

Statewide Youth Evaluation Survey Results

CalFresh Healthy Living, UC Evaluation Report

FFY 2024



Introduction

All CalFresh Healthy Living (CFHL), UC Cooperative Extension (UCCE) county programs evaluate their youth programming. The project goals for these evaluation activities are to:

- Clearly define the healthy eating and physical activity behaviors program services are aiming to promote,
- Utilize a range of practitioner-oriented evaluation tools for assessing these behaviors appropriate to the strategies and participants' age,
- Assess progress among program participants towards these promoted behaviors and SMART targets,
- Enable UCCE program teams to review and share with partners county-specific evaluation results to identify areas for further strengthening and/or emphasis, and
- Meet funding requirements to report evaluation results, for example against the SNAP-Ed Evaluation framework indicators as well as contribute evaluation responses for CFHL aggregate statewide outcome evaluation.

The CFHL, UC State Office evaluation team provides each UCCE county/cluster county-specific results on an annual basis. In many cases, evaluation results are provided in an interactive excel results file that allows for filtering specific results by site, curriculum, community educator, grade, race/ethnicity, and intervention approaches. This approach supports the use of evaluation results at the local level.

This report aggregates results across all 16 UCCE county/cluster programs providing services in 34 California counties highlighting the variety of evaluation tools and results used to assess progress toward youth programming outcome goals and SMART objectives. In FFY 2024, over 2,800 retrospective surveys and 2,185 matched pre-post surveys were collected from youth participants with an additional almost 600 surveys collected from teachers and extenders helping to deliver youth programming.

Evaluation of Youth Programming

The CFHL, UC statewide evaluation was originally developed to evaluate the performance and effectiveness of direct education (DE) services. Recommended evaluation tools align with specific curriculum. Over the last decade, UCCE teams have worked hard to make their programming more comprehensive by incorporating evidence-based policy, systems and environmental (PSE) change strategies. As UCCE county programs support partners to adopt nutrition and physical activity related PSE changes at the same sites where direct education is delivered, the statewide evaluation tools are increasingly capturing the combined effects of DE and PSE-related work.

Figure 1 shows that in FFY 2024 the majority of CFHL, UC nutrition education is provided to elementary age youth. Of the total direct education participants (n=99,551), one-third (34%) were in kindergarten to 2nd grade and one-third (33%) were in 3rd to 5th grade.



The most common types of sites where nutrition and physical activity education is being provided are schools (K-12th grade) (n=339 sites), before and after school programs (n=160 sites) and Early Care and Education (ECE) (n=287 sites) facilities. PSE activities were implemented to support direct education at almost half (44%) of these schools, more than a third (34%) of the ECE facilities and more than a quarter (27%) of the before/afterschool programs.

Results:

Evaluating Taste Tests

CFHL, UCCE teams commonly incorporate the opportunity to taste and evaluate foods as an interactive activity both for direct education and PSE interventions especially related to school food and gardens. Exposure to healthy foods is particularly important for children in low-income households where availability of fruits and vegetables is low, and limited resources discourage parents from experimenting with new foods that their children might reject. A goal of the CFHL, UC youth program is to increase willingness to try new healthy foods and encourage children to ask for these foods at home. Other studies have shown willingness to try fruits and vegetables and children asking parents to buy these foods are associated with greater household purchases of fruits and vegetables¹ and fruit and vegetable consumption in school-aged children².

¹ Busick DB, Brooks J, Pernecky S, Dawson R, Petzoldt J. Parent food purchases as a measure of exposure and preschool-aged children's willingness to identify and taste fruit and vegetables. Appetite 2008; 51(3): 468-473.

² Sandeno C, Wolf G, Drake T, Reicks M. Behavioral strategies to increase fruit and vegetable intake by fourth- through sixth-grade students. J Am Diet Assoc. 2000;100(7): 828-830.

UCCE teams use three different simple and practitioner-orientated evaluation tools to collect feedback in various settings and among different age groups. In collaboration with the UCCE Evaluation Taskforce members, CFHL, UC has developed and validated a simple <u>Youth Taste Test Tool (Y-TTT)</u> to evaluate youth response to food tastings that are coupled with classroom nutrition education.³ A simplified version was developed for use with preschoolers – the <u>Preschool Taste Test Tool (Pre-K TTT)</u>. Following the taste tests, students are asked about their experience and opinions about the targeted food. The questions are typically posed to the group at large with responses indicated by students raising their hands and responses recorded in aggregate.

