

The Cafeteria Environment: Noise Reduction & Other Factors that Impact Food Consumption by The Whatcom Farm to School Support Team, 2017

THE CAFETERIA ENVIRONMENT IS GAINING ATTENTION IN THE MOVEMENT TO GET STUDENTS EATING MORE HEALTHY FOOD.

In Northwest Washington, the Whatcom Community Foundation awarded grants to several Bellingham elementary schools to install noise reduction panels and make other enhancements to the cafeteria environment. The Whatcom Farm-to-School Support Team used this opportunity to test the hypothesis that reducing the noise level in school cafeterias would result in students eating more healthy food. They also took into account other cafeteria enhancements schools made (e.g., schedule changes, new salad bar, paint, art).

MEASURING NOISE REDUCTION

Decibel levels were recorded every five minutes during lunch time in two elementary school cafeterias (Columbia and Roosevelt), three times before and three times after installation of sound absorption panels.

MEASURING FOOD CONSUMPTION

Food consumption data was systematically collected at three elementary schools (Columbia, Roosevelt, and Parkview) three times before and three times after cafeteria enhancements were implemented. Photos taken of students' lunch trays before and after they ate were used to estimate how many portions of each food group they consumed.



Before

After

1 NOISE REDUCTION STRATEGIES DECREASE DECIBEL LEVELS

While each school made different choices about the type of noise reduction materials they used based on cafeteria architecture and budget, the data showed a significant decrease in decibel levels following installation. In addition to installing sound absorption materials, schools implemented other strategies that helped reduce cafeteria noise included scheduling recess before lunch, managing traffic flow in and around the cafeteria, and reducing the number of children in the cafeteria at the same time.



Noise reduction panels covered with silk banners painted by students

2 FRUIT AND VEGETABLE CONSUMPTION RISES

All three schools studied showed statistically significant increases in students' consumption of fresh fruits and vegetables following cafeteria enhancements.



FACTORS IMPACTING FOOD CONSUMPTION VARIED BY SCHOOL

Columbia – In addition to the sound absorption materials that created a quieter cafeteria, Columbia changed the schedule to have recess before lunch. In combination, these factors not only contributed to increased fruit/vegetable consumption, but students also ate significantly more of their food overall.

Roosevelt – Fruit and vegetable consumption more than doubled following the significant decrease in cafeteria noise combined with the promotion of a new salad bar.

Parkview – A new, quieter cafeteria was built during the study period. The noise reduction, a new salad bar, and schedule change to recess before lunch all contributed to a significant increase in consumption of fresh fruits and vegetables.

Interestingly, the total amount of food students consumed did not increase significantly at Roosevelt and Parkview, indicating that the cafeteria enhancements had a greater impact on students' healthy food choices than the total amount they ate. This is most likely due to the introduction of salad bars at these two schools, though Columbia did not have a salad bar and still saw increased consumption of fruits and vegetables with a quieter cafeteria.

For more on this and related topics see:

- [Northwest Regional Farm-to-School Guide](#)
- [Creating Cafeteria Environments that Promote Healthy Eating](#)

Contact: info@whatcomfarmtoschool.org with questions or to see the full report.

RECOMMENDATIONS:

- Install and strategically position sound absorption materials in cafeterias to decrease decibel levels.
- Design school schedules and cafeteria routines to create a calm and orderly eating environment. Effective strategies include:
 - Implement recess before lunch
 - Create traffic flow patterns in and around the cafeteria
 - Reduce the number of students in the cafeteria at the same time.
- Install full salad bars and actively encourage students to eat the fruits and vegetables.



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