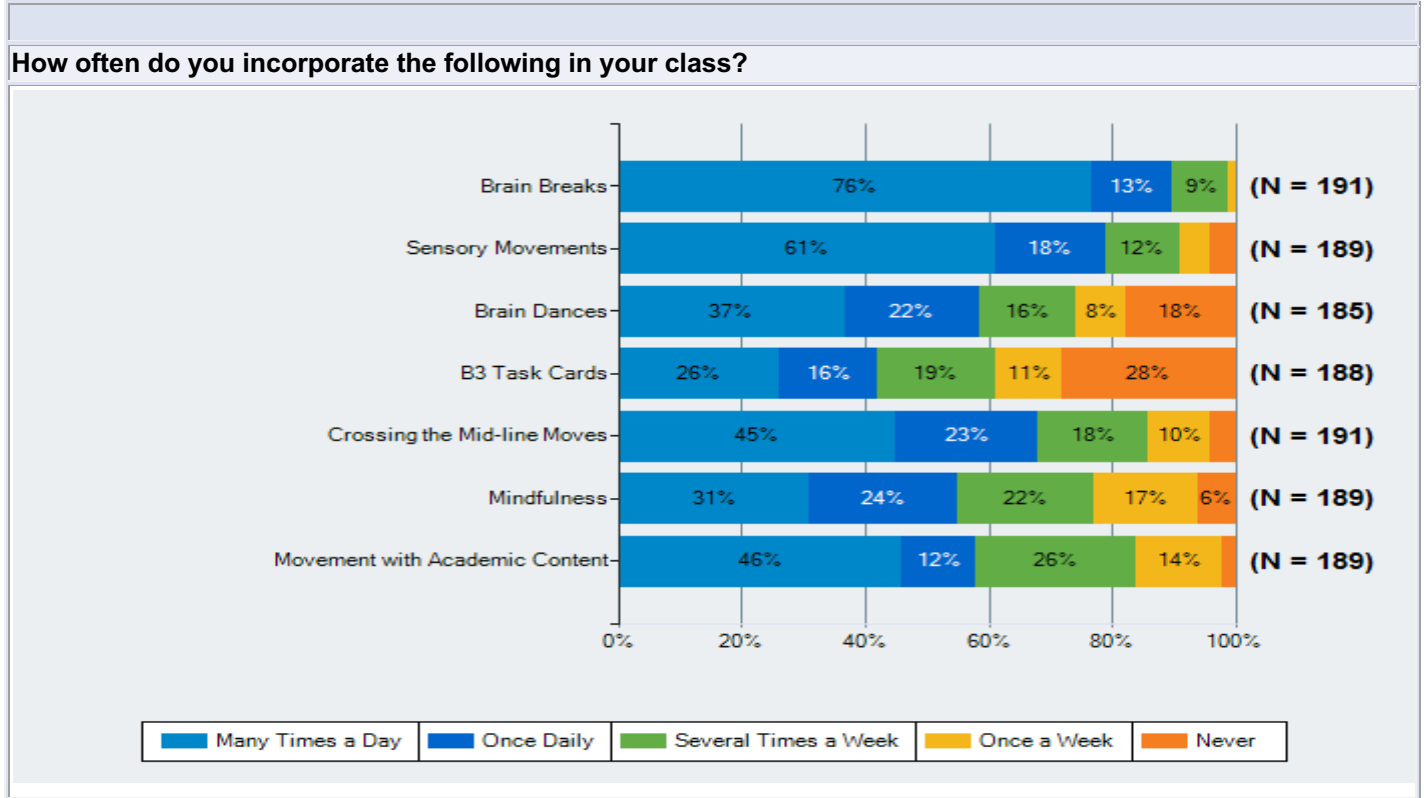


Figure 13



Teacher Open-ended Responses

Lastly, an open-ended item asked the respondents to provide examples of how B3 has impacted their teaching or students. The responses were overwhelmingly positive about the benefits to the classroom and students. Unedited responses are provided in Appendix B. A few of the responses are listed below:

- Increased student engagement, decreased behaviors!
- Students are more focused and using B3 has made learning more fun for them.
- Fast way to reset focus and energy levels so we can get back to learning

Student Focus Groups

Student focus group results were overwhelmingly positive. The most common themes across questions related to what the students like about their school were:

Teachers

- They make learning fun, not stressful
- They are nice
- They explain things and are helpful
- The way they teach helps understanding
- They are encouraging

