



Evaluation of Breakfast After the Bell in the New Brunswick Public Schools

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Schools that serve breakfast after the bell (BATB) provide breakfast to students after the first school bell has rung and the school day has officially begun. Often students eat BATB in their classroom at their desks, as can be seen in the photo (right) of New Brunswick Mayor James Cahill eating with local students. Many NJ school districts implemented this approach in order to provide breakfast to students who do not arrive early enough to eat breakfast in the cafeteria before school starts, which has been the traditional approach to school breakfast. Unless they have already eaten at home, students who do not arrive early miss the opportunity to have breakfast, and missing breakfast has been shown to negatively affect school performance¹ and behavior.²



Photo credit: New Brunswick Today

BATB in New Brunswick began as a pilot in the spring of 2014 with a few schools, and in the fall of 2014, it expanded to serve all students in Kindergarten through 8th grade (K-8). New Brunswick is a large district with approximately 10,200 students, so the schools serving BATB in 2014 included 6 elementary-only schools, 3 mixed elementary and middle schools, and the large New Brunswick Middle School (NBMS), which educates the majority of the 6-8th graders. As a result of the BATB implementation, Advocates for Children of New Jersey reported that in May 2015, New Brunswick was among several high-poverty school districts “making progress” in serving breakfast to eligible students by significantly increasing breakfast participation over the 2014-15 school year.³

New Brunswick Public Schools operate under the Community Eligibility Provision (CEP), which is a meal-service option designed for very low-income districts that allows them to serve free breakfast and lunch to all students, regardless of their ability to pay. Thus, no matter how breakfast is served, it is free to all students in all New Brunswick schools.

How is breakfast served in NBPS?

When BATB was first implemented in 2014, all K-8 New Brunswick schools had breakfast delivered to the classroom, after the bell. Children ate their breakfast at their desks. Breakfast was served in a bag, which included a 100% juice drink, a snack food (such as graham crackers or Cheez-Its), and a main course of either cereal, an oatmeal bar, or a muffin. Milk was served separately, as was fresh fruit from the United States Department of Agriculture and the Department of Defense Fruit and Vegetable Program. While one breakfast bag per child was sent to each classroom, many of the schools sent fewer pieces of fruit or milks than there were children, and this varied by school. In addition, there

¹ <http://frac.org/wp-content/uploads/breakfastforlearning-1.pdf>

² <http://frac.org/wp-content/uploads/breakfastforlearning-1.pdf>

³ http://acnj.org/downloads/2015_10_15_School_Breakfast_Annual_Report.pdf

was significant variation from classroom to classroom in terms of how many students took the fresh fruit.



Photo credit: Jennifer Shukaitis



Photo credit: Jennifer Shukaitis

Over time, individual schools began to change their approach, and the breakfast program has been in even more transition since the District switched food service providers for the start of the 2017-18 school year. As of January 2019, seven schools have grab-and-go breakfast, where the students pick up a meal in the cafeteria or from a kiosk elsewhere in the school and bring it back to the classroom to eat at their desk, while two schools have maintained the original classroom delivery method. See below for photographs of a kiosk located in an elementary school.



Photo credit: Jennifer Shukaitis

The New Brunswick Middle School (NBMS) had been serving BATB in the classroom through 2016, but in January of 2017 switched to a hybrid model. The new system is largely a breakfast *before* the bell model where students get food in the cafeteria and eat in a common space. However, they allow students who arrived late to school to pick up breakfast in the cafeteria before going to class.

Given the importance of eating breakfast to student success, the changing approaches to breakfast in the New Brunswick Public School District, and the community interest in the success of the breakfast program, an evaluation of the BATB was undertaken to understand the program's successes and challenges.

STUDY METHODOLOGY

The research team used a multi-method approach to study the BATB program. All primary data collection took place during the 2016-17 and 2017-18 school years. The research team conducted qualitative interviews with staff at the schools, district administrative staff, focus groups with K-8 students, an online teacher survey, an online parent survey, and an in-person survey of middle school students. The school district provided additional administrative data. We collected data from all K-8 schools in the district. All data collection was approved by the Rutgers University Institutional Review Board. All participants completed informed consents appropriate to their age.