In FFY 2024, UCCE teams reported 3,896 Y-TTTs conducted with 79,842 students from 29 counties. These numbers are compiled from multiple tastings in classrooms – sometimes with the same students. Across all categories of healthy food items tasted in the CFHL, UC youth program:

- 95% of students tried the food featured for the tasting,
- 36% reported having tasted the target food before which met the SMART objective of 40% or fewer,
- 72% reported willingness to eat the food again which was just shy of the 75% SMART objective, and
- 66% reported being willing to ask for the food at home which exceeded the 60% target.

Additionally, UCCE teams reported a total of 469 Pre-K TTT surveys collected from 10 counties, representing 6,580 preschoolers participating in taste tests. Again, these numbers are compiled from multiple tastings in classrooms – sometimes with the same students. On average, across the surveys a large majority (89%) of the children tried the target food and over three-quarters (81%) of them expressed a willingness to eat the item again.

The Large Group Taste Test Tool (LG TTT) was developed to evaluate food tastings typically conducted in partnership with School Food Services Programs with large groups of students rather than solely in the classroom setting. Often, these groups include multiple grades and are typically done in the cafeteria but also possibly in an afterschool or playground setting. The tool includes five different sets of questions so UCCE teams can tailor the questions they choose to collect student feedback. One or more sets of questions are selected, depending on what is most appropriate to the setting and purpose. A participatory "voting" approach is most often used with students either dropping their food sample cup in small buckets with the appeal of the food item indicated using a two- or three-item smiley face scale. Other approaches are also used such as a voting booth, iPad or tablet with a "thumbs up" or "thumbs down" icon, or a large wall-size

³ Kaiser LL, Schneider C, Mendoza C, George G, Neelon M, Roche B, Ginsburg D. Development and Use of an Evaluation Tool for Taste Testing Activities by School-Aged Children, J Acad Nutr Diet 2012; 112:2028-2034

laminated poster for capturing post-it notes or sticker "votes". Each method can help the school and cafeteria to quickly capture feedback from a relatively large number of students. Again, responses are aggregated and reported for a specific food tasting "event".

Overall, 234 food tastings were evaluated using the LG TTT in 16 counties during FFY 2024. Taste tests were most often conducted in support of the Smarter Lunchrooms Movement, Farm to School local procurement and/or garden efforts, Harvest of the Month, Farmers' Markets at schools, cooking and community events such as Farm Day, and Rethink Your Drink efforts. Almost two-thirds (65%) of the foods tasted were single, uncooked food items and just over a third (35%) were mixed foods or menu items. UCCE teams could include more than one set of questions on the LG TTT during each tasting. Across all CFHL, UC youth program food tastings assessed with the LG TTT, results are presented below by each question set.

Preference Question Results

A total of 185 LG TTT surveys were collected from 31,250 students using the 3-response option preference question, "Tell us what you think about [food/recipe]." Student responses included:

- 69% *I loved it!* with large smile face
- 17% *I liked it* with smaller smile face
- 14% *Not today* face not smiling

For the 2-response option version of the, "Tell us what you think about [food/recipe]," preference question, 40 surveys were collected with 5,266 students. Student responses included:

- 82% *I liked it!* smile face or thumbs up
- 18% *I don't like it!* face no smile or thumbs down

Seventeen surveys were collected using the third preference question, "Would you like to see [food/recipe] on the menu?" with a total of 1604 students. Student responses included:

- 75% Yes or Liked or Thumbs Up or Smiley Face
- 25% No or Disliked or Thumbs Down or Face No Smile

Intention Question Results

In total, 25 surveys were collected utilizing the one *intention* question, "Would you try [food/recipe] again?" with 1988 students. Student responses included:

