

Farm to Preschool:
A Study on Teacher Support in Nutrition Education

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Executive Summary

Nutrition is a key issue right now for Americans, with 35.7% of adults categorized as obese according to the CDC. In order to reduce this percentage, nutrition education has to start at an early age, which requires curriculum in preschool classrooms. Farm to Preschool, a non-profit organization, is an important program at the preschool level. It fills a major gap in curriculum in order to support teachers on issues of food and nutrition. This study investigates the type of successful supports and what more can be done.

Farm to Preschool focuses on getting local, fresh food into early childhood care and provides nutrition curriculum to preschool classrooms. This paper discusses the barriers for teachers and Farm to Preschool in terms of implementing nutrition curriculum in Pacific Asian Consortium in Employment's (PACE) Los Angeles Head Start preschools. It also examines the perspectives of PACE teachers on the importance of and their experience with nutrition education in the classroom. To do this, teachers at different PACE Los Angeles Head Start Preschools, employees at Farm to Preschool, and the PACE nutritionist were interviewed. This paper also compares lesson plans from the PACE nutritionist and Farm to Preschool curriculum.

From the interviews, it was determined that communication is key to success when it comes to implementing a curriculum. However, the bureaucracy of large organizations, like PACE, can make that very difficult. Farm to Preschool repeatedly makes attempts at contact with PACE, but the bureaucracy and lack of funding for both organizations makes success very limited. Farm to Preschool is trying to contact PACE in new ways, such as creating a listserv. Without changes to funding or the bureaucracy, communication may not improve and this paper recommends that Farm to Preschool look into focusing its resources to more responsive schools.

Interest

Nutrition has been an interest of mine because I have friends with eating disorders and overweight relatives who are close to me. For many reasons, including health, I have been a vegetarian during my college career. I had to learn about nutrition as my diet changed to make sure that I was getting everything I needed.

Besides nutrition, teaching has always been a great interest of mine. I grew up working with children in whatever way I could, including Sunday school, tutoring, and summer camps. I entered college knowing I wanted to teach young children.

Throughout my coursework and volunteering, I have come in contact with many teachers who have creatively grappled with barriers and changes that are made in schools and how teachers can be sufficiently supported to effectively make those changes. Additionally, they did not feel that administrators and policy makers hear their voices.

Interviewing teachers will let them express their opinions on nutrition education and on the support they receive. This project is a way to understand teacher support, which is important to me, as I will be beginning my career as a teacher upon graduation.

Nutrition education in schools is a very broad topic, so I have focused on Pacific Asian Consortium in Employment (P.A.C.E.) preschools with Head Start programs in Los Angeles County. Many of the schools have had contact with Farm to Preschool, a program supported by Occidental College, where I will graduate from in Spring 2014.

Introduction

According to the Center for Disease Control (CDC) nutrition is a key issue right now, primarily because 35.7% of Americans are categorized as obese (CDC). In order to reduce this percentage, preschool teachers can serve as a line of first exposure to ideas of health and eating. Nutrition affects not only one's physical health, but one's mental development and health. Also, nutrition can affect social development (Tisdall; Roizman).

Starting in the 1920s, experts began to recommend addressing nutrition in schools. Since then, programs and regulations have been put into place with organizations filling the need for nutrition education curriculum. Farm to Preschool is one such organization.

Preschools have a choice of which or how many curricula to use. The degree of which these curricula are implemented varies greatly. This paper examines how schools implement nutrition curriculum, with a particular focus on Farm to Preschool curriculum implemented in LA County. Additionally, it looks at the many political and systemic barriers that teachers face when trying to implement a new nutrition curriculum, like Farm to Preschool's Harvest of the Month. Teachers were interviewed regarding their opinions and experiences with nutrition education, focusing on Farm to Preschool curriculum, but also addressing other programs and nutrition education provided for teachers who teach young children, including why nutrition education is important. During these interviews, teachers expressed their opinions on the support they receive through Farm to Preschool, including teacher training, access to resources, and use of curriculum materials. By interviewing Farm to Preschool staff about their experiences with creating curriculum and trying to work with large organizations like PACE to provide nutrition curriculum, this

paper looks at the political and systemic barriers that Farm to Preschool faces while working with organizations to help implement their programs.

Literature Review

Nutrition and nutrition education in preschools are very important because nutrition affects not only physical health, but also mental and social development. Some areas are more difficult than others to provide proper nutrition because fresh fruits and vegetables are not readily accessible. Over the years, nutrition and nutrition education have become more prominent in school related policies and programs. One of the most recent ones was the passing of AB 290, which provides more nutrition training for early education providers. The preschool classroom is a very important place to teach nutrition, as it is a place where children have consistent access to role models. However, there are several factors that can help or hinder a teacher in teaching nutrition in their classroom. Teachers need proper training, supplies, and support. Without that, teachers are often stretched and under resourced. This can be especially true in subsidized preschools where teachers have to fill out extra paperwork as part of regulations for organizations who receive federal or state funding.

Why is Nutrition Education Important?

Farm to Preschool focuses on nutrition education programs because their goals include “influencing the eating habits of young children while their preferences are forming” and “creating healthy lifestyles through good nutrition” (Farm to Preschool). Nutrition is important for several reasons. Lack of proper nutrition can cause malnutrition and obesity, as well as overall physical and mental health problems such as eating-

disorders, dental cavities, and iron-deficient anemia (Wilson). A preschooler's development includes physical, mental and social health, all of which are impacted by the quality of nutrition provided. Race and socio-economic status can influence the environment in which a parent tries to provide proper nutrition to their preschooler.

Physical Health

Malnutrition

Proper nutrition is key to physical health; failure to have proper nutrition can have life-long negative consequences. Improper nutrition can lead to smaller body size which has been linked to shorter life expectancy, frailty, and less resistance to disease (Haas; Alter). With the proper amounts of vitamins and nutrition, children can have strong bones, energy, and the ability to prevent illness (First 5 California).

Better nutrition has been linked to increased schooling attainment. Lack of certain vitamins can impair the rate at which children learn, which can result in more grade repetition, less grades completed, lack of an ability to concentrate on tasks, worse performance on tests, and behavioral problems (Tisdall; Behrman; PEI Healthy Eating Alliance). As nutrition is related to overall health, better nutrition is linked with less absenteeism due to illness, and allows children to participate in more activities (Behrman; Children's Heart Center). Good nutrition has resulted in elevated feelings of wellness and wellbeing as well as being able to fight off colds more efficiently (Children's Heart Center). Proper nutrition has been linked to better problem-solving abilities, recall, memory, verbal fluency, and creativity which are all important factors in academic performance and achievement (Wilson).

Obesity

While too little nutrition and food leads to the long-term health challenges cited above, an overabundance of these is also unhealthy and dangerous. Since 1970, the rate of childhood obesity has more than tripled in the United States, causing the World Health Organization to deem it an epidemic (Christina Paxson et al.). The results of an increasing rate of childhood obesity and overweight “may reverse the modern era’s steady increase in life expectancy” (Daniels). Minority and low-socioeconomic-status groups are disproportionately affected by obesity because of poverty, lack of nutrition education and lack of access to medical care, among other factors (Wang and Beydoun).

Obesity can be harmful to one’s future. Obesity and being overweight are often a result of an excess of caloric and fat intake, but other factors include excess sugar intake, increased portion size, and an inadequate amount of physical activity (Dehghan, Akhtar-Danesh, and Merchant). Many fast food restaurants have large portion sizes with large amounts of sugars and fats in their food, all for low prices. These fast food restaurants are often more common in low-income neighborhoods and more accessible to the poor.

Being overweight or obese negatively impacts almost every organ system. Obesity-related illness can include metabolic, digestive, cardiovascular, respiratory, and skeletal disorders. These illnesses can accelerate the development of heart disease, heart attack, and stroke (Daniels). Obese children are more likely to develop gallstones, hepatitis, and sleep apnea (Must and Strauss). Even if these disorders do not present themselves during childhood, being overweight as a child increases the chance of these disorders developing in adulthood, which makes it even more important to start interventions early. Scientific evidence supports that a poor diet and childhood inactivity have an impact on the possible

development of risk factors related to the onset of chronic disease later in adulthood; overweight children are more likely to become overweight adults (Baranowski et al.; Nicklas et al.; Guo et al.).