Flexible Seating

- Can get comfortable
- Freedom to move and choose seats; don't have to stay in the same seat
- Different types of seating were named:
 - Bungee seats
 - Couches
 - Rocking chairs
 - Pillows
 - Wiggle stools
 - Beach fold out chairs
 - Low tables
 - High tables
 - Balls

Interactions

- Kindness
- No bullying
- Accepting
- The seating and movement allows them to talk, and talking is ok

Classroom/B3 Labs Climate

- Relaxing and calming
- Focus is better after movement
- Helps get ready to learn
- Releases stress
- Gets energy out
- Energizing
- Feels free
- Concentration is better after getting the energy out

Emotions after Movement

- Happy
- Relaxed
- Not stressed or nervous
- Confident, sharpened, focused
- Calm
- Feels good

How they Self-Regulate

- Brain breaks
- Take a walk
- Jump rope
- Hula-hoop
- Trampoline
- Stretch
- Breathing exercises

Favorite B3 Activities (note: students used terms and activity names as taught in the B3 trainings)

- Spinner boards
- Go Fetch
- Trampoline activities
- Domes
- Balance boards
- Stomp and catch
- Scooter pull
- Dice and board games
- Blocks
- Glitter jars

There are some real inferences that can be made based on comments made across the questions. Over and over students commented on how friendly, nice, kind, etc. their school is from the teachers, staff, to their fellow students. It stands to reason that moving around the classroom all day, having to converse with other students to determine who sits where, having to partner with other classmates during B3 activity breaks (i.e. opposite hand plank taps), and having an overall level of happiness about

your environment would lend itself to a collaborative classroom environment. Students also have the ability to move to a place where they are comfortable, thus lessening any impact of another student irritating them, which could lead to fewer student quarrels and less stress. Statements such as, "We have no bullying," or "We are accepting of each other," were not uncommon in the focus groups.

The ability to move, interact, self-regulate, getting the energy out versus fighting sitting still, and partnering with classmates inherently teach skills that make for a healthier, less stressed student and a friendly classroom environment. The students in the focus groups were overwhelmingly enthusiastic and loved their school. There were many comments around learning: how much fun learning was in their school; how their teachers helped them when they didn't understand; progress in learning was similar to progress in the activities in that growth in both were celebrated; and that they own their progress. Students had methods, and could name their methods, of regrouping when they felt like they were losing concentration (ex: deep breathing, crossing the midline, stretching in the seat, meditation, drawing maps such as figure eights to run fingers across, and staying calm).

Conclusions

Results representing B3 were consistently positive across all data collection methodologies among all stakeholders: administrators, staff, teachers, and students. Given that interest in B3 data and a review of the program began after the 2018-2019 school year started, a structured and controlled evaluation was not feasible. Therefore, this exploratory analysis sets the stage for future work should CMS administrators want to learn more about the effectiveness of B3, more specifically regarding student outcomes. At the very least, the surveys that were developed and implemented for this exploratory analysis can be used by B3 staff throughout the upcoming school years, especially as the program continues to grow and the materials/resources are frequently improved. Should there be interest in continuing an evaluation with more controlled data collection methodology and analyses, it is strongly suggested that an external partner be identified to work alongside the district to establish effectiveness levels of the program.

Appendix A

Open-ended Comments from the Retrospective Pre-Test/Post-Test Survey
for Novice Teachers and Staff

Qualitative Comments from Trainings
2018-2019

Responses

Very beneficial and informative! Made me look again at some of my students with a different perspective!

great work

Thanks for a great training! You definitely provided actual take aways that can be implemented right away!

Great Program!

I enjoyed seeing the activities in person.

Great professional development with a lot of ideas to implement right away. Excited to see impact on student time on task, behavior and overall performance.

So good - I saw a bit of this in beginning teacher training and definitely wanted more.

Awesome training! So excited to take this back to my classroom!

Awesome resource

Can't wait to implement the program and watch students grow.

The presentation was fantastic! I would love to have the team come to our school to help put together our sensory room.

Wonderful!

This was a great training and very informative. This should be implemented in all schools

excellent training and resource

This was fantastic. I would love to have the information conveyed to school leaders in order to have their buy in.

This training was very informative and really an eye opener to many of my students actions and behaviors. I am looking forward to trying some of these activities and strategies in my classroom.

Loved it!

This training assisted with the science in understading student development and learning.

Everything was excellent!

We may need help with buy-in at our school for teacher and administration support.

So thankful for this training. Throughout the training my students names were popping into my head along with ideas of how to better serve the needs I didn't even know they had! Excited to implement!