- 78% Yes or Thumbs Up
- 22% No or Thumbs Down

The results across these three taste test tools are promising in determining students' willingness to try the target foods and their willingness to eat the food again. The findings also underscore the great variety of taste testing opportunities the program is providing. Hundreds of different food items were featured in food tastings – often fresh fruits and

vegetables. Research indicates that it often takes multiple exposures to a new food to change children's food preferences⁴. County programs can use their taste test results to make informed choices about which foods and food groups to target next year. Findings can also be used to increase the variety of food preferences by pairing foods less desired or novel with those generally considered as highly appealing for food tastings to reinforce the nutrition education messages delivered. Additionally, county programs can use their results to inform PSE opportunities on the school campus such as foods offered in the cafeteria or on the salad bar, to inform orders for locally grown produce, or other ways to collaborate with food services. Coordinating cafeteria tasting with food service staff can also assist with identifying appealing recipes or preparations of new, locally grown produce that students may not have tasted and help improve preferences for any produce items that are not being selected and/or eaten by students.

Outcome Evaluation of Youth Programming

UCCE teams also use a variety of evaluation tools to assess progress toward outcomes and changes youth programming is designed to achieve. Three types of evaluation approaches are used most frequently and described below.

- **Teacher Observation Tools (TOT)** collect information on teachers' perceptions and observations related to students and their own nutrition and physical activity behaviors. These tools are especially appropriate for lower grade levels (pre-k to 3rd grade) when administering written surveys with students is not feasible.
- A pre/post survey called the Eating and Activity Tool for Students (EATS) collects information from students about their fruit, vegetable and sugar sweetened beverage consumption and physical activity. This tool is designed for evaluating students in 4th grade and higher when the programming is of sufficient duration (6+ lessons or 5+ lessons with PSE interventions) to capture pre/post changes.
- A short **two-question qualitative survey** called What Did You Learn (WDYL) is also used to collect open-ended responses about what youth (grade 4th and higher) learned and do differently as a result of the lessons.

Teacher Observation Tool (TOT):

The TOT was developed to create a retrospective evaluation measure that could be used across the various curricula delivered by CFHL, UC youth programs. Teachers, youth program leaders, and other extenders at participating sites are trained to deliver UCCE nutrition curricula such as *Go Glow Grow*, *CATCH*, *Discover MyPlate*, *My Amazing Body*, and *Good for Me and You*. The TOT collects information on teachers' perceptions and observations related to the changes in knowledge and behavior among students and themselves. In FFY 2019, a Physical Activity Teacher Observation Tool (PA-TOT) was developed to evaluate structured physical activity interventions (such as CATCH or SPARK) that aim to improve youth physical activity behaviors and opportunities at ECE,

⁴ Birch L, Savage JS, Ventura A. Influences on the Development of Children's Eating Behaviours: From Infancy to Adolescence. Can J Diet Pract Res. 2007; 68(1): s1–s56.

school, and afterschool sites. Both TOTs are especially appropriate for the lower grade levels (pre-k to 3rd grade) where administering student pre/post surveys is not feasible. The TOT is typically collected at the end of the school year.

In FFY 2024, 565 retrospective TOT surveys were completed by teachers on behalf of their 11,870 students across 20 counties. Twenty percent of these students were in preschool, 22% in TK or Kindergarten, 36% in 1st to 3rd grade, and 21% in 4th to 6th grade.

As a result of CFHL, UC nutrition education, the following percentage of teaching staff "Strongly Agree" or "Agree"⁵ that compared to the beginning of the year more students now:

- 97% Are able to identify healthy food choices which exceeded the SMART objective of 75% or more,
- 88% Are willing to try new foods offered at school which exceeded the SMART objective of 75% or more,
- 81% Wash hands more often before handling food,
- 74% Choose fruits and/or vegetables in the cafeteria or during classroom parties, and
- 69% Bring fruit and/or veggies as a snack.

Furthermore, compared to the beginning of the school year teachers also reported changes in their own behaviors. Some highlights include teachers who report "A lot more often"⁶ engaging in the following:

- 85% Encourage students to be physically active,
- 80% Encourage students to eat breakfast,
- 77% Make healthier personal food choices,
- 76% Remind families to bring healthy snacks for school parties, and
- 76% Offer healthy food choices to students (at parties, snacks, rewards).