Mental and Social Development

Mental Health and Development

Adequate nutrition can lead to the correct development of the brain, especially during preschool years, because 90% of a child's brain develops in the first five years of life (First 5 California). First 5 California, a government organization, has launched several educational campaigns about the important role parents and caregivers play in their child's first years (First 5 California).

Poor nutrition can also have devastating effects on mental health. It has been linked to a lack of well-being, irritability, muscle pains, moderate impairment of physical efficiency, negative mental outlook, and low self-esteem (Tisdall; PEI Healthy Eating Alliance). Overweight and obese children are more susceptible to teasing, discrimination and victimization, all of which can affect their self-image and psychological health (Must and Strauss).

Social Development

According to Tracey Roizman, improper nutrition may increase the chances of a child developing antisocial and aggressive behaviors. These may grow from children having a difficult time dealing with the events and feelings in their lives and as a result lead to externalizing behaviors where children direct their anger and other negative emotions in

an outward manner. These negative behaviors, such as aggression, lying, and screaming are detrimental to a child's success in school (Roizman).

What a child eats is not the only aspect of nutrition that can affect how the child behaves; the environment where the child eats matters as well. Meal and snack times introduce spaces where children and even adults can sit together and enjoy their food while also engaging in a conversation. This is accentuated in a family-style meal service, which "promotes self-help skills, and develops fine and gross motor skills," while also helping a child work on language skills, conversation and table etiquette (Harris). Through role modeling and nutrition education, children can learn healthy eating habits. Learning to eat well at an early age increases the chances of healthy eating as an adult, and can even help them live longer (Children's Heart Center).

Food Deserts

One barrier for teachers and families is in the formation of food deserts. The lack of fresh fruits and vegetables make it difficult to plan nutrition education fieldtrips and activities, as well as making it challenging to provide healthy food at home. One example is South Los Angeles, where six of the eight PACE schools I sampled were located, in which the majority of the population is poor and Latino. In a 60-mile radius, according to a study conducted by Public Matters and South Los Angeles Healthy Eating Active Communities, , there are 800,000 people with the area broken up into smaller communities with few mainstream grocery stores. Each one is overrun with liquor and convenient stores that sell primarily liquor and no fresh food. If they do sell fresh food, the choice is limited, overpriced and inferior to supermarkets in other regions. The lack of access to fresh food is only exacerbated by the fact that the commercial corridors are filled with fast food chains.

These chains make it cheap and easy to buy junk food, and the lack of healthy food drives prices up at markets that do sell fresh food, even though it is substandard (Public Matters and South LA HEAC). Food deserts do not only exist in South Los Angeles, but in many other areas of poverty as well.

Food deserts are one of the issues that Food Justice seeks to address. Food Justice promotes that “the benefits and risk of where, what, and how food is grown, produced, transported, distributed, accessed, and eaten” should be “shared equally” (Gottlieb). This means that the food should be fresh, nutritious, and grown locally in a way that respects communities, workers, animals, and the land. Food Justice is a relatively new concept in Los Angeles and in other large cities, but it becoming more popular. Farm to Preschool tries to start the conversation of Food Justice in their workshops, curriculum, and organizing by talking about the importance of local fresh fruits and vegetables.

Conclusion

Proper nutrition is key to the health of a child. It can affect their physical, mental and social health. In order to have proper nutrition, one needs to have the proper knowledge about nutrition, access to fresh fruits and vegetables, as well as the money to purchase these items. Proper nutrition in preschool can affect how a child develops into adulthood. Poor nutrition can lead to severe illnesses in many different organ systems. With limited access to fruits and vegetables in impoverished neighborhoods, many poor children are not getting proper nutrition. This is leading to higher rates of obesity and diabetes in this demographic. Teachers care about their students and want them to grow up to lead healthy and productive lives. Many of their students come in without proper nutrition and they feel it is their jobs to help provide nutrition education to fix that.

History of Nutrition Education Policy in Schools

In 1946, the United States government, with pressure from advocacy groups and later with the war on poverty, started to help supply school meals for needy children. Over time, nutrition standards have been set for those meals. After the introduction of nutrition standards in meals, came the introduction of teaching nutrition education to the students themselves (Federal Education Budget Project). Without these changes, including the creation of state standards, teachers would not receive the nutrition training or resources that are needed to meet the needs of their students. There have been few reforms in terms of nutrition education in preschools, but by looking at these reforms in elementary schools, we can see the change in opinions on the importance of nutrition education in schools over time.

National School Lunch Act and Child Nutrition Act

Before nutrition education was introduced to schools, school meals were the only way to address nutrition. In 1946, with the support of the farming community and childhood health interest groups, President Harry Truman signed the National School Lunch Act (NSLA) that granted aid to states in the form of a reimbursement of about nine cents per meal. Over the years, the act evolved to include free and reduced priced breakfast, milk, after-school snacks, and summer meals for qualifying students (Federal Education Budget Project). In 1966, because of the success of the NSLA, the Child Nutrition Act (CNA) was passed which included a school breakfast program, food service equipment assistance program, and higher reimbursements for meals that allowed for programs to be run in preschools as well. Additionally in 1946, the American School Food Service

Association was founded to ensure that "healthful meals and nutrition education are available to all children" (School Nutrition Association). In 1970, both the NSLA and CNA were amended to allow for free and reduced priced lunches and to prohibit discrimination and overt identification of needy children (School Nutrition Association).

Nutrition Education Programs

After school lunch programs were established, the next step was to add nutrition education to the curriculum. For that to happen, teachers had to have the nutritional knowledge to pass on to their students. Programs that offer grants and training programs were created like the Nutrition Education and Training Program (NET) and the Expanded Food and Nutrition Education Program (EFNEP) as well as guidelines provided by the Center for Disease Control (CDC).

During the 1920s, nutrition and dietetic professionals promoted school nutrition programs. In 1946, the National School Lunch Act was passed due to the fact that American military inductees in World War I and II were physically unfit due to malnutrition. The act also initiated child nutrition programs in public schools (Frank).

Founded in 1965 and stemming from the war on poverty, EFNEP operates in all 50 states and U.S. territories. Some of its funding is sourced from the United States Farm Bill. It provides low-income individuals and families with the knowledge and skills to adopt and maintain a nutritious diet. A special youth subset of EFNEP provides curriculum in after-school care programs, 4-H EFNEP clubs, day camps, residential camps, community centers, neighborhood groups, and home gardening workshops (National Institute of Food and Agriculture).

In 1970, PL 91-248 was passed into law to accomplish the recommendations from the 1969 White House Conference on Food, Nutrition and Health. This legislation, which authorized training school food service workers in nutrition, amended the National School Lunch Act and was the first act of its kind passed by the federal government (Frank).

The Head Start program, which is described later in this paper, began as an extension on the war on poverty. Since 1973, the Head Start program has required health and nutrition programs to be integrated into daily activities for the children. For this program to be effective, the lessons taught in school need to be carried over into the home, which requires well-informed parents (Society for Nutrition Education). Head Start regulations and ill-informed parents are just a few of the barriers that teachers face when trying to successfully implement nutrition curriculum in the classroom.

In 1977, Congress helped establish NET as section 19 of the CNA to make grants to all states for nutrition education programs for school children, teachers, parents, and food service workers (Cal-Pro-NET). The intent for the program was to train personnel and to help that personnel create curricula to teach children the importance of a nutritionally balanced diet. This program helped jumpstart a nationwide effort to teach nutrition to children (Frank).

In 2006, the CDC introduced a guideline where schools would require planned and sequential health education from prekindergarten through grade twelve. Nutrition education works best when it works off of previous knowledge, as well as when it is culturally and developmentally appropriate (Rutledge). This previous knowledge can be about explaining what a carbohydrate or protein is in middle school, or something as simple as relating shapes, colors, food origin, texture and smells to food that is presented to

them in preschool (Harris). The nutrition and health education curriculum should be consistent with scientific evidence in terms of what is taught and in terms of effectiveness in helping students improve their health behaviors. This can be achieved by using classroom methods that are interactive, engaging, and relevant to the students (Rutledge).