Teacher survey. The teacher survey was conducted online for four weeks in spring, 2017. All K-8 faculty, including part-time and specialty teachers, were invited to participate via an email from their principal, and three reminder emails were also sent by the principal. Within the 10 schools included in this study, a total of 528 teachers responded to the survey out of 769 invited, for a response rate of 69%. We removed teachers who were not eligible to participate, largely because they taught in pre-K or the high school, resulting in a final sample of 457 teachers.

Parent survey. Parents were invited to participate in a survey about the breakfast program during parent-teacher conferences in January 2017. The research team coordinated with the District technology office to set up computers at six schools (a mix of elementary and middle schools) during the afternoon and evening conference hours. A total of 192 parents participated. It is not possible to calculate the response rate because there was no way to measure the total number of parents in attendance.

Qualitative interviews with school staff. Researchers conducted interviews with 45 staff members at district schools, including nurses, social workers, custodial staff, and kitchen staff. While many interviews were done one-on-one either in person or over the phone, researchers held additional group interviews with members of the kitchen staff at a number of schools and also engaged in a group discussion with the attendees at the district-wide kitchen staff meeting. Select maintenance staff also participated in one group interview. The one-on-one and group interviews took between 30 minutes and one hour to complete.

Focus groups. We conducted five focus groups with 25 K-8 students in April-May, 2017. Three focus groups were held in English and two in Spanish, and trained facilitators moderated all sessions. Focus groups included discussions of what students usually eat for breakfast, their perceptions of the breakfast program and its cultural appropriateness, their teachers' role in encouraging breakfast, and ways that they would like to see the program improved.

Data from the District. The District provided us with breakfast and lunch participation data, including from two pre-BATB school years (2011-13), from the transition year (2013-14), and from four years post-BATB (2014-2018). These data were compiled as part of the District's reporting to



Photo credit: Jennifer Shukaitis

the USDA, and were used to determine reimbursement. No data on consumption of fresh fruit from the USDA DoD Fruit and Vegetable Program were available.

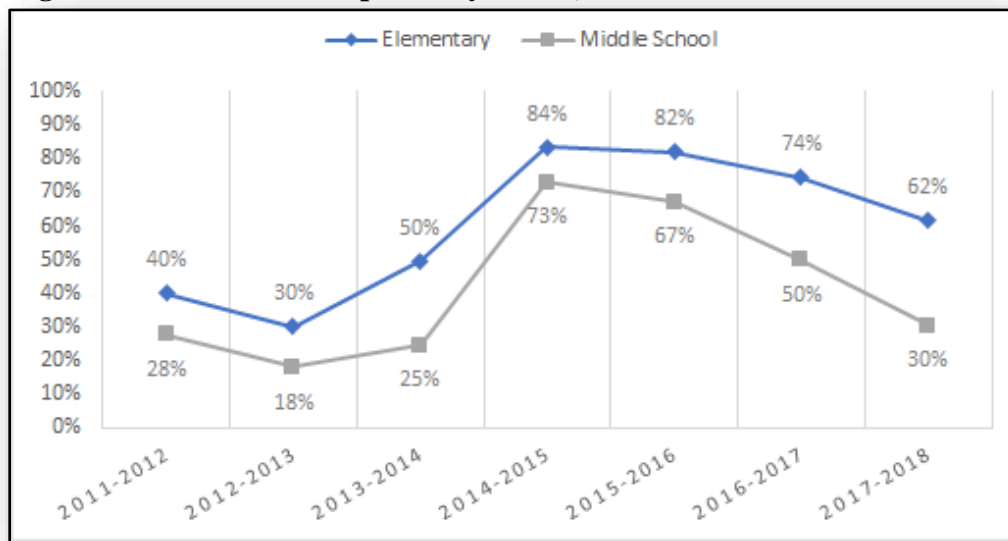
Middle School Survey. Because the district's large middle school changed from BATB back to the traditional approach of breakfast before the bell halfway through the 2017-18 school year, middle school students were surveyed to obtain their opinions and perceptions of both breakfast programs. The pencil-and-paper survey was administered during homeroom to all students. Surveys were made available in both English and Spanish to accommodate the significant number of students whose first language was Spanish.