Physical Activity Teacher Observation Tool (PA TOT)

The PA TOT uses a similar approach to evaluate structured physical activity interventions (such as CATCH or SPARK) that aim to improve youth physical activity behaviors and opportunities at ECE, school, and afterschool sites. The PA TOT results speak to the various physical activity (PA) related behavioral changes teachers are observing in their students as well as changes they notice in their own behaviors.

In FFY 2024, 31 PA TOTs were collected from teaching staff in ECE sites, schools, and afterschool programs representing observations of 554 youth from 6 counties. All the teaching staff surveyed delivered structured PA through CATCH (n=31) and more than two third (n=21) also reported delivering *Go Glow Grow* a nutrition curriculum designed for younger age youth. All teaching staff indicated being responsible for supervising outdoor play times either "occasionally" (10%) or "regularly" (90%). In addition, the four

⁵ Response scale for frequencies excludes "Unable to discover / NA".

⁶ Response scale for frequencies excludes "Not sure / No outside food allowed in class".

school teachers surveyed also reported being responsible for providing all the PE for students in their class.

As shown below, 97%-100% of the teaching staff⁷ statewide either "agreed" or "strongly agreed" that <u>more students now</u> enjoy and participate in PA, as well as ask to repeat specific physical activities introduced during the year and for additional opportunities for PA compared to the beginning of the school year. For the PA TOTs collected at schools (n=4), teachers surveyed either "agreed" or "strongly agreed" that <u>more students</u> now spend at least 50% of physical education (PE) time in moderate or vigorous PA (MVPA) compared to the beginning of the school year. The great majority of school and ECE teaching staff (n=23) surveyed also "agreed" or "strongly agreed" that <u>more students</u> now meet State PE or Desired Results Developmental Profile (DRDP) PA standards although two were unsure or unable to determine this outcome.



Of those responding, 75-100% of teaching staff reported differences in their behaviors compared to the beginning of the school year that support student physical activity.⁸ These include all (100%) of teachers reporting either "Somewhat more often" or "A lot more often" that they are now enthusiastic about PA, encourage all students to be actively involved during PE/structured play times, and create a PA environment that supports students at all ability levels. Most (90%) reported that they use the playground to teach academic concepts through movement and many (84%) promote PA opportunities outside of the school day. And three-quarters (75%) of the teachers who responded to the question (n=12) reported they use brain breaks or active energizers with their classes (in schools and afterschool programs) either "Somewhat

⁷ Response scale includes "Unable to discover or N/A".

⁸ Response scale includes "Not sure or N/A".

more often" or "A lot more often". These findings represent key outcomes of the CATCH program which promotes a fun, engaging, inclusive, and safe environment for physical activity among all children participating.



Many of these positive changes in teacher and child behaviors move beyond the individual factors of the Socio-Ecological Model (SEM) and are affecting environmental settings. Additionally, these findings are supported by FFY 2024 PSE reporting, which highlights:

- improved access and quality of structured PA and PE as well as increased opportunities for unstructured PA time/free play, classroom PA breaks, PA during recess, and improved PA equipment and facilities;
- access to and utilization of edible gardens and fresh/local produce, as well as distributions of seedlings for home gardening, and closer collaboration between classroom and cafeteria through coordinated tastings;
- **Smarter Lunchrooms Movement** (SLM) strategies to expand point of decision and meal server prompts for healthy eating and improved menus/recipes and dining areas or facilities; and
- CFHL, UC staff participation on school and district School Wellness Committees resulting in improvements to district wellness policies and offering districtwide professional development trainings for teaching staff related to SLM, gardens and structured PA.

Eating and Activity Tool for Students (EATS)

The Eating and Activity Tool for Students (EATS) is the pre/post behavioral survey used by three State Implementing Agencies (SIAs) beginning in FFY 2020. As part of their SNAP-Ed evaluation work with California Department of Public Health, the Nutrition Policy Institute (NPI) adapted and tested EATS based on the <u>School Physical Activity and</u> <u>Nutrition Survey</u> (SPAN). CFHL, UC introduced EATS to CFHL, UCCE programs for use with students in grades 4th and higher. CFHL, UC adapted the administration protocol and instrument to utilize a modular approach and include recall prompts for physical activity. Depending on the intervention focus, UCCE teams select from the three EATS modules to administer the: Fruit and Vegetable Module (7 items), Sugar Sweetened Beverages (6 items) and Water (1 item) Module, and/or Physical Activity Module (4 items).