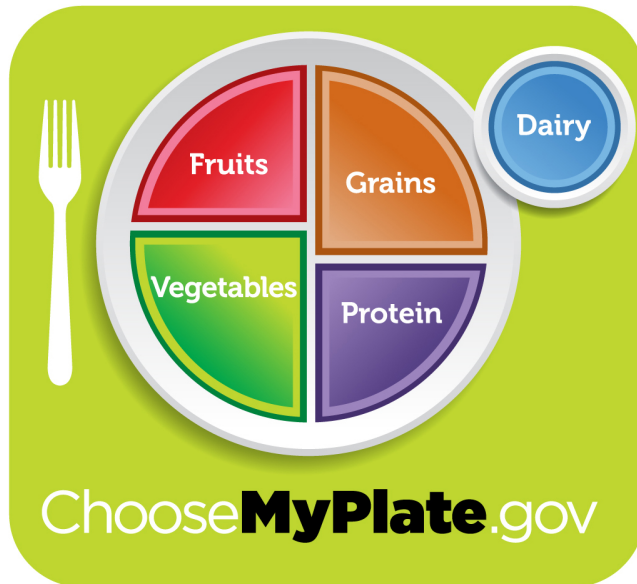
While most states and districts require health education in terms of nutrition and physical activity, it is not a truly functional requirement because few devote a sufficient amount of hours to the curriculum for it to have a change in the behaviors and habits of the students (Rutledge). Without a set plan of implementation with an established requirement of minimum hours spent on the topics, new sets of guidelines will fail to truly be effective.

Head Start

Started in 1965, Head Start is a federal preschool program for three-to-five-year-olds from low-income families. In order to enroll in the program, the child must be homeless, receiving public assistance, a foster child, or belong to a family below the poverty line. The poverty guidelines apply to 48 states, including California and is issued each year in the Federal Register by the Department of Health and Human Services (“Poverty Guidelines and Determining Eligibility for Participation in Head Start Programs”). It consists of part-day comprehensive developmental programs with an emphasis in parent education and involvement (LACOE). As part of the standards for the Head Start program, leaders need to integrate all educational aspects of health, nutrition and mental health services into program activities, with at least one nutrition education lesson per week (“§ 1304.23 Child Nutrition. - Head Start”).

MyPlate

For many years, the Food Pyramid was used to help Americans figure out how much of each food group should be in their diet. In 2010, Michelle Obama and the United States Department of Agriculture helped replace that with a simpler version called MyPlate.



This version shows the five food groups using a familiar image, the place setting for a meal, segmented for each food group (USDA). When teaching nutrition, teachers now use MyPlate when discussing portions and food groups. Activities in preschool can include actual plates with MyPlate printed on them, where children put plastic foods in the correct category and make pretend healthy meals.

Healthy, Hungry-Free Kids Act

Recent changes have been made to make sure that what students are eating at school is even more nutritious than before with the help of the Healthy, Hungry-Free Kids Act. WIC provides Federal grants to states for supplemental foods, health care referrals,

and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk (United States Department of Agriculture). These programs not only improve the nutrition the students receive, but help with training those providing the meals, which in preschools can be the teachers themselves.

This act allows the USDA to make real reforms in school lunch and breakfast programs by improving the critical nutrition and hunger safety nets for millions of children (United States Department of Agriculture). Before this legislation, there was a minimum number of calories that could be served at a meal, but now there is a maximum as well (Huber). This transferred the focus from general food insecurity to the ability of people to get healthy food. The focus began to look at interventions schools could take to reduce the chance of obesity and overweight in their students.

AB 290

Teachers need to have training in nutrition education in order to teach the subject well. California Governor Brown backed up this assessment, especially for early childhood teachers, when he signed AB 290 into law, which requires these individuals to have more training in nutrition. Several groups advocated for this law, such as the California Emergency Medical Services Authority and the California Food Policy Advocates.

On October 11, 2013, Governor Brown signed AB 290 *Foundations for the Healthy Nutrition in Child Care* into law. This law requires that when individuals seek out childcare licensure in California, they are educated about the importance of childhood nutrition and benefits of the Child and Adult Care Food Program (CACFP) as part of the Preventative

Health and Safety code. CACFP, run by the United States Department of Education, is a training program that provides aid to child and adult care institutions, and family or group day care homes, to provide nutritious foods for the health and wellness of children, disabled, and elderly people. This will ensure the childcare providers know about early childhood nutrition and are informed about the federal resources that CACFP provides (Elyse Homel). CACFP reimburses money spent on meals based on specific meal patterns. For example, a plate has to have a grain, a protein and a dairy to be counted for a meal. Therefore, activities as taste-testing a fruit or vegetable would not get reimbursed.

Increasing nutritional knowledge provided to teachers may make a difference to some schools in the amount or quality of nutrition education provided. Unfortunately, the amount of change that can be expected is diminished by AB 290's lack of authority to make sure changes are made in the schools as a result of the increased training that is now required.

Conclusion

For most of history, nutrition education and addressing nutrition in schools has been at the elementary or higher level, not preschool. While many reforms, thanks to pressure from advocacy groups, have happened at the elementary and high school level, only some of these ideas trickle down to preschool policy. There are the NSLA and NET, but those only apply to elementary and high school levels. Instead, Head Start has had to create its own policies, which apply to only Head Start schools, instead of all non-private schools. These programs and regulations show support for nutrition and nutrition education in elementary and high schools. Because many programs do not exist for preschools, there is less money, guidance and resources for teachers in regards to nutrition in the classrooms,

which are serious barriers. However, there have been a few changes that will effect early education and preschool teachers. Many teachers now try to teach MyPlate to their young students, and AB290 will change how future preschool teachers will be trained.

Why Nutrition Education in Schools

In order for nutrition education and training for teachers to improve, school leaders need to see that nutrition education belongs in the classroom. The leaders have to see that everyone can play a part in nutrition education and the consistent access that teachers have to their students puts them in the perfect position to be role models and to teach these children about food and nutrition. Education needs to start at an early age, making preschool a perfect place to begin nutrition education.

Learning Food Habits

Parent's Role

Habits learned from an early age are more likely to carry on into adulthood and children need good food habits to have a healthy diet. They learn these habits from those that surround them, which are mainly their parents, but also includes the teacher in the classroom. Because preschoolers often share a meal or snack time with their teachers, educators have a strong role model position where they can create an environment that can help with food acceptance. In order to be a good role model and set up a good environment for food acceptance, teachers need proper resources and training.

Bad habits can be hard to break and “it is easier to develop good food habits in young children than it is to correct poor habits as children grow older” (Society for Nutrition

Education). As a child imitates those around him and those behaviors become habits, it is important for parents and teachers to set a good example right from the start.

Everyone's role

When it comes to making sure everyone has proper nutrition from an early age, everyone has a role to play; “it’s not just food companies, its schools and families” (Huber). The most effective way to prevent obesity is to start by fostering healthy eating practices and regular physical activity in the early stages of life (CDC). Starting early is important because children progressively learn eating and exercising habits as they grow and develop. Initially, the role of teaching these habits falls on the parents in terms of role modeling, encouraging certain behaviors, and rewarding or limiting others (Birch LL & Fisher JO). However, this role of teaching expands to extra-familial influences including peers and teachers. This starts to occur when children begin school, are more independent, and start making their own food and other personal choices (Story, Neumark-Sztainer D, and French).

Preschoolers learn their food habits from the people that surround them, as he or she imitates them. This is most often the parent, but the preschool teacher does have input as well. Parents and teachers help children learn to identify the use of food, such as to relieve hunger, to cement friendship, to celebrate, or to honor someone. Preschoolers often take on the feeding habits of the homemaker in the family because he/she is the major influence. He/She considers what types of the food the family will eat and develop ideologies such as health, taste, status, and cost. Ideas that the parents and family hold are essential in the development of food habits in a small child; their attitudes, preferences, and other

environmental factors affect the child's lifetime eating patterns. Parents often are the decision makers in terms of the food habits of a small child. They determine when, how much and what food the child receives. Most children have little if any experience in making decisions about food selections when they enter preschool (Society for Nutrition Education).

Having good role models early in childhood to help make healthy choices, such as a personal taste for fruits and vegetables, can have a major role in subsequent and lasting food selections, as food habits that continue during adolescence are more likely to remain into adulthood (Birch; Wardle et al.; Kelder et al.). Role models are important because children's food preferences are influenced by having repeated opportunities to watch others eat, being encouraged by an authority figure or someone the child admires, and having opportunities to taste unfamiliar foods. Repeated exposure to nutritious foods can help children learn to like foods that they initially did not have an interest in (Hendy and Raudenbush; Horne et al.; Neumark-Sztainer et al.; Pliner; Wardle et al.; Birch; Greer et al.).

