“Do Cheerios have whole grains?” : Results from a pilot evaluation of the Discover MyPlate curriculum

O’Shea, G., Adams, L., Potter, K., Nasso, F., Chu, A., De Feo, M., Silliman, R., & Marcial, C.
Michael Cohen Group, LLC

This project was made possible by a research contract provided by the USDA.

Abstract

The Discover MyPlate curriculum was piloted for 6 weeks in two racially/ethnically diverse communities - one in Hartford, CT and another in a rural town in northwest Iowa. A total of 170 activities were completed across four classrooms, with qualitative and quantitative data collected from 74 students, 18 parents, 4 teachers, and 1 food service director. The feedback from teachers, parents, and staff, as well as the findings from students, were overwhelmingly positive. Statistically significant gains were observed from pre- to post-test on 13 of the 14 student outcomes

Research Goal

To evaluate changes in students’ recognition of MyPlate and the five food groups, as well as awareness of healthy eating and physical activity.

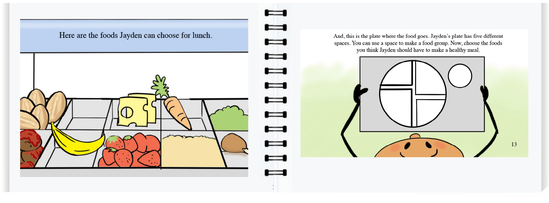
Method

Participant Demographics
Children (80 consent, 50 Completed Screenings)

	N	%
Gender (80)		
Female	44	55%
Male	36	45%
Ethnicity (50)		
Hispanic or Latino	32	64%
Not Hispanic or Latino	18	36%
Race (16)		
Black or African American	7	44%`
Asian	2	13%
Native Hawaiian or Other Pacific Islander	1	6%
American Indian or Alaskan Native	1	6%
White	5	31%

Measures
Student questionnaires were developed based on measures that were valid and reliable for students age 7-11 (Edmunds & Ziebland, 2002; Moore et al., 2007).

The survey questions were embedded in an illustrated storybook. Example image below.

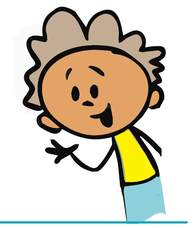


Results

Five Food Groups
At pre-test, 16.2% of students correctly answered that there are five food groups versus 64.8% at post-test, t(73) = -6.948, *p*<.001 (Figure 1).

Students identified more food group names at post-test (M=2.18, SD=2.229) than at pre-test (M=0.09, SD=0.338), t(73)= -8.089, *p*<.001. At post-test, 32.4% of children named all five food groups.

More students were able to correctly choose foods from all five food groups at post-test (43.2%) than at pre-test (10.8%), t(72)=-4.094, *p*<.001.

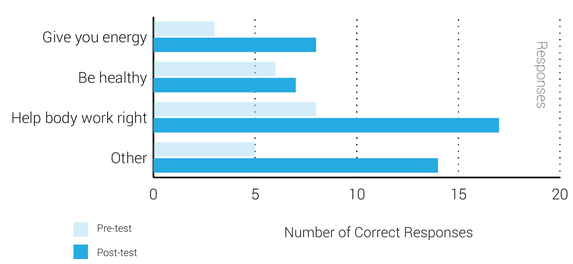


Breakfast
Students increasingly reported eating breakfast as important to do in the morning from pre-test (51.4%) to post-test (78.4%), t(73)=-3.715, *p*<.001.

The number of students that correctly answered, “how do you think a healthy breakfast could help” doubled from pre-test (24.3%) to post-test (50%), t(73)=-3.759, *p*<.001 (Figure 2).

Children identified more “healthy” foods from pre-test (M=2.66, SD=1.510), to post-test (M=3.47, SD=1.219), t(73)=-4.634, *p*<.001.

Figure 2. How is a Healthy Breakfast Helpful?



Staying Active
The number of students that correctly answered, “what could you do to stay healthy,” nearly tripled from pre-test(17.6%) to post-test (45.9%), t(73)=-4.373, *p*<.001 (Figure 3).

Figure 3. Benefits of Physical Activity

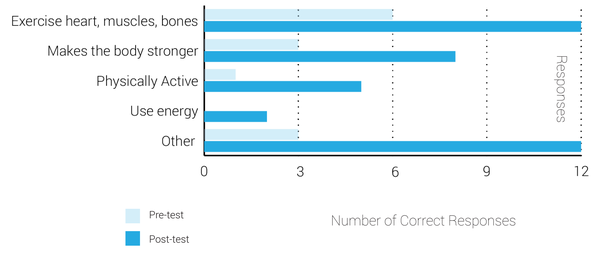
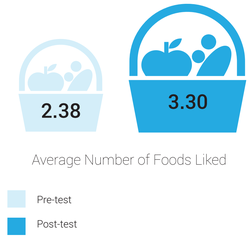


Figure 4. Curriculum Food Appeal



Fruits and Veggies
Children correctly identified more foods at post-test (M=5.34, SD=2.721) than at pre-test (M=3.32, SD=2.203), t(73)=-9.057, *p*<.001.

Children reported liking more foods (M=3.30, SD=2.333) at post-test than pre-test (M= 2.38, SD=1.826), t(73)=2.902, *p*<.01 (Figure 4).

“Since we started this, my child wants more fruits…yesterday, she brought a grapefruit, and she said, ‘you have to eat this because it’s good for you.’”
—Parent, IA

Discussion

The use of developmentally appropriate research practice - **adapting the measure into a storybook** - is an effective mechanism to get valid and reliable data from young participants while minimizing children’s fatigue and increasing their engagement.

A classroom nutrition curriculum can **connect** food service providers, the home, and the classroom, providing a common language and focus on health and nutrition.

Children increased their **knowledge** of health and nutrition after the 6 lesson curriculum – understanding of food groups and healthy food selection. Students were better able to create a balanced meal at post-test.

Students were better able to **articulate** the importance of eating breakfast and getting physical exercise after completing the curriculum.

Students reported significantly **higher appeal for foods** featured in the curriculum after the pilot period.

References

Edmunds, L.D. & Ziebland, S. (2002). Development and validation of the Day in the Life Questionnaire (DILQ) as a measure of fruit and vegetable questionnaire for 7-9 year olds. Health Education Research, 17(2):211-220.

Moore, G. F., Tapper, K., Murphy, S., Clark, R., Lynch, R., & Moore, L. (2007). Validation of self-completion measure of breakfast foods, snacks, and fruits and vegetable consumed by 9-11 year old school children. European Journal of Clinical Nutrition, 61:420-430.

Contact

Michael Cohen Group, LLC
375 W. Broadway, Suite 502
New York, NY 10012
1 (212) 431-2252

Gerad O’Shea
goshea@mcgrc.com

This poster was presented at the Association for Psychological Science 27th Annual Convention, May 21, 2015.