In FFY 2024, CFHL, UCCE programs collected matched pre/post EATS surveys with a total of 2,185 youth participants (4th-12th grade) across 15 counties resulting in 2,170 Fruit and Vegetable Module respondents, 1,845 Sweetened Beverages and Water Module respondents, and 1,811 Physical Activity Module respondents.

Fruit and Vegetable Module Results

The Fruit and Vegetable Module assesses whether students' report eating fresh, frozen, canned, and dried fruits and vegetables more times from the pre to post survey. Over a quarter to one-third of students (27-39%) reported an increased frequency in eating most of the fruits and vegetables asked about, including starchy vegetables (potatoes, corn, or peas), orange vegetables (carrots, squash, sweet potatoes), green vegetables (spinach, broccoli, green beans), "other" vegetables (tomatoes, peppers, cucumbers, celery), fruit, and 100% fruit juice. The smallest increase in students reporting more frequent consumption of the promoted fruits or vegetables from pre to post was for beans (pinto, refried, baked), with only one in five (19%) students reporting that they consumed beans more frequently on the post-survey. On average, youth increased their consumption of fruits, 100% juice, vegetables, and beans from 5.52 times at pre to 6.29 times at post which was a statistically significant increase (+0.77 times, p<.001). Significant gains were found from pre to post in the number of times students consumed vegetables both with and without beans included in the total vegetables. Significant gains were also found from pre to post in the number of times students consumed fruits including 100% juice (+0.25, p<.001). When examining individual question items, there were statistically significant increases (p<.05) reported for each vegetable item as well as for fruit (fresh, frozen, canned, dried). The only individual fruit or vegetable item that did not show a significant increase was 100% fruit juice which showed little change between the pre and post surveys (+0.05).

Sweetened Beverage and Water Module Results

The Sweetened Beverage and Water Module assesses whether students report drinking sweetened beverages fewer times and water more times from pre to post. Reductions in the reported frequency of consuming sweetened beverages from the pre to post survey ranged from 12% of students drinking diet soda fewer times to nearly one-third (29%) of students drinking fruit drinks (lemonade, sports drinks) fewer times. In fact, there was a

statistically significant decrease in total sweetened beverages including flavored milk from pre to post (-0.17, p<.05). Almost one-third (29%) of students reported drinking fruit drinks such as lemonade less often and almost one-quarter (24%) drank regular soda fewer times and sweetened coffee/tea fewer times from pre to post. The percentage of youth reporting improvements for each type of beverage is presented below in declining order.

Beverage Type	Improvement in Percentage Points
Fruit Drinks	-29%
Regular Soda	-24%
Sweetened Coffee/Tea	-24%
Flavored Milks	-23%
Energy Drinks	-13%
Diet Soda	-12%
Water	+23%

In contrast to the reductions observed in sweetened beverage consumption from pre to post, almost a quarter (23%) of the youth surveyed reported drinking water more times when completing the post-survey.

Physical Activity Module Results

The Physical Activity Module focused on the number of days and amount of time that students were physically activity, including in and out of the school setting. Among the physical activity measures collected at pre and post, students were most likely to report improvements in the number of days over the past week they were active for at least 60 minutes (43%). The percentages of students who reported being more physically active from the pre to post survey are presented below in declining order.

Physical Activity Type	Improvement in Percentage Points
Days with 60+ minutes of physical activity (last week)	+43%
Days with classroom physical activity breaks (last week)	+34%
Days of physical education (PE) (last week)	+26%
Time in PE spent doing physical activities (last week)	+24%

Statistically significant increases were found in the mean number of days students reported being physically active for 60 or more minutes (+0.36 days, p<.001), days with PE (+0.24 days, p<.001), and days with classroom physical activity breaks (+0.14 gain in mean score, p<.01). Of the 4 physical activity related items, only time in PE spent doing physical activities did not show a statistically significant improvement during FFY 2024.