Environment

The environment that adults create mainly determines food acceptance. Early and frequent contact with different foods, especially when associated with a positive, pleasurable situation, can lead to greater food acceptance. Children associate their environment with their food and perceive certain foods as conflict, praise or scold food. For example, many children see dessert as praise food as they are able to eat it after being praised for eating the rest of the food on their plate. Another aspect of food acceptance can be related to relationships (Society for Nutrition Education).

Schools are Key Locations

Teachers have consistent access to their students for a significant period of time. This makes them key role models for their students. Additionally, their role is to teach these children topics that will improve their lives and futures. This includes nutrition education. To adequately fill this role, teachers need proper training.

There is widespread agreement that nutrition education should be included in elementary education, as schools have been identified as a key location to shape children's health behaviors and impact their lives (Britten and Lai; Institute of Medicine; Mullen and Shield). However, in preschools, the burden of nutrition education is put on the shoulders of the staff of the school, who will be creating and providing the meals that will be served to the children. Preschools often have few employees and budget cuts. Sequestration has diminished the staff even further. There often is not enough money to hire anyone to help with nutrition education.

Instruction in nutrition should begin in early stages of a child's development and increase in complexity and depth as the student progresses through school. In fact, nutrition objectives exist in a variety of formats including school lunch requirements, state standards, and evaluation criteria (Dixey et al.; Pérez-Rodrigo, Klepp, et al.; Pérez-Rodrigo, Luna, et al.). Nutrition intervention can play out in several different programs including teacher modeling, nutrition education, school cafeteria menus, and parental involvement.

Conclusion

Children learn their food habits from the people that surround them. Preschoolers are around their teachers on a consistent basis, making them role models for food habits. However, there are several barriers that teachers face in terms of successfully teaching

good food habits. The first is that children come into preschool with a few years of experience with food; they have already learned many habits from their parents. If their parents have bad habits, then it becomes to the teachers job not only to teach good habits, but also to try to break old ones. This can be difficult as parents may enforce different habits at home than the ones that are practiced in the classroom. Additionally, teachers already have quite a busy schedule since they often only have the children for a morning or afternoon session. Another barrier to teachers is money; students need repeated exposure to foods before they will like the food. However that costs money, which is often in short supply.

Surveys of Teachers' Opinions

In order for nutrition education to succeed in the classroom, teachers need to feel the topic is important and that the school supports them in teaching the topic. There is no specific evidence about what preschool teachers feel, but there have been extensive surveys and interviews at the elementary level, which may give us an insight into how preschool teachers may feel. In order to tell how nutrition education can be improved, one has to get input from the teachers themselves. Teachers are the ones who have to be in the classroom day in and day out. They have first hand experience with what works and does not work. They know what needs improvement. For efficient work on improving teacher training and resources, one has to use the teachers as resources, as Surveys 1 and 2 have.

Survey 1: The Role of Classroom Teachers in Nutrition and Physical Education

This study by the UCLA School of Public Health surveyed Los Angeles elementary school teachers who participated in the Nutrition Network Program about their role as classroom teachers on the subject of nutrition. The Nutrition Network Program in California is known as the Network for a Healthy California and represents a statewide movement towards “improving the health status of low-income Californians through increased fruit and vegetable consumption and daily physical activity” (Network for a Healthy California).

The study found that while teachers do integrate nutrition education into existing subject areas like math and science and believe that teaching nutrition education produces positive change in a child’s health, they spend “too little time” on nutrition education. Too little time is determined by a study by showing a minimum of fifty hours of nutrition education per school year is necessary to have an impact on behavior (Mullen and Shield). Table 3 demonstrates teacher’s reports on average time students spend per week in nutrition education.

Table 3
Average time teachers report that students at their school spend per week in nutrition education

Response	N	Percent
0 Minutes	1	1.3%
1-15 Minutes	16	20.5%
16-30 Minutes	12	15.4%
31-45 Minutes	18	23.1%
46-60 Minutes	8	10.3%
More than 60 Minutes	22	28.2%
Don't Know:	1	1.3%

Teachers had several answers as to why they did not spend more time on nutrition

education in the classroom. Their top three answers, with over 50% of teachers choosing these responses, were classes (other than Reading/Language Arts) take up too much time, Reading/Language Arts takes up too much time, and teachers are not adequately trained (Michael Prelip et al.).

Survey 2: California Teachers Perceive School Gardens as an Effective Nutrition Tool to Promote Healthful Eating Habits

No matter how much training teachers receive, they will always need resources. Graham and Zidenberg-Cherr set out to see what types of resources were provided, their quality, and how teachers were using them.

Graham and Zidenberg-Cherr saw school gardens as a way to not only improve nutrition education, but to increase knowledge in other subjects as well. Gardens were used for academic instruction by 68% of responding teachers. The most frequently taught subject areas using the garden included science (65%), nutrition (47%), environmental studies (43%), language arts (42%), math (40%), and agricultural studies (27%). Some teachers noted the effectiveness in using gardens as an interdisciplinary way to give the content a real life context. (Graham and Zidenberg-Cherr)

In order to make the gardens work most efficiently, teachers need adequate resources. Graham and Zidenberg-Cherr asked the teachers what types of resources and support would help with academic instruction in the gardens. Their responses are shown in Table 2 (Graham and Zidenberg-Cherr).

Table 2. Resources that would assist in the school garden being used by teachers for academic instruction according to California fourth-grade teachers (n=592)

Resources	Strongly disagree (%)	Somewhat disagree (%)	Somewhat agree (%)	Strongly agree (%)	No opinion (%)
Curriculum materials linked to academic standards	2	2	19	50	5
Teacher training for gardening	2	5	23	43	6
Teacher training for gardening and its connection to curriculum	1	3	18	51	5
Information on composting and/or vermiculture	4	7	27	32	9
Lessons on teaching nutrition in the garden	3	3	21	46	6

As a result of their surveys, Graham and Zidenberg-Cherr realized that there was a lack of resources for teacher training to integrate the garden into the classroom as a hands-on learning experience. For example, a typical comment was “I wish the state would offer more resources” (Graham and Zidenberg-Cherr). To help understand the full impact of the lack of teacher training and other barriers to using school gardens in academic instruction, Graham and Zidenberg-Cherr surveyed teachers. They found that the greatest barrier to using the garden for academic instruction was time (67%). Other dominating barriers included lack of teachers’ interest in gardening (63%), lack of teachers’ experience with gardening (61%), lack of curricular materials linked to academic standards (60%), lack of teachers’ knowledge of gardening (60%), and lack of teacher training in relation to gardening (58%) (Graham and Zidenberg-Cherr).

Conclusion

These two studies show that elementary school teachers feel a need to teach nutrition education, but are having trouble implementing them in the classroom because of several barriers. Some teachers try and apply their lessons in a school garden, frequently in an interdisciplinary manner. Additional support seems to be necessary for the elementary

school teachers to succeed. Nutrition education will not be very successful, however, unless teachers are able to teach nutrition education for the suggested fifty hours per school year. Yet, big changes to the system are not likely to be seen in the near future. With budget cuts and bureaucracy to deal with, there will be large barriers to overcome. No similar studies with preschool teachers could be found.

Training and Capacity

For teachers to teach nutrition education effectively, they need several things. Without proper training and resources, several barriers are put up preventing teachers from successfully implementing curriculum. When all of the resources are in place, teachers have self-efficacy and believe in themselves. Teachers need proper knowledge that can come in the form of trainings, such as in-service trainings, and a good support system. Teachers need the resources like props and the training on how to use them, but they need to have enough staff as well. Some programs offer support in their nutrition education system, but because of budget cuts, the lack of support for teachers may stem from the lack of enough staff on hand. While some of this comes from outside support like training and books, some of it can only come with time, like experience.

Teaching Experiences and Teacher Effectiveness

The amount of experience a teacher has teaching in a classroom matters in terms of his/her effectiveness in the classroom up to a certain point. This is because they have “attained expertise through real-life experiences, classroom practice, and time” . Experienced teachers often know more ways to monitor student progress and make

meaningful lesson plans that flow. Effective, experienced teachers are often able to do more in less time than effective novices can. To be considered experienced, it usually requires five to eight years of experience. Additionally, the teachers must be flexible, adaptable, and able to apply “book knowledge” to classroom situations. Experienced teachers tend to have better planning skills, apply a range of teaching strategies, understand students’ needs, organize around a routine, and plan for handling problems (Stronge).