This training was very informative, user friendly, and I will implement it in my classroom

AMAZING! It was so informational and relevant to my students and classroom.

Presenters correlated the behaviors we see in the classroom everyday to the brain and why they behave the way they do. Love!

Thank you! It was very informative

Thank you for the great resources and presentation!

I am excited about incorporating B3 at my school

This was a very interesting and informative training. I am excited to take this back to use with my EC students.

Awesome..Awesome...Awesome

Amazing! Thank you!

Excellent PD... This PD has allowed me as an educator to better understand my students, but gives me ways to help them in their development!

Great workshop!

This training kept me alert and entertained at the same time. I love every moment of it.

I thought everything was amazing! The hand outs were great, but I don't think they are necessary

Thank you for all that you do, this was super powerful. Can you please train the adults who lead professional development for us? This will help, thank you.

Thank you!!!!

Amazing Training

I am excited that CMS is taking B3 seriously and understand that this is extremely important in all areas of academics for school culture and schoolwide performance

This workshop helped clarify some unknowns (I already incorporated movement and brain breaks). Just hope that with your help, we can get all staff on board with this wonderful program.

I didn't really know what I was signing up for, but I am so glad I did. I have boys who are very active. Now, I don't have to fuss, but implement these strategies into my daily routine. I believe it.

Thank you!

This was one of the best PDs I've ever attended. It was very positive, informative and useful. I will definitely use this in my classroom starting on Monday!

The "Uh-Oh" Signs worksheet handout was very helpful in identifying what B3 activity would be beneficial to try for certain students.

I LOVED the team that presented to us! They are very engaging and entertaining. I appreciated learning about all of the planes of the body. Doing the Brain Dance felt invigorating. Kids will love it!

Excellent workshop!

This training was AMAZING! I cannot wait to use this in my classroom.

As a PE teacher this was a very encouraging and validating PD. I hope this continues to get bought in throughout the district.

I think that everyone should come through this training. It really opens up your mind on students learning and how they need to be active to learn more.

This was amazing! I want to get in the classroom NOW to start implementing these practices. I feel more knowledgeable and capable to implement movement with content in my room.

I love this training. I attended the Pre-K version a couple years ago, and I have been amazed at the difference the Brain Dance made for my students and having explanations for behaviors.

I have really enjoyed this workshop and I am excited about the possibility of implementing this with my students and helping to meet their need for movement.

I feel that more administrators need to attend this training to provide them with the research and information to show the benefit of movement/this program.

The training was very informative and I plan to implement the content into my classroom

Enjoyed the training and am really excited about the task cards!

It was great!

very helpful

Excellent information provided and very informative. Great training with mindful information. The instructors were very hands on. This course should be taught to all CMS teachers and support staff.

Great training.

Great training! Lot of wonderful ideas on incorporating movement all day long!

I'm very interested in creating movement activity pathways in our expansive hallways!

This was probably the best training I have ever had.

Great training!

Very active and informative training. Loved the examples used and the preseners were knowledgable.

The presenters were very active and engaging. I am very excited to take this back to my school and share all the great information that I've learned. I absolutely love the Calm app

Well paced and bery informative

Links or samples for equipment

This was a terrific PD!

Excellent training. Looking forward to using some of this asap to help with student behaviors.

It was very productive!

This training was highly engaging and informative. The examples were relevant, and I was able to see students sitting in my class that exhibit the types of behavior problems discussed.

This was a wonderful training/workshop that I would love for my entire staff to participate in. I would love to recreate a mini session for PD as we focus on the whole child and increasing SEL.

The training was well implemented and easy to understand, I think that all schools should put an emphasis on movement during the school day.

Very clear in why movement is important and great varieties of ways to implement in classroom and other areas in school.

THANK YOU!!!

Thanks for sharing your efforts today! It was great!

This was the BEST PD I have been to!!!

This was a great training session! I am so excited to try some more movement activities with my students this year!

Absolutely fantastic!! The presenters were so knowledgeable with the content and could easily and quickly answer any questions or concerns that they audience posed.

As a secondary educator, I would love to tie in more B3 things that could be incorporated in a middle and high school setting as well.

This was a great training with many wonderful resources and ideas. Can't wait to try some of the activities in my classroom.

Very informative!

This PD was AMAZING and should be in every school in CMS.

This training was VERY informative and engaging! WOW!

Excellent training, would like to support in my school

This was excellent! It makes so much sense and gives me a number of ways to better support my students.