In addition, statewide and county specific EATS results are examined against **four SMART objectives** as a reference for gauging program performance. Across the 15 counties collecting EATS pre/post surveys, each of the four SMART objectives were met and exceeded with:

- 41% increasing the frequency of fruit (including 100% juice) consumed the previous day compared to the SMART objective of 30%,
- 43% increasing the frequency of vegetables (including beans) consumed the previous day compared to the SMART objective of 30%,
- 47% decreasing the frequency of sweetened beverages (including flavored milk) consumed the previous day compared to the SMART objective of 30%, and
- 47% increasing the number of days with 60+ minutes of physical activity in the last week compared to the SMART objective of 35%.

At the statewide level, positive and significant outcomes were demonstrated among youth completing the EATS survey in both the areas of healthy eating and PA with all four SMART objectives being achieved.

The graphic below shows a user-friendly presentation of the EATS pre and post survey findings developed to highlight summary results from the 2023-2024 school year. County programs are encouraged to share their EATS results with stakeholders in the communities they serve using this engaging new visual format. These results can be filtered and displayed by classroom, grade, school, primary curriculum, intervention and race/ethnic group to best meet partner needs and facilitate collaboration on program improvement.

CFHL, UC Youth Program Evaluation Pre to Post Survey Findings (School Year 2023-24)										
Number of Surveys = 2185										
Fruits and Vegetables		Sugar Sweetened Be and Water	Physical Activity							
Completed module = 2170		Completed module =	Completed module = 1845			Completed module = 1811				
Mean Times Ate(yesterday)	Pre	Post [†]	Mean Times Drank(yesterday)	Pre	Post [†]	Mean Physical Activity (last week)	Pre	Post [†]		
Fruit and Vegetables	5.52	6.29	Sugar Sweetened Beverages*	2.76	2.59	Days with 60+ minutes MVPA	3.90	4.26		
Fruit	2.57	2.83	Water	2.38	2.42	School days with PE	2.63	2.87		
Vegetables 2.93 3.45 † Improvement from pre to post highlighted green. † Improvement from pre to post highlighted green.										



What Did You Learn? (WDYL)

In FFY 2024, UCCE teams continued to use the 2-item WDYL retrospective survey as an innovate option for collecting open-ended qualitative feedback from students. The questions include: 1) "What, if anything, is one thing that you learned from these classes?" and 2) "What, if anything, is one thing that you do differently because of these classes?".

In total, 2,723 surveys were collected across 19 counties. Youth respondents ranged from 4th-12th grade although most (86%) were in the 4th to 6th grades. This flexible evaluation tool was used for a variety of curriculum, most commonly with:

- Up4It! Level 1 (4-5th grade)
- Nutrition to Grow On (4-6th grade)
- CATCH (K-5) Kids Club Manual and Activity Box,
- Power Play! Power Up for Learning Physical Activity Supplement (4-5)
- TWIGS (K-8th grade) (garden enhanced nutrition education), and
- 4-H Cooking 101 (4-6)

Because student responses typically reflected the specific curricula and learning activities being implemented, WDYL results are most useful for providing class, site, or curricula specific feedback to community educators at the local level. The open-ended responses provide insight into what information and actions are most memorable or notable to students. Overall, students shared a great variety of specific responses about what they had learned from the CFHL, UC classes and things that they did differently. A few examples of student responses are provided below:

What, if anything is one thing that you learned from these classes?	What, if anything, is one thing that you do differently because of these classes?
I learned to eat healthier	I watch what I eat and how much I ea
 I learned how to cook nutritious food that's healthy and good for you 	I drink more water
I learned to check the labels	I eat more vegetables and fruit
Il learned to exercise every day	I try more different foods and its fun.
I learned about MyPlate and why it is important	How I cut food, now I use low and slo
• I learned about serving sizes and how they are affected my nutrition and calorie intake	Give more suggestion for dinner to m mom.
I learned its better to drink water than drinks with lots of sugar	• I eat whole grain for most of my break rice and tortillas. I also love eating veggies more since starting this class.
• One thing I learned was how to grow plants not only that, but I enjoyed it	I exercise more
 I leaned that plants need nutrients so do humans 	I garden with my mom

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