Importance of Books in the Classroom

Reading books in the classroom touches on multiple disciplines including language acquisition, literacy development, story comprehension, and critical thinking skills. Stories may have vocabulary a student has never encountered before or could contain a picture for which the student does not have the vocabulary to be able to discuss it. For example, a book about plants is an opportunity for the teacher to discuss vocabulary concerning parts of the plant, whether the books specifically contains that vocabulary or not, as the teacher can point to different parts of the illustration. Books are a great way to introduce a new concept in the classroom, like a fruit being focused that month in the classroom. This is especially true because illustrated books, when read aloud, help children learn from auditory and visual cues. Props and varying voices can enhance this. Teachers can engage their students in critical thinking by having discussions before, during, and after the book is being read. This can involve questions about the story or illustration, explanations, personal narratives, analyzing situations or experiences, and sharing of opinions and ideas. Having the students recreate events from the story can further this even more (Massey). Reading relevant books in the classroom can help engage the students in the topic (Massey).

Self-Efficacy and Support

Teachers work best when they believe in themselves. Training in the subjects that they will teach can help them with their self-efficacy, the conviction that one can successfully execute the behavior required to produce the outcomes. Additionally, giving the teachers resources and support will make them feel like the school believes in them, improving their self-esteem. Teachers need this support and training in order to best teach nutrition education.

In order for teachers to educate their students about nutrition, they need to have self-efficacy. Teachers often lack self-confidence about teaching nutrition because they have problems fully grasping the concepts and see nutrition as a college-level subject. However, nutrition education has a variety of levels ranging from food recognition, to where food comes from, to the complex workings of nutrients in the body. If teachers lack confidence that they can teach nutrition, it will effect how or if they will try and educate their students. When teachers lack self-efficacy, they can feel a sense of isolation, instead of feeling free to ask for help in a way that would include co-teaching and cooperation (Britten and Lai).

Self-efficacy can stem from background factors and previous knowledge of the subject matter. One way to increase self-efficacy is to prepare and support the teacher. This can be accomplished by training teachers in the subject matter and increasing the availability of standards based curricula (Britten and Lai). Additional support can include pre-service and in-service training opportunities that increase awareness. In-service training can encourage collaboration with teachers as they implement what they have learned and can motivate teachers and educators to adopt healthy lifestyles (C Pérez-

Rodrigo and J Aranceta). However, only 52% of elementary school teachers have had formal training in teaching nutrition. It seems unfair to expect teachers to teach nutrition education if that are not prepared. Teachers with more support and college training in nutrition were more likely to utilize family involvement strategies for nutrition education than were under-supported and untrained teachers. Including parents in nutrition homework assignments was a family involvement strategy that was more likely to be used by supported, trained teachers (Institute of Education Sciences).

In-Service Training

One type of nutrition education training that teachers can receive is in-service training, which the school provides. This brings teachers in a school together to work towards becoming better prepared teachers.

In-service trainings make elementary school teachers “more likely to teach nutrition or teach it more thoroughly” (Britten and Lai). When trying to support teachers, it is important to get their input and target their needs, such as increasing their confidence and knowledge of nutrition (Contento IR, Balch GI, and Bronner YI). Unfortunately, only 27% of teachers report availability of high quality in-service training in nutrition education and 37% report a coordinated school nutrition policy (Institute of Education Sciences). Just by having training, schools show that they seek to support teachers and encourage them to teach on the subject they received training in. Trainings can increase the sense of self-efficacy and can lead to teachers working together and coming up with innovative ways to teach to their students.

Stretched and Under-Resourced

Teachers have a significant amount of responsibility. They need training and support to be able to perform their jobs. Teachers are already stretched thin and under-resourced, and consequently some experts have expressed concern at assigning additional responsibilities to classroom teachers without added support, especially since resources available for advancing nutrition education in schools are scarce (Michael Prelip et al.). This means that effective strategies must be found to maximize the impact of these resources (Britten and Lai). With the lack of support and resources provided in many schools, it is not fair to expect teachers to teach nutrition education successfully on top of all the other expectations that have already been placed on them without some sort of change or support system.

Teachers at federally funded preschools like Head Start preschools have to fill out a significant amount of paperwork throughout the year to create a Desired Results Developmental Profile (DRDP) three times a year and fill out and an environmental checklist. The DRDP is supposed to improve program quality in early childhood education (Center for Child and Family Studies). It monitors how the children are progressing in multiple areas, such as math, science and literacy. These assessments and developmental screenings must be completed within 45 days of enrollment and must use these results in supporting the child's learning and development. The paperwork includes taking pictures of the children and writing it down. This is more than is required for kindergarten and elementary school teachers. There is additional paperwork like the environmental checklists that teachers have to do to ensure the personal safety for the students. There is so much paperwork they have to fill out. Each week they have to report on attendance, on

the children and any problems they may be having. It is common for Head Start programs to have class on four days a week and have the fifth day devoted straight to paperwork. The paperwork is part of the mandatory oversight that accompanies federal or state money (Center for Child and Family Studies; Romero).

Conclusion

The amount of experience a teacher has can impact the quality of their teaching in terms of flexibility and adaptability. Teachers not only gain experience by actively teaching in the classroom, but also can gain knowledge from in-service training. With a higher level of knowledge, teachers can feel more prepared and confident when they teach. Books in the classroom can also significantly help because they can not only promote language acquisition and literacy, but can also be a way to bring up a new topic and discuss concepts of many different subjects, including nutrition. Nonetheless, experience can only help so much and books can only help when there are adequate amounts in the classroom. Money and bureaucratic problems can result in preschool classrooms not having enough books. Other barriers for teachers are that they are given too many responsibilities and work to do, but are under-resourced and under-paid. They end up piled under seemingly endless paperwork and regulations, but are expected to have time to still teach a multitude of lessons. Lack of materials and too many responsibilities are serious barriers to teachers in terms of implementing new nutrition curriculum.

Subsidized Preschools

There are several types of preschools that a child can attend, if they attend one at all. Different programs have different requirements and offer different resources and trainings to the teachers in their schools. There are Private Preschool Centers, Family Child Care Preschool Programs, and Subsidized Preschool Programs. 32.9% of preschool age children attend some type of preschool. 59.1% of White Children, 66.5% of Black children, and 43.4% of Hispanic children enroll in preschool programs. The three income brackets with the highest rate of enrollment are \$75,000 – more a year (75.1%), \$50,000-75,000 (57.1%), and less than \$10,000 (53.4%) (US Census Bureau). While the higher brackets can better afford preschool programs, the government and non-profits have worked hard to help low-income families have access to preschool programs as well.

There are also several types of Subsidized Preschool Programs including Early Education Centers, School Readiness Language Development Programs, State Schools and Head Start. The Head Start Program is federally funded to serve low-income three and four year olds. Certain guidelines for enrollment are waived for children who have an Individualized Education Plan (IEP) or are in the foster care system (Child Care Resource Center). In terms of enrollment for the Head Start Program, 5.6% of children attend. 5.1% of White children, 9.9% of Black children, 3.5% of Asian children, and 8.9% of Hispanic children enroll in the program. 7.4% of children from families below the poverty attend, while 5.5% of children from families above the poverty level attend (Laughlin). However, budget cuts and lack of proper funding from the beginning has led to insufficient amounts of spots available in the Head Start Program. Therefore, the statistics reflect on who gets into the spaces rather than who is eligible to attend.

Different types of preschools serve different demographics in terms of race and socio-economic status. Some schools have students who have less access to healthy foods and health care than others. Additionally, different types of schools have different bureaucratic systems and vary in size. While smaller schools tend to have fewer regulations and a smaller bureaucratic system, they may have less funding. However, it is hard for organizations, like Farm to Preschool to make changes in larger schools because there are a multitude of regulations and many layers of bureaucracy to get through before they can reach teachers and classrooms.

Summary

Through this literature review, I have shown that nutrition education is vital to the health of not only children's health, but also their health as adults. Good nutrition can improve the overall health of the child and prevent diseases like obesity. Over the years, schools have increased the amount of programs related to nutrition in the meals provided and classroom practices. Since teachers are consistently in front of the same kids day in and day out, they are in prime positions to model and teach about nutrition. In-service training, experience, and support all help teachers fulfill these positions. Many barriers to effective nutrition education exist, including bureaucracy and lack of knowledge on the topic. However, most of the research on teacher support in nutrition education focuses on elementary school teachers. This reveals a gap in the literature in terms of how preschool teachers feel they need help in teaching nutrition education, especially considering there are multiple types of preschools.