This training was very helpful and beneficial

Very useful. Love the hands-on exercises

This training was excellent! Finally, a training about movement in the classroom that incorporated hands on movement based activities! This presentation was well planned and informative!

Very helpful and lots on information thats very useful.

This is the best training I've attended at CMS!

This training is amazing, and I am hoping they can come to the Aug symposium to share the info to our Pre-K Teachers

This is one of the most applicable PD experiences I have ever had! Every single concept was reinforced with "WHY". This is powerful!

Loved it. Plan to do.

Amazing!!!

Great training! As many folks should take this training as possible.

It was very insightful and interesting (fun and active)

very engaging

It was great!

This is so valuable. I want to start incorporating it this year. I feel like next year i will need to change my daily schedule & planning to make this a bigger part of the day

This training was incredible. I look forward to seeing the impact it makes in my student development.

Loved it

This was fantastic!

I thought the instructors did an excellent job. I would love to see examples of how it is used in a smaller classroom.

Wonderful training

Loved it!

Those 3 were amazing and definitely set the stage to engage!

This was awesome! Much needed for educators!

Great Training

I enjoyed the training. I fully understand how important movement is for kids. I will definitely incorporate B3 into my classroom.

So worthwhile and beneficial. Looking forward to implementing. In our new technological world, this research will be imperative for future generation's successes

Great presentation! Very organized and well run. Thank you!

AMAZING is not even the word. I've been to hundreds of trainings and I can say this is definitely top 5! Everyone needs this training.

The best PD I've been to. The movement kept MY attention. Loved it!

The physical education department has done a tremendous job with the rolling out and creating of the B3 program in CMS.

Awesome workshop!! Increased my understanding of how to help my students better.

Finally, a workshop offering actual sensible solutions!

Appendix B

Open-Ended Items from Implementation Survey

Qualitative Comments from the Implementation Survey 2018-2019

Question: Please provide examples of how B3 has impacted your teaching or students.

Unedited Responses

More engaged

We have incorporated daily morning workouts as well as energizer breaks into our classroom for when the kids need breaks. Movement has been built into all learning activities in my room. Better moods!

Students have developed more autonomy, have learned routines to allow for quick breaks and return for more attention, children are engaged and excited.

We incorporate music and movement throughout the day. When one student is disruptive, he/she moves away from the group to sit either in a chair or another location where they can still see and hear

More engaged and more focused. More excited about coming into the classroom!

Students are more engaged during lessons.

Children enjoy taking a short break to do a quick activity.

Keeps things fun!

The brainercize on Gonoodle tricks my students and helps them cross the mid line... challenging them!

My students know the importance of how moving helps us train our brain to learn new things. We take a movement break before beginning any subject and lots of our lessons have movement involved.

I give more brain breaks, especially before a test.

My students have complete flexibility in classroom seating, which has lead to a relaxed, comfortable classroom environment (bean bags, couch, laying on floor etc.)

My students enjoy the variety of exercises and getting a chance to move

B3 allows students to have the movement and flexibility that they crave. Moving your body "wakes up" the brain.

Students enjoy flex seating, electrical tape used in a variety of lines to walk on, hopscotch on the floor, muscle building activities.

I use brain breaks in my classroom, so I feel that is a type of B3. It gets their wiggles out and helps them focus.

B3 activities has made my students more focused and give them the movement they need.

Our children are more positive and love school

My reading scores are the highest they've ever been this year. And it's not because I'm doing something different/better with the reading curriculum.

Students focus more after B3.

Students look forward for their B3 sessions with me.

Brain breaks

B3 has enabled me to incorporate movement breaks within my classroom.

FYI I teach PreK, I do not offer flexible seating as I did when I taught K-2. I use movement every 20-30 minutes in my class and have done so for years. I have found the B3 activities to be used by my

It recenters and refocuses them often bring a smile to their face.

Students are more engaged, self motivated and work harder when given the opportunity to take a break and love the choice of how to take that break or where to sit in the classroom.

increase engagement

movement breaks help them focus

I have been able to create different activities for students in my class

My students are more engaged

Brain breaks allow students to refocus so that lessons can be completed in a timely manner.

We have seen greater focus and attention in those classes

Made it more fun and increased student engagement.

A few of my behavior issues have calmed down a little.

Students look forward to movement breaks.

It keeps instruction moving.

It motivates them to finish work

B3 has helped my students self-regulate and have ownership of their learning. When they feel unfocused or off-task, they can do a B3 task card on their own.

They were able to return to class and be focussed. Students were more successful in the classroom. Students felt better about themselves. Students were ready to learn.