RESULTS

Participation

Although breakfast participation increased dramatically immediately after the implementation of BATB, this increase has proven difficult to sustain. Figure 1 shows the participation at the NBMS as well as the elementary schools, a few of which include students in grades 6-8.

Figure 1. Breakfast Participation by Grade, 2011-2018



Note. The middle school participation rates are drawn only from the NBMS. A small percentage of middle school students attend K-8 schools, and they are included with the elementary school students in the figure above.

There was an initial spike in breakfast participation once BATB was fully implemented in September 2014. In addition, the overall participation numbers for the 2013-14 years were elevated by the schools that introduced BATB as a pilot during that year. However, we see a consistent participation decrease in each year subsequent to the initial implementation. The decrease in participation is particularly significant in the MS, which went from a high of 73% participation in 2014-15 to 30% in 2017-18, more in line with the pre-BATB numbers. This is likely related to the fact

that NBMS had decided to stop the BATB program and moved toward a “hybrid model” where breakfast was served in the cafeteria *before* school, but late students were allowed to eat before going to class.

Parent Survey

While more than one in four parents say that their child eats breakfast at home *every day* (27.3%), almost as many say their child *never* eats at home (17.6%). Most parents report that their children eat at home some of the time.

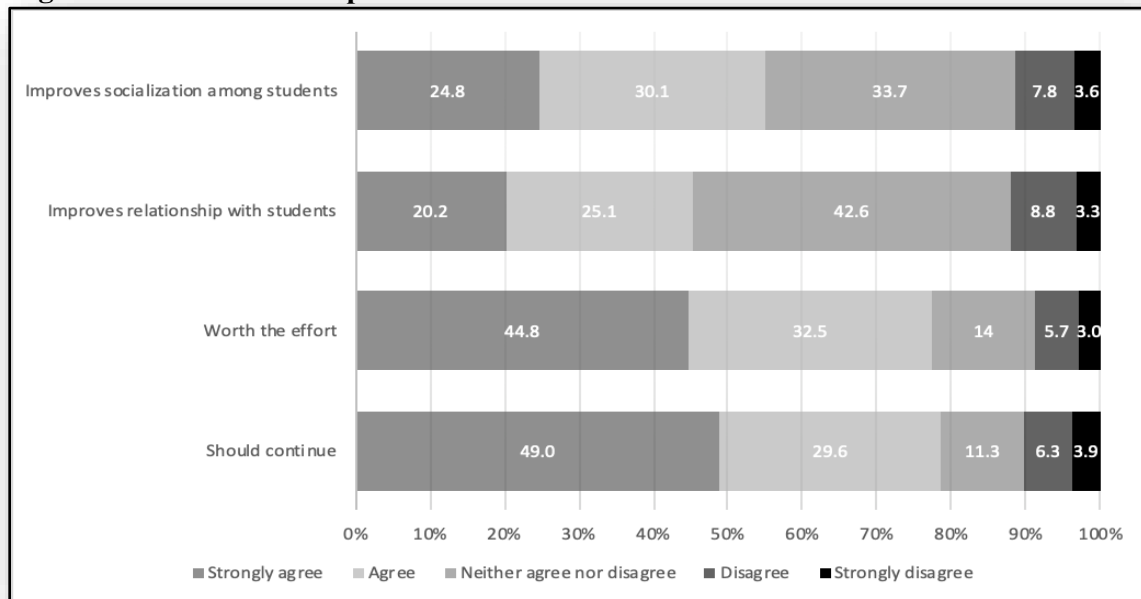
Some parents report that their child either never eats at school or only eats at school 1-2 days a week (12.2%). Among these parents, the most common reasons that were given for their child not eating breakfast at school are that they dislike the food (52.2%) or that they are not hungry (26.1%).

Many parents say that BATB has made their children more likely to be on time for school and that BATB has made their morning routine easier (41.1% and 30.7%, respectively).