Methodology

As part of a collaborative, client driven project, I interviewed at least two preschool teachers from eight different schools in Los Angeles County. Six of the schools have been involved in the Farm to Preschool Program through training and/or curriculum. Two of the schools were not involved with Farm to Preschool. The interviews were conducted in person on the school campuses. To schedule these interviews, I called and emailed the site directors at each site. Sometimes it took more than one call or email to schedule a time and date. The site directors then were to choose and inform the teachers of the interviews. The interviews contained questions about the subject's definition of nutrition and nutrition education. It also asked about their background in nutrition education. I specifically asked the teachers involved in the Farm to Preschool about their experience with the program and how they felt about the support provided by the program. The purpose of the interview was to find out how the teachers are being supported or need more support in terms of their nutrition education. The interviews were designed to discover how preschool teachers view nutrition education and what barriers they faced in teaching nutrition. One limitation to the interviews was that I was only able to interview teachers from eight schools due to time constraints.

Before I began interviewing at each of the eight sites, I was supplied a spreadsheet of PACE preschools with schools associated with Farm to Preschool highlighted. From that spreadsheet, I chose six highlighted schools and two non-highlighted schools. I call the eight schools, Schools A through H. The sites I call Schools G and H were not part of the Farm to Preschool Program. School C was not easily classifiable because they had not received training, but did have the curriculum binder accessible in the classroom. For the

purposes of this paper, School C will be considered part of the Farm to Preschool Program in a similar capacity to School B, D and E. However, while School A is considered active with Farm to Preschool; it is using only the garden program because it is part of a pilot program control site. Only School F is currently successfully implementing Farm to Preschool nutrition curriculum in the classroom.

I then interviewed the two employees at Farm to Preschool to get their opinion on why certain schools were implementing the Farm to School curriculum better than others, as well as discussing barriers that Farm to Preschool encountered when trying to work with PACE's Head Start preschools.

Teachers often mentioned the central kitchen as a barrier. Additionally, many sites said that their main source of nutrition lesson material was the PACE nutrition binder. My point person on both of these topics was the PACE nutritionist, who I interviewed. I asked questions about how the kitchen worked and why it worked that way, as well as discussing the nutrition lesson binder.

The nutritionist was able to give me three music and nutrition sample lesson plans from the PACE nutrition coordinator. I was then able to compare them to the Farm to Preschool's September curriculum, which Farm to Preschool provided, to see if the PACE curriculum was easier to use as suggested by one school site.

Through these methods, I was able to see why teachers thought nutrition was important, how they viewed nutrition education in the classroom and the barriers they faced in implementing the curriculum. I was also able to see the barriers that Farm to Preschool faced in trying to support the implementation of their curriculum in preschool classrooms.

Background Information

Farm to School

Farm to School started out as a small program by Robert Gottlieb in San Diego, California, but has grown into a nationwide movement supported by the White House and the USDA. The national network, formed in 2007, now includes more than 50 states in eight regions. In 2011, it separated itself from Occidental College and became an independent, non-profit organization (Zeltser). Its goals include influencing the eating habits of young children, creating healthy lifestyles through good nutrition and experiential opportunities, and ultimately influencing policies to address the childhood obesity epidemic through a local food lens (UEPI). These goals all support good health at home, at school, and throughout the community in a way that will benefit the area where the program is located.

Program components include sourcing local foods for school snacks and meals, promoting and increasing access to local foods for providers and families, offering nutrition and garden-based curricula, school gardening, in-class food preparation and taste testing, field trips to farms, farmers' markets, community gardens, and parent workshops, as well as influencing policies at the local, state or national level (UEPI). Farm to Preschool puts a lot of effort into creating events that include hands-on learning activities and involve the community.

By encouraging parents to take their children to farmer's markets and community gardens, parents are able to take an active role in their child's education. The encouragement that Farm to School provides does not take place by mandate or a set of rules. Parents are encouraged to go to the locations, but are given control over what their family experiences. Parents can decide which foods their children should try, while in an

environment where perhaps the children will ask their parents to buy new types of healthy food for them. Farmers markets can be a learning experience for both the children and the parents.

Farm to Preschool

Overview

Farm to Preschool is a program run by the Urban and Environmental Policy Institute at Occidental College with similar goals and program components as its mother program, Farm to School. Farm to Preschool serves the full spectrum of child-care delivery, including, Head Start, private preschools, and family home care facilities (UEPI). Their main role in the structure of preschool education is in supplemental education where they can provide nutrition curriculum, garden curriculum and giving an overview of how they can incorporate these lessons into their daily routines. The goal is to not add more lessons to their schedule, but instead help integrate nutrition into other lesson in other subjects like math or science. They come in with the understanding that teachers are overburdened, and try to impress that the lessons are optional and that by adding the nutrition element they are enhancing the lesson. It is important to integrate these fruits and vegetables into these lessons because it takes at least fifteen times before a child will try a fruit or vegetable or incorporate it into their diet. There are many types of exposures that count towards this; it can be counting seeds in a tomato or comparing two different color tomatoes.

Farm to Preschools is getting the conversation started about fruits and vegetables. They bring up the subject of freshness. Schools often have canned fruits and vegetables, but heavy syrups often cover them. When talking about nutritional quality, the subject of local

farms always comes up. They have fresh fruits and vegetables, and buying from them supports the local economy. Plus the food that organizations would get would be in season, when the food tastes the best. This is important because when a child tries a food for the first time, it should be the best fruit in order to increase the chance that the child will like it. The conversation also includes how important it is to work with young children because it really does influence them in the long term.

Farm to Preschool's end goal is to no longer be needed. The goal is to have all preschools have gardens, source with their local farming community, put on parent workshops, and have a strong nutrition curriculum. Schools would inherently have these features instead of having an outside source providing them (Romero).

Recent Accomplishments

In 2012, Farm to Preschool won a 2012 Recognition Award from Michelle Obama's Let's Move! Child Care, which is part of her Let's Move! Campaign.

One accomplishment was the Farm to Preschool pilot program that showed that nutrition curriculum really does impact the children and their families. They were able to survey the parents and children. Farm to Preschool found that the children understood where food came from, what a fruit and vegetable was, and there was an increase in food preference from a sticker-based survey. For the parents, there was a longer survey which demonstrated that parents were able to increase their knowledge on issues like what local means, where the farmers market was, what organic means, and overall general food education.

Another accomplishment from that study was just the fact that they were able to get statistically significant data from a survey from preschoolers. They have had people calling asking about their methods and procedures. More recently they have had people outside the field of nutrition trying to learn how they did this. By working and creating this survey, they have become a resource not only for other nutrition researchers, but researchers of many topics working with young children.

Now that the organization has been established, they have developed a reputation. People see Farm to Preschool as a resource and call to get help with garden grants, asking for training, and asking for advice with their gardens. With this reputation, they are able to connect with the few other organizations that are working in similar fashion. There are many other organizations that are working for healthier kids, but Farm to Preschool's vision is bigger than that. They are also working with farmers to build a stronger food economy and supporting the local farming industry. Their work has political ramifications outside the education and health fields.

Curriculum

Farm to Preschool has developed *Harvest of the Month*, a nutrition curriculum that is tailored for ages three to five. It was revised after educator feedback and a two-year pilot study. The free and downloadable curriculum is aligned with state learning standards and with Child and Adult Food Care Program meal patterns. By conforming to these standards and patterns, Farm to Preschool opens up opportunities to expand all over California. California's standards are much stricter than many other states, meaning that the standards will most likely align with other states as well. While the curriculum has always

been aligned to state standards since its release in 2009, curriculum specialists in 2012 made this alignment official. This is important because teachers are required to meet certain standards by the end of every year. Because of this, teachers are forced to pack in curriculum to meet the standards and often have little time for non-required enrichment. By being aligned to the standards and meal patterns, Farm to Preschool paves the way for teachers to more easily fit the curriculum into their plans for the school year (Hernandez).

Farm to Preschool's curricula is not set in stone, but instead allows for flexibility. The program includes two years of curricula where the school can choose which curriculum year to teach. After the initial training is completed, schools can be quite independent from Farm to Preschool. The non-profit organization allows schools to mix and match sections of curricula and can change the vegetables and fruits to other ones that are in season. Most schools, like PACE, follow the recommended sequence. After the first year, schools do not need to have much contact with Farm to Preschool. Each year, Farm to Preschool offers refresher courses for teachers to take if they choose, but they are not mandatory. The frequency of teacher trainings that are offered at the schools depends on teacher turnover (Hernandez).