Students are more focused.

Students are more focused and using B3 has made learning more fun for them.

Movement opportunities have helped my students focus more. I notice student body language and it reminds me to give them a break.

As a kindergarten teachers, built in breaks help students focus and retain information provided. it allows them to get the wiggles out but then come back to learn with a positive mindset.

We start math with B3. It had increased productivity during this time

Increased student engagement, decreased behaviors!

Brings purpose to movement and students must be mindful of their learning, movement and actions.

Brain Dance/Enhanced Indoor Recess and Learning Breaks

Movement-based morning work has made a positive impact, and also a mindset shift from 'punishing offenders' to receiving information students send teachers.

It's been very helpful to learn ways to give the kids brain breaks that don't involve dancing to a Go Noodle video. The videos are great but not every kid enjoys dancing.

More focus

Most students are more focused during lessons.

more movement, learning how they learn best, engaging all of their senses

Students seem more focused after B3

daily brain dance and movement break

One time I do B3 Stations is in the morning before we start Math. Once I started doing them my students were better able to focus on the Math when we started it.

B3 program has allowed students to begin their day with activities so they can be more focused when returning to class

B3 has had such a positive impact on my students. They are showing more self control in the classroom due to increased movement of their bodies throughout the day.

Students look forward to B3 as stations.

Students are more focused

I have used more breaks during the day and used mindfulness lessons and activities to help students.

helps me to be creative

Helps my students to stay focused.

I am not a supporter of B3 as a class or as a teaching position. Common sense tells you when children need a break.

Increases engagement and energy level

Gives students choice to regulate their focus for the day.

It has decreased negative behaviors in the classroom and increased students staying focused and on task

I get the kids up and moving all day long. Students can choose where they'd like to work with lots of different work area options.

Students are more engaged/focused after a movement break

it has allowed for a brain break

It allows them to focus more and there are less behaviors

We complete in the morning most in the morning which allows them to start the day off focused.

Movement increases motivation.

Fast way to reset focus and energy levels so we can get back to learning

Less negative behaviors

Brain breaks has helped during transitions or to give a brain-break during harder concept teaching or practice sessions.

Students are happier and look forward to movement breaks.

B3 has helped us to start our day energized and ready to learn! It has also helped us when we start to get into the afternoon sleepys

More engagement

Allowing for breaks gives students a chance to refocus which has helped them in my class; also it is a good incentive to complete longer tasks

I continue to implement B3 in my teaching and in my classroom environment with flexible seating.

I am a literacy facilitator so sharing these with my teachers has assisted with maintaining student interest and focus. Teachers have also seemed to be more energized and focused themselves!

Now that I understand why they are behaving in this manner I provide more outlets for them to develop these skills. The students are happier and are more focused during our after movement.

offers a chance to move and refocus using fun movement activities

Some students use it to calm down/ help with socio-emotional issues and we use the moves as a transition to the next part of the day or during whole group time.

Great way to transition

Movement Education.

Brain Break Choice Board, Fitness Fluency in both reading and math. B3 centers on playways.

Makes scholars more engaged

Students have learned how to appropriately move throughout the day to meet their own personal movement needs. Students are also more aware of their movement needs.

allowing students a time to exercise the body and mind.

we have a B3 lab... that is used weekly

Rejuvenation

Students are more focused.

The opportunities to use kinesthetic skills as a first part of the agenda make the students focus in the assignment

Implementing the brain dance before read aloud has improved focus and helped them learn to answer higher preset questions about the book.

Brain breaks, using task cards, yoga, movement

We engaged in B3 activities as an entire school for our half day.

Students are more focused, ready to learn and engaged. Moving helps the students remember what they are learning about.

B3 training has given me even more ideas for ways to get my students moving so they can learn better.

My students get so deep into their work but given that they are only 6 or 7 years old, they cannot sit for long. B3 has allowed me to give them the opportunity to get up and moving for a minute or 2.

Students are more engaged and active participants in their learning process.

We often participate in brain breaks between transitions to allow the students to refocus and get out of their seats.

My teachers have started implementing more movement activities and calming breaks for students. This has increased student achievement.

It has been a little more challenging to me since I do pullout groups in a very small space with limited time. I've used shorter tasks as a result

Breaks, Flexible Seating, Movement included in lessons and to teach and reinforce content.

Brain Breaks

I feel it gives them more energy and if used before tests, it helps improve test scores.

Movement including B3 is a part of our school routine every day. I have definitely notice my students being more focused and engaged since implementing movement on a regular basis.

