

Making Food Literacy Education a Global Priority

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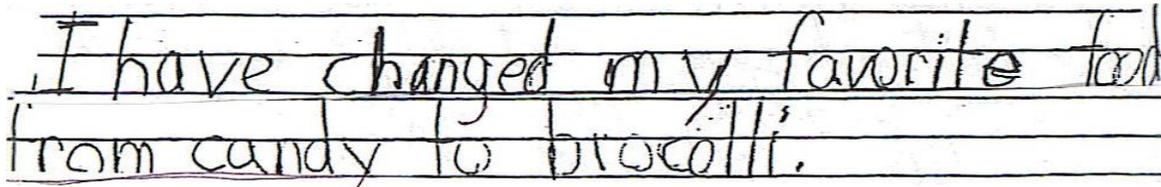
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Abstract

This paper presents a successful field-tested program, Food is Elementary, that is research based and designed to improve food related behaviors through sensory-based, hands-on education. A goal is to improve the health of people and the earth through positive, integrated education about nutrition, cooking, and the environment. The author presents evidence that it is critical to have experiential education that involves the senses taught in our schools beginning at an early age and continuing through adulthood so that children will be able to make informed choices about what to eat that will enhance their health and protect the environment. The relationship between what we eat and how it is produced affects the health of people and the earth and it is vitally important that this information is easily accessible. Never in our history were so many highly processed food items available and this has had a dramatic effect on the health of the population. If children do not understand these connections and work to find solutions their lives will be adversely compromised as chronic diseases continue to affect them and climate change continues to cause devastating consequences to our environment. Our schools can play a dynamic role in getting students to act and it is essential that they do so.

Key words

Food literacy education, environmental education, healthy food



I have changed my favorite food
from candy to broccoli.

Introduction

The Food Studies Institute (www.foodstudies.org) has been working with diverse populations in the U.S. and abroad in food literacy education since 1995. Food is Elementary (FIE) is a unique curriculum that uses food as the vehicle to teach science, math, social studies, art, literature, gardening, and environmental education. People of all ages and economic backgrounds from preschool, K – 12th grade, senior citizens, M.D.'s, health and educational professionals, to incarcerated teens have obtained statistically significant results in improving their food behaviors after participating in the FIE program. FSI's goal is to make FIE available to people everywhere so they will have access to information that can improve their quality of life.

The United States is experiencing multiple issues related to health, education, behavior, and the environment. Our children are at special risk because this is the only world they know, and we are barely on the cusp of figuring out both short and long-term solutions.

We are amid an ongoing pandemic of Covid that has made it difficult to have in person education, resulting in quarantines to try to mitigate the spread of the virus. Additionally, most young people are enamored to their digital devices and according to a study done by the Pew Research Council, at least 2/3 of parents are concerned about this trend.¹ As a result, levels of antisocial behaviors are increasing as children turn to their smartphones and electronic devices as an increasing source of information while in person engagement with people is on the wane.

Communication skills develop through ongoing interactions and debates. Childhood as we know it is rapidly changing. Problem-solving skills such as negotiating with neighborhood friends and family, nature exploration, and figuring things out through creative play, are being lost. Furthermore, fundamental skills such as cooking, manners, and caring for oneself and others are rarely taught in today's schools. The "foods" that many kids eat are processed concoctions that contain ingredients that are not identifiable to the average person, be it a child or adult. The NIH issued a report in 2018 that children get 2/3 of their calories from highly processed foods.²

In previous times, before the explosion of highly processed "foods" became ubiquitous, most people ate what was locally available and hoped they could get through the winter with enough to eat. The connection between what we eat, and health was recognized early on starting with Hippocrates' admonition, "Let Food be Thy Medicine." Ironically, the diet many people consume today, often devoid of whole foods, causes many to take our contemporary definition of "medicine" to mean drugs, not food.

Children are getting chronic diseases at younger ages that previously were the domain of adults. For example, adult-onset diabetes had to undergo a name change to type-2 diabetes since children were developing it at an increasingly alarming rate. The consequences of not eating whole foods cannot be understated. Our children are not learning that we literally "are what we eat" and that if we eat junk, we often behave in a junky way. Our organs are dependent on nutrients to function and rebuild new cells. This fundamental message is rarely taught in schools and homes.

Materials and Methods

I have taught children, their families, and communities food literacy over the past 50 years. I began this work in the early 1970's by teaching at a Head Start/Day Care Center in Montpelier, Vermont. Approximately 70 students attended this pre-school, so teachers were able to focus on specialty areas after the philosophical tenants of Head Start were met. My passion has always been children, education, healthy food, cooking, gardening, and art. I was able to develop a program for preschoolers by teaching them how to grow food in the garden we created, cook it, and make it delicious and look beautiful.

The Head Start philosophy honors the ability of young children and recognizes the fact that the first five years of life are crucial for healthy brain development. Children are

¹ <https://www.pewresearch.org/internet/2020/07/28/parenting-children-in-the-age-of-screens/>

² <https://www.nih.gov/news-events/nih-research-matters/highly-processed-foods-form-bulk-us-youths-diets>

read to every day, spend time outdoors no matter what the weather, and parents are encouraged to be part of the process. The one weak link as I saw it was the food served to them which included typical American processed fare such as hot dogs and tater tots. I decided on concentrating my daily efforts on getting the kids to learn about healthier items by engaging their senses in preparing them.