Teacher Survey

Most teachers indicate satisfaction with the BATB program as a whole (64.7%). As we can see in the figure below, teachers report benefits that go beyond students’ classroom performance, as 54.9% of teachers say that BATB improves socialization among students and 45.2% say that it improves their relationship with their students. In addition, the figure illustrates that the majority of teachers agree that BATB is worth the effort (77.3%) and should continue (78.6%). However, some teachers report dissatisfaction with the healthfulness (44.1%), quality (29.7%), and variety (45.1%) of the breakfast served.

Figure 2. Teachers’ Perceptions of BATB



Given the changes in the NBMS, we asked the teachers in that school about both the prior and current breakfast approaches. The majority of the NBMS teachers say that instructional time (65.5%), amount of cleanup (73.6%), and their morning routines (68.2%) are somewhat better or much better with the current breakfast *before* the bell program. Additionally, some teachers report that student behavior and tardiness are also better with the current breakfast *before* the bell program (41.4% and 26.8%, respectively). However, many NBMS teachers indicate that student behavior and tardiness were not affected by the change in breakfast format (40.2% and 53.5%, respectively).

Student Focus Groups

The most common theme students expressed in the focus groups was the students' fatigue with food choices, particularly with the cereal. Students also expressed concern for the healthfulness of the food, quality of the food (unripe or overripe fruit and frozen muffins), as well as distaste for many of the items served. This was the consistent across all grade levels.

One somewhat unexpected finding was that many students report that they take breakfast packs to eat later, or only eat some of the food in the packs during the breakfast period, raising issues of what counts as "eating" breakfast.

Middle School Survey

Most of the participants indicated that they were more likely to eat breakfast when it was served in the classroom, before the bell. Another notable result was that the vast majority of students indicated that they do not eat breakfast before coming to school in the morning, contrary to what school administration had believed.

The majority of student participants reported positive impressions of BATB, such as the fact that BATB saved time and money, and that they felt better after eating breakfast in the morning.

Staff Interviews

Nurses report fewer hunger-related visits since the implementation of BATB. Unfortunately, we were not able to quantitatively examine this or other health outcomes because of the way that the schools record the visits.

Challenges specific to BATB such as mess and spills in the classroom have not been as significant as many of the staff expected. However, teachers, custodians, and nurses all report being affected by spills in the classroom that are not generally present when breakfast is served in a central location. Staff also report that they view breakfast in the classroom serving as positive social time for students, and that they see other benefits of the program in student behavior.

DISCUSSION

Parents, teachers, students and staff indicated that they liked most aspects of the BATB program and were supportive of it. The problems of low quality and repetition of the food served was the issue that was raised most often, particularly by teachers and students. In part as a result of this dissatisfaction, the NBPS began a contract with a new food service provider vendor starting in July 2017.

While initially breakfast participation increased dramatically as a result of the BATB program, these increases were short-lived, particularly in the NBMS. The issues of food quality and repetitiveness may account for some of the decreasing participation. In addition, the NBMS stopping the BATB program resulted in an additional significant decrease, resulting in participation rates that are only marginally higher than in the years before BATB was introduced.

What can be done to improve participation? The data clearly indicate that reinstating BATB in the NBMS would help improve their participation. Across all the schools, our survey and focus group data indicate that solutions include increasing the variety and quality of the foods served. The NBPS District is working on this in partnership with their new food service provider, and they have begun serving hot food options using the kiosk approach to breakfast.

The NBPS will have to change their approach again because, in May 2018, the NJ legislature passed a law that will require all schools with 70% or more of the student population qualifying for free- or reduced-price school meals to serve BATB starting in September 2019. Due to New Brunswick's status as a CEP district, all New Brunswick Public Schools will be required to comply with this legislation. Thus, the breakfast programming in New Brunswick, and around the state of New Jersey, is going to change once the requirements of the new BATB law are implemented in the 2019-2020 school year. Specifically, in New Brunswick, a BATB model will have to be implemented for the first time in the New Brunswick High School, and NBMS will have to reinstate a BATB program. The good news is that our data indicate that breakfast participation rates are likely to rise once the new law is implemented.