We have used many of the B3 breaks and fitness lab this school year.

Sometimes it's difficult to get students attention back after a break.

Sight word milk jug and math line

I have implemented flexible seating and many brain breaks throughout the day.

I have noticed more time on task in my room as a result of the stations. They are excited to do the stations everyday.

It has given my learners choice and an outlet to take a break and engage their brain in movement to refocus/recenter.

Makes learning more engaging and fun for my students by actively learning.

More thoughtful on implementing movement activities

It has allowed students to take more ownership of their bodies' needs by being given the freedom to take breaks as necessary.

None at this time

I offer more breaks and cross body movements to improve focus

Increased attention and participation

We do movement all the time, and once they come "back down," lessons are focused.

We do daily movement stations that has helped increase focus.

they are happier

allowed for less behavior

Giving my students a brain break before beginning a tedious task has helped improved their concentration on the task at hand

Warm up, breaks and cool downs are all impactful in getting my students calm and break provided before during and after a lesson.

Students are more focus on the task at hand after we have done a B3 activity, which then increases our scores.

Students look forward to a break, I participate in the activity (it helps me destress), it allows the brain some down time - time to file some of the new info students learned, recharges tired student

Students are more focused and engaged after a break.



Appendix C

B3 Curriculum Materials

B3 Sensory Checklist

Tactile:

- ☐ Often touching someone or something
- ☐ Touches harder than necessary

- ☐ Chews or sucks on clothing, hands, pencils, other objects
- ☐ Distracted by clothing or shoes...wants them off if "not right"
- ☐ Craves excessive physical contact with others
- ☐ Avoids casual touch from classmates or teachers
- ☐ Becomes "silly" or annoyed when touched
- ☐ Dislikes certain textures-materials, paper, toys, food, etc....

Proprioception:

- ☐ Crashes and falls on purpose
- ☐ Crave heavy lifting
- ☐ Difficulty use of force-breaks crayons, pencils points, toys
- ☐ Have trouble knowing how much pressure is needed to perform a task
- ☐ Does everything with 100% force
- ☐ Pushes others and/or plays aggressively
- ☐ Bumps into classmates, furniture, walls
- ☐ Poor handwriting-difficulty forming letters, presses too hard or soft
- ☐ Poor body awareness

Vestibular:

- ☐ Excessively cautious on stairs
- ☐ Has difficulty maintaining balance when walking and during gross motor play
- ☐ Slumps in chairs, sits in "W" position, needs support for floor sitting
- ☐ Rocks in chair, wraps legs around chair legs
- ☐ Fidgets constantly, always moving or spinning

- ☐ Gets dizzy easily
- ☐ Craves swinging or spinning playground equipment
- ☐ Bounce a lot
- ☐ Touches furniture or walls when walking
- ☐ Difficulty using playground equipment-slides, swings, ladders

Visual:

- ☐ Has difficulty with eye-hand coordination
- ☐ Squints, blinks or rubs eyes frequently
- ☐ Distracted by glare, bright light, fluorescent lighting
- ☐ Struggles with reading
- ☐ May hold head at odd angles
- ☐ May cover one eye when reading and writing
- ☐ Has difficulty distinguishing distance and size of performance task
- ☐ May not understand what they read
- ☐ Difficulty copying from the board
- ☐ Makes poor eye contact

Foot Trace Shapes



1. Balance on 1 foot.
2. With the foot in the air, trace the shapes on the floor.
3. Be sure to switch feet.
4. Try it with your shoes off.

"Did I successfully trace all the shapes?"

YOU ARE SOMEONE. YOU MEAN SOMETHING.



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Go Fetch



1. Start at an empty hula-hoop.
2. Run and pick up 1 ball and place inside the empty hoop.
3. Be sure the ball does not roll out of the hoop.
4. Repeat until time runs out.

"How many balls did I fetch?"

FIND YOUR GRIT. CHASE YOUR DREAM.



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Plank Number Line



1. Pick up a number card.
2. In plank position, touch the numbers in sequential order.
3. Solve a math equation and show your answer on the number line.

"How many numbers did I complete?"

B3
Brain Body Behavior

CHALLENGE. CONTROL. COMMIT.

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Air Bags



1. Toss and catch a plastic bag.
 2. Toss, clap hands and catch the bag.
 3. Throw, spin in a full circle and catch the bag.
- ***Try to catch the bag before it hits the floor***

"Was I able to do all the air bag challenges?"

B3
Brain Body Behavior

BE YOU. DREAM BIG.

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