Parents told me there was “no way” their child would ever eat a vegetable willingly. I took this as a challenge and asked them to tell me the veggies their child would never eat. I developed fun, hands-on activities with these foods and showed the students how to prepare them in an appealing way by using art and positive activities to pique their interest. To my astonishment, when the students had a literal hand in preparing the recipe or engaging in the experiment, they would eat the new food and enjoy the experience. I cooked or made snacks with the students daily and without exception, they would get excited and eat what they prepared if they were actively engaged in the process. While I taught Head Start for only a couple of years the experience gave me insight to the capabilities of young children as I took my lesson to a variety of other venues.



Young children learn about Brussel sprouts and their interesting growth habits, separate the leaves to make a delicate bowl, fill the leaf bowl with berries and small whole foods and eat it as a Brussel sprout treat

I came to realize the problem with kids not eating healthy foods was primarily an adult problem. We project our biases on children in subtle or not so subtle ways. Starting in infancy when veggies are first introduced many adults make negative faces and assume the child will not like the veggie. We use sweet and fatty foods as reward foods and typically do not involve the child in sensory exploration of new foods. In all my work with children of diverse cultures, ages, and economic backgrounds I have found it to be universal that children will eat healthy foods when approached in a manner that engages the senses and respects their abilities. No child is forced to try the new food so fear of the unknown is dissipated. Peer pressure is used in a positive way as students try to outdo each other by requesting more exotic fare such as hot peppers and seaweed.

Children first learn about the world through their senses. They taste, smell, touch, observe and listen to their environment. This is the raw data that allows them to make connections and learn about their world. They want to know how and why their world functions and by the time they are around five, their curiosity is at a high level. The early years are a critical time in child development to expose children to a variety of experiences which will lead them to understanding basic concepts and expand their palates.

We have long understood that the first five years of life are crucial to brain development and what a child eats during this time can set them up for a lifetime of good or bad habits. Many of the processed foods available today did not exist in previous times. Some of these items may not contain any whole foods but are a concoction of chemicals that can be addictive. When a child eats a processed diet, we are setting them up for potential health problems that have been occurring at younger ages than ever before.

Results and Discussion

My preschool experiences many years ago taught me that there is no age too young to teach food literacy. Since that time, I have worked with thousands of kids, schools, and communities in over 35 states and other countries. The response from students was universally positive but some adults viewed this as “woman’s work” – caring for, cooking, and gardening with children and did not view it as serious education linked to the academic disciplines. I decided to go back to school at midlife to learn research methodology to scientifically validate (or not) my long-term observations and acquired a Ph.D. at Cornell University. My research received national awards and proved that education was highly effective in accepting new foods.³ The guiding principle that informs my curriculum is from anthropologist Claude Levi-Strauss “Food is Good to Think.” If you use your imagination, food can be related to just about any subject as a tangible, enjoyable way to learn. One is more likely to remember what they learned if the senses are involved rather than relying primarily on cognition.

Currently, FSI, is committed to getting FIE in as many schools as possible and documenting the results. Not only are students exposed to a variety of health promoting foods, but they bring the message home and have impact of their families’ eating behaviors. When one accepts the food of a culture, they are likely to be predisposed to accepting the people from that culture.

Our food tastes are notoriously resistant to change, especially as one grows older. Children are open to hands-on sensory experiences if they are fun, and it can be done in collaboration with their peers. It is critical that we seize this opportunity to take advantage of a child’s natural curiosity about the world that can result in developing good habits that will nurture them and the planet and can last a lifetime.

³ Society of Nutrition Education, *Excellence in Nutrition Education*, 1995, USDA, *Most Creative Implementation of the Dietary Guidelines*, 1995.

3 Favorite snacks prior to FIE lessons: candy, ice cream, hot dogs

Please name your 3 favorite snacks:

1. Kumkwat
2. Chiflower
3. brussle sprouts

2nd Grade New Favorite Foods – Kumquat, Chive Flowers, Brussel Sprouts after tasting new foods from Food is Elementary curriculum

Summary/Conclusion

The way we eat not only affects our families, but also has a profound effect on Mother Earth. Like the children we are feeding highly processed foods to, Mother Earth has been fed a steady diet of plastics and chemicals. Our air, soil, and water are fed daily doses of toxins that are absorbed by our foods and our bodies. Scientists have determined that all humans and animals have plastics in their bodies that comes from the air they breathe, the water they drink and the food they eat.⁴

The time has come to develop a new paradigm in the way we educate our kids, due to the fact we are not providing them with the intellectual tools they need to reverse the reality of poor nutrition for people and the planet. Children can lead the way if given accessible information just as they did in the stop smoking campaign over 25 years ago. We no longer have the luxury of time as climate change becomes more dramatic every day and human health continues to deteriorate.

There is an urgent need to overhaul the curriculum of schools and other educational organizations starting with preschools and continuing through college to address our current reality. Positive education, while messy to implement, is the one solution that works. If we don't take immediate constructive measures, we will not be able to heal our health and the health of our planet. The legacy we will leave for our children is not sustainable for them or the earth. We owe it to our children to teach them how to protect themselves and our global home. Our future depends on it.

“Let us be good stewards of the Earth we inherited. All of us have to share the Earth’s fragile ecosystems and precious resources, and each of us has a role to play in preserving them. If we are to go on living together on this earth, we must all be responsible for it.” - Kofi Annan

⁴ <https://www.nationalgeographic.com/environment/article/you-eat-thousands-of-bits-of-plastic-every-year>