Schools get to choose how much Farm to Preschool is involved in their program. Moreover, Farm to Preschool surveyed the teachers to see how they wanted the curriculum presented to the children. From the results of the survey, it was decided that the classroom teachers would be the ones that teach nutrition education in the classroom, not employees from Farm to Preschool. The non-profit organization built in flexibility, such as who teaches the curriculum, into the program from day one. Schools and teachers can decide which parts of the curriculum fit their needs.

Communication

Farm to Preschool also runs a national website that allows schools and families from all over the country to work with and learn from Farm to Preschool's resources. This website does not promote the idea that Farm to Preschool is the only one to learn from. It also creates a community of schools, where they can learn from each other and not just from the staff of Farm to Preschool. Farm to Preschool does not just serve under-privileged schools in urban areas. A survey disseminated through Farm to School and Early Childhood Education networks found that over half of the respondents self-describe as rural and that the number of young children served by Farm to Preschool is at least 163,450 (Hernandez). Each area can create learning environments or forums to help solve problems that are unique to their communities.

In order to serve these different areas, there needs to be some form of communication. Farm to Preschool started getting in touch with schools by reaching out to contacts in local preschools. From this, they were able to use the snowball method to get in contact with more schools. In addition to these methods, Farm to Preschool seeks out schools it would like to work with and contacts them even if they do not have any personal or professional connections with the school. Additionally, some schools seek out and ask to be a part of the program (UEPI). Farm to Preschool is open to connecting with schools in many ways; however, increasing the expansion rate may require hiring more employees.

The size of a school or organization is important in determining how Farm to Preschool works with them, as each organization works differently. A school with one child development center or family care provider is much more open and often lets Farm to Preschool work directly with teachers and other staff members. When the organization is

larger, like PACE, Farm to Preschool usually works through program managers or site directors instead of being given access to teachers. Overall, the bigger the program, the less access to teachers. The reason behind all of this is just how larger organizations are structured. When these organizations are working with the government and larger entities, there are more levels and people to go through before you can reach teachers. However, all the teachers in these programs have Farm to Preschool's contact information, so they could be proactive and contact Farm to Preschool if they chose to (Romero).

Kitchen

Farm to Preschool is currently working on a pilot in a school kitchen to find out best practices. They are trying to find ways that the kitchen can still get reimbursed by CACFP and stay under budget, while also having local fresh food. Right now it is cheaper to get a tomato that was shipped from Chile than to buy a tomato from down the street. While many larger groups are working on changing the system, Farm to Preschool is trying to see what can be done to temporarily change how things are done. This can be by grouping farmers together and linking them to kitchens. The pilot school kitchen is connected with local farmers, with Farm to Preschool writing newsletters to parents explaining who these farmers are and why it is important to use local food. Additionally, the chefs are sharing recipes with the parents to show how they are using this local food. Nonetheless, working local can be difficult. While a smaller school can go to a single farm to get the fruit they need for that day, the prices are going to be higher because they are purchasing a small amount. On the other hand, large schools cannot go to a single farm because their need is greater than one local farm can supply. They then have to either go to multiple farms or use

a distributor. This is unfortunate for schools trying to buy local because distributors gather large quantities of these fruits, but there is no way to know where they came from or even if they are local (Romero).

P.A.C.E

Pacific Asian Consortium in Employment (PACE) has a workforce development center, business development center, financial education and asset building, energy and environmental services, early childhood education, affordable housing and repair. PACE Early Childhood Education “emphasizes the well being of the whole family to assure that students enter kindergarten ‘learning ready’”(PACE). PACE also provides health, mental health, nutrition and social services to the children and families in the schools. It serves over 2,100 low-income children and families in the South Bay, Greater Los Angeles, East Los Angeles, and San Gabriel Valley. All of the students enrolled in PACE Head Start preschools are admitted under the Head Start guidelines and regulations.

Like Farm to Preschool, PACE values active learning, which the Farm to Preschool curriculum includes. Furthermore, PACE relies heavily on family and community members to strengthen its programs, which Farm to Preschool encourages. Since PACE realizes that adults are important role models, parents are involved in many decision-making processes (PACE).

Unfortunately, PACE had its funding cut and has had to make changes in how its organization is run. They have had to decrease the amount of administrators and move both site directors and teachers around. The decreased amount of staff means that the staff still working for PACE have to do the work of more than one person.

PACE Demographics

PACE preschools are all Head Start preschools and as such, have enrollment requirements, which include the poverty level. Below is a graph that demonstrates the percentage of students below the poverty line at the eight schools I interviewed at.

Table 1: Percent of Students Below Poverty Line

School	% of students below poverty line
School A	76.47%
School B	78.9%
School C	89.13%
School D	85.00%
School E	89.77%
School F	88.00%
School G	86.96%
School H	89.65%

In terms of racial demographics, PACE Head Start schools are 3.64% Black, 3.75% Asian and 90.42% White. Unfortunately, instead of Hispanics being its own category, PACE data includes Hispanics under the category of White. None of the schools I interviewed at reported an Asian population. School A was 1.51% Black and 92.42% White, School B was 5.88% Black and 91.18% White, School C was 0% Black and 100% White, School D was 1.67% Black and 96.67% White, School E was 4.58% Black and 94.67% White, School F was 2.78% Black and 97.22% White, School G was 1.49% Black and 97.01% White, and School H was 0% Black, 100% White. PACE was able to break down their demographics by ethnicity into two categories, one being Hispanic or Latin Origin and the second being Non-Hispanic or Non-Latino Origin. School A was 93.06% Hispanic, School B was 86.36% Hispanic, School C was 100% Hispanic, School D was 95.45% Hispanic, School E was 97.37% Hispanic, School F was 97.56% Hispanic, School G was 95.18% Hispanic and School H was 100% Hispanic.

Data and Findings

PACE Head Start teachers and Farm to Preschool both face barriers to implementation of nutrition curriculum because of the bureaucracy that a large organization like PACE necessitates. Only two of the eight schools I interviewed at had working gardens and were actively engaged with Farm to Preschool. Teachers received training, but wanted more. Because of low wages and budget cuts, teacher turnover was high at many of the schools. Teachers face barriers such as lack of parent knowledge, kitchen bureaucracy, schedule inflexibility and a lack of materials. They want more speakers to come into their classroom, more training, and more books. Farm to Preschool has tried very hard to support these teachers, but there are many limitations. There is a lack of funding and staff for Farm to Preschool as well as PACE, which has led to teacher turnover. The budget cuts and large, confusing bureaucracy has led to the lack of response from site directors and kitchen staff that Farm to Preschool has experienced.

Enrollment

Overall Enrollment

Before finding out teachers' experience with nutrition curriculum, I had to decide which schools to interview and find out if they worked with Farm to Preschool. While several sites were highlighted as enrolled in the program, enrollment turns out to be a very loose term. Many of these sites have attended only one training, but that made them eligible to be called part of the program by PACE. However, Farm to Preschool only had three PACE sites as currently enrolled and active, two of which were schools interviewed for this paper, School A and School F. The accuracy of the list of schools could be high if the

purpose of the highlighting was to document schools that had attended a training with Farm to Preschool. However, if it was supposed to document schools actually using the curriculum, it was not accurate. This could be because with such a large organization, it is very difficult to track which curriculum each school is using.

There seemed to be a disconnect between the schools that have had the training and Farm to Preschool. Farm to Preschool had tried to reach out to these sites asking if they needed technical support or more trainings, but had not heard a response. This failure to respond had been taken as a lack of interest or support from the site director. However, the data from the interviews with teachers shows support at many schools for the program. Farm to Preschool tries to offer these trainings as supplements to the in-service training that PACE provides in an effort to help teachers gain self-efficacy in terms of teaching nutrition and gardening.

Site Specific Enrollment

School A is a pilot site for Farm to Preschool garden curriculum. Employees from Farm to Preschool helped install a garden bed onsite and brought curriculum and supplies starting in the first half of the 2013-2014 school year. Farm to Preschool employees had the impression that School A felt comfortable contacting Farm to Preschool with questions, but were too busy teaching to do so. To deal with this issue, employees visit the site to make sure they have everything and see if any support is needed.

