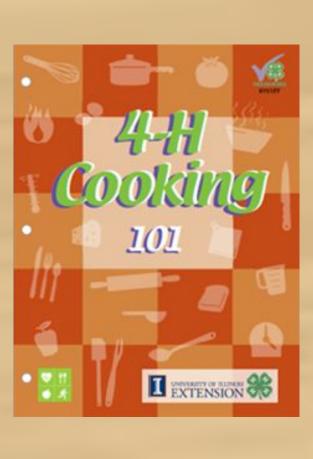
INCORPORATING YOUTH DEVELOPMENT TECHNIQUES INTO NUTRITION EDUCATION: UC 4-H COOKING ACADEMY Horowitz, M., Bird, M., Hill, R., Iaocopucci, A., Miller, J.

Ingredients:

- 7 lessons
- 1 ¹/₂- 2 hours each
- 6 healthy recipes
- Focus on cooking skills
- No kitchen required



Background: The American Dietetics Assocation states "The best way to teach kids about eating right is to get them into the kitchen to prepare healthy meals together". The UC developed the 4-H Cooking Academy to do just that. Historically, nutrition education programs have relied on theories derived from child development, psychology, education and medicine. As the field has evolved, so have the theories. However, it is rare to incorporate research and theory from the field of youth development. When looking to impact the health of young Californians, UC aimed to incorporate both fields into a synergistic approach. Youth development is a whole-child approach to supporting children as they grow so that they are confident, competent, connected, caring, have a strong moral character, and contribute to society. 4-H integrates theory into practice by providing children ages 5-18 with a variety of structured experiential activities to develop these qualities. By providing a safe space where they feel like they belong, can practice and master new skills with support but independently, and are given opportunities to give back to others, 4-H develops leaders. A focus on topics in healthy living, science/technology/engineering/art/math, and citizenship help prepare them for a productive life.



Objectives: To develop healthy nutrition habits as well as youth's science, problem-solving, teamwork, time management, leadership, self-confidence and other 21st Century Learning Skills by integrating youth development principles into an experiential project.

Methods: The UC Nutrition Education Programs coordinated with UC 4-H to lead the Cooking Academy throughout the state using the 4-H Cooking 101 series curriculum with elementary students from low-income sites. The hands-on, experiential, skill-based program includes seven weeks of cooking and food safety instruction centered on the Dietary Guidelines for Americans with an emphasis on fruits, vegetables, whole grains, water, and healthy fats. Students prepare and cook healthy foods, while incorporating the latest research from youth development using a teens-as-teachers model. Partnering with federally funded nutrition education programs, 4-H uses the motivational force and educational pedagogy of having older teens and young adults teach to children in out-of-school group settings. This harnesses the desire of adolescents to have increasingly meaningful responsibilities (care and contribute), to work with peers (connect), and to gain employment experience for future college and career success (competence and confidence). By integrating positive youth development theories into nutrition programs, we increase not just the likelihood for dietary change, we encourage positive cognitive, social and emotional development in adolescents.

Chef Quote: What I like best was... "...making food and being able to help out"

University of California Agriculture and Natural Resources

EFFNEP Expanded Food and Mathematican Education Program

Materials:

- 4-H Cooking 101 series curriculum
- Portable cooking equipment
- Dedicated educators
- SNAP-Ed/EFNEP & 4-H funding
- 5^{th &} 6th grade after school program participants

Teen Leader Quote: the best part..."Got to build relationships with team members and got to know that I am a leader and their are kids that look up to me."

This material was funded by USDA's Supplemental Nutrition Program - SNAP, known in California as CalFresh (formerly food stamps). These institutions are equal opportunity providers and employers. CalFresh provides assistance to low-income households and can help buy nutritious foods for better health. For CalFresh information, call 1-877-847-3663.

"What were 3 things you learned at Cooking Academy?"

-How to cook (54%) -Learning about healthy foods (35%) -How to follow directions (29%) -How to read a label (18%) -Teamwork skills (15%)

Results: Both the youth chefs and the teen leaders were evaluated using different measures.

Youth Chefs: 97% of students stating they would eat zucchini again, 73% of students enjoyed whole wheat pasta, 94% enjoyed blackberries, and 35% of students increased their liking of tofu. Formative testing showed increases in cooking at home, self-efficacy in trying new foods, washing hands before food preparation, and eating more than one fruit or vegetable at dinner.

Teen Leaders: When asked about their abilities (using a 4 pt scale), teens improved on every measure (see table).

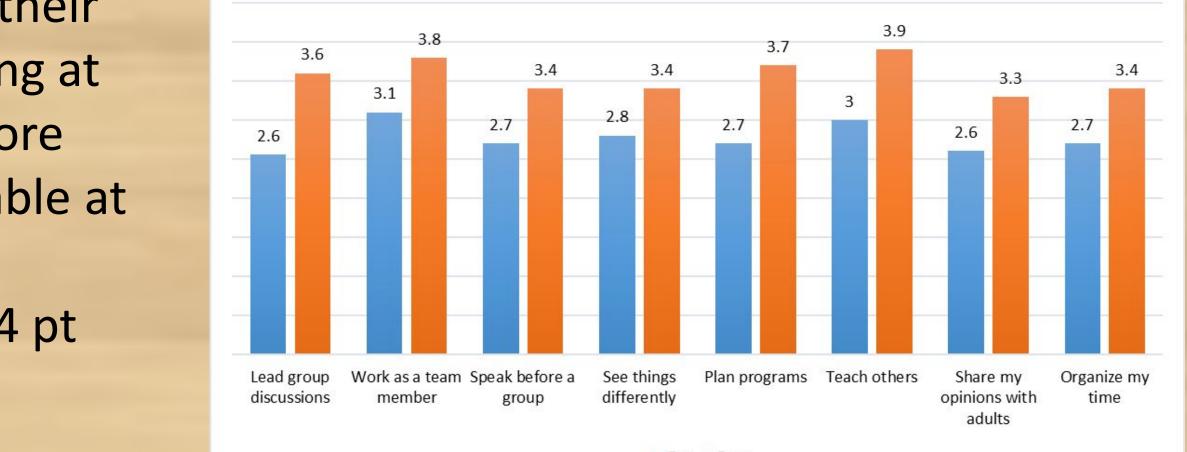
Impact: 4-H is an international program found in over 50 countries. Incorporating the project into the existing 4-H Youth Development program created an avenue to reach more children, garner the expertise of Youth Development experts, and create a new format for projects. Teens were given opportunities for mastery and leaderships, and children enjoyed having teens lead the lessons.

These results indicate that children improved towards the goals of both programs. UC Nutrition Education programs wants Americans to select and prepare foods consistent with the dietary guidelines. Self-efficacy related to food preparation and trying new foods increased in these young chefs. This is crucial to continued cooking and preparation of healthy meals. Students also stated that they learned and enjoyed working as a team and helping others. These are important constructs in 4-H Youth Development programs whose aim is to help students grow towards caring, confident, connected, competent contributing adults.

> **Teen Leader Quote: "I have become more** patient and flexible."

"What were the **3 best things** about Cooking Academy?"

-making the food (57%) -trying new foods (27%) -working with others (24%) -trying new things (22%) -helping (14%)



Chef Quote: "The best part of Cooking Academy is working as a team and having fun."

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