Farm to Preschool was unfamiliar with School B, but assumed that the site attended a training over a year beforehand. Farm to Preschool employees recognized that Schools C, D, and E have attended trainings, but the teachers I interviewed at School C had not

attended those trainings. This is reflective of the teacher turnover at each site and the moving a teachers from site to site that makes it hard for Farm to Preschool to retain contact with a site. With the changing of staff, they lose the people that were dedicated to working with Farm to Preschool and have to begin the process of communication all over again. The Farm to Preschool director has contacted these sites to see if they needed support, but there has been no response. The only difference with School E is the Farm to Preschool director has worked with the site director before when the site director was working at another site. Even so, that director has not responded to the email offering support to School E, which further shows the disruptive effect of moving employees to different sites, which hinder Farm to Preschool's ability to support schools.

School F has a familiarity with the curriculum. The site director was working at School F when the site began using the curriculum and has been consistently working at that site for the past five years. Additionally, her staff and the Farm to Preschool director consider her an expert gardener. Her knowledge and experience with both Farm to Preschool and gardening has given her the self-efficacy to take on the Farm to Preschool program. School F was the first pilot site for Farm to Preschool and was really familiar with the program. They have been used as demonstration sites for prospective new sites and donors. As best told by the Farm to Preschool director, "[School F's site director] knows us and she really wants to work with us and make it a better program. Early on she provided tons of input in our lessons to help us develop better developmentally appropriate lessons. She even adds her own lessons for the Farm to Preschool Program. It's been great working with her through the entire period." It seems Farm to Preschool sees School F as a resource instead of just an implementation site. Their feedback on lesson plans has had an impact on

the final curriculum. The site director can see her own work in the lesson plans, which may encourage her to support the program at her school site. There has to be trust involved as well with the site in order to use it as a demonstration site. This view of the school as a resource and source of pride may have helped maintain the successful implementation of the curriculum.

Schools G and H have had no contact with Farm to Preschool, have not attended a training, and do not have the Farm to Preschool curriculum accessible in the classroom.

Nutrition Education Program

Farm to Preschool has attempted to contact many of the PACE schools, but only three schools have been responsive enough to truly implement the curriculum. However, this limited success is not due to a lack of effort. Farm to Preschool repeatedly offers advice and support, with little response. Issues with PACE site directors responding to Farm to Preschool were present throughout the project and are discussed later in the paper.

School Curriculum

Schools B, D, E, G, and H all mainly use the PACE nutritionist binder. School C reported that it was their first year with Farm to Preschool curriculum, but rarely used it. Instead, they used the PACE nutritionist binder and a curriculum call Be Choosy, Be Healthy, a federally mandated Head Start curriculum, which includes a resource binder, props, visuals, and movement. School D tried to implement Farm to Preschool curriculum last year, but does not this year because they do not feel they have enough assistance. However, it was up to their site director to ask for this assistance, but they are often

stretched and under-resourced. They instead use the PACE nutritionist binder, which they felt more comfortable with.

Schools A and F use the Farm to Preschool curriculum. This is the first year that School A has been part of the Farm to Preschool Program and are trying to use Farm to Preschool garden curriculum. School F has been using the Farm to Preschool nutrition curriculum since 2008, and their garden is included in their lesson planning. The teachers interviewed were not employed at that location when the Farm to Preschool Program began at the school site, but they did not feel that there was a large learning curve in terms of Farm to Preschool when they arrived at School F.

School F Ideas

When asked about how other sites might be able to implement the Farm to Preschool curriculum, they gave a few suggestions. Other teachers may think because School F “ha[s] done it before, that [School F teachers] know everything but [School F teachers] didn’t know at first either.” They feel that the main issue might be motivation and perseverance. While internal motivation may be a key part of successful implementation of Farm to Preschool curriculum, Farm to Preschool needs to support the teachers as well. According to School F, another huge issue is teamwork, where teachers can split up the lessons to divvy out work and also teach the lessons that they most enjoy. They can also use each other as resources, asking for help and clarification when they are confused. Another driving factor is support from the top, their site director.

Garden

Schools and Gardens

The table below demonstrates which schools have attempted and were successful at growing gardens:

Table 7

	School A	School B	School C	School D	School E	School F	School G	School H
Garden	X					X		
Attempted Garden	X			X		X	X	

50% of all sites and 50% of the Farm to Preschool sites have attempted gardens, while only 25% of all sites and 33.33% of Farm to Preschool sites have functioning gardens. As Graham and Zindenberg-Cherr study discusses, gardens are a way to improve nutrition education, but are also a place to incorporate other subjects. Because of this, 50% of the schools have put resources and time into attempting gardens. School A and School F each have a successful garden that the kids love. They use it in an interdisciplinary fashion to teach math, science, and health. The kids really enjoy seeing the process of the plant transforming from a seed to a plant bearing fruits or vegetables, as well as learning about the individual parts of plants. While four schools attempted school gardens, it is important to note that the two that had successful gardens were the ones that were actively enrolled in the Farm to Preschool program. PACE seems to support the idea of gardens at their preschools. However, they do not have the resources to physically support a garden with the recent budget cuts and the man-hours required to maintain a garden. Additionally, it would be difficult to start a new program, like gardens through PACE in a very efficient

way. The bulkiness of the bureaucracy, would likely be a barrier for gardeners to communicate with each other and get the supplies from the organization.

Garden Issues

Not all schools were successful in their garden attempt for a variety of reasons from lack of self-efficacy to being under-resourced. It is important to note that an issue for many sites is a lack of materials. For example, School D tried to start a garden with the teacher's own money, but failed due to the expense and trouble finding gardening tools for preschoolers. However, other issues exist, like School G, who lost their garden when it died in the summer, but did not start it again due to a food allergy. Such allergies should not be too hard to address, depending on the severity of the allergy with Farm to Preschool curriculum because they have two years of curriculum. For the month that features that fruit, they can replace it with the curriculum for the other year. The issue of gardens dying over the summer seems not to be an issue for School A and School F. Gardens can always be started from scratch at the beginning of the school year, if there are enough supplies and people to prepare the soil. However, Farm to Preschool would have been happy to provide guidance on how to handle that problem, if they were alerted of the issue by the schools. They cannot solve issues that schools are having if the schools do not tell them.

School E's Idea

In order to incorporate the whole family into nutrition and gardening, School E had an idea. One teacher wished there would be a garden, but not just a garden at the school. It was important to the teacher for the children and even the parents to work together in the

garden to see how the food grows and that it does not just come from the store; it has an actual growing process. This garden could be a community garden could be a place of outreach and teaching where “people have full access anytime they want to go.”

Nutrition Training Sessions

Description of Training

To become a teacher at PACE Head Start preschools, a teacher needs a credential, which includes attaining baseline health knowledge through college courses; however the childhood nutrition sections are often very limited. Below is a table that shows which of two types of major trainings the teachers at the schools have received. PACE in-service trainings are mandatory trainings that include general nutritional knowledge, regulations, and classroom skills that teachers need to know. PACE has trainings for all of its teachers at once. These large attendances at these trainings prevent the material presented from being tailored to the needs of the individual teachers. On the other hand, Farm to Preschool trainings are voluntary supplementary trainings that are a more specified type of learning, like how to start and maintain a garden for a preschool classroom. If the training is something that the teacher would like more knowledge in, they can attend, but can choose not to if it does not fit their needs. Below is a table demonstrating which trainings each school attended.

Table 1: Trainings Attended by Schools A-H

	School A	School B	School C	School D	School E	School F	School G	School H
PACE	X	X	X	X	X	X	X	X
Farm to Preschool	X	X		X	X	X		

Discussion of Trainings

All five schools that attended Farm to Preschool trainings talked about having the trainings. School B thought the Farm to Preschool trainings were very helpful and have impacted the nutrition in their homes, not just in the classroom. School D teachers said that they had many trainings throughout the year with a great deal of support year round by the agency nutritionist. All of the trainings for the parents, along with books, pamphlets, and resources were also available to the teachers. School F explained that part of the training process on their own for them was actually going through the motions of preparing and executing the Farm to Preschool activities and lessons with the children.

School A discussed their concern that they did not feel that they had been trained about *how* to teach nutrition in the classroom. However, the Farm to Preschool training they received was on how to use the garden curriculum, not the Farm to Preschool nutrition curriculum. School B and E said that they wished there were more Farm to Preschool trainings for them to attend. School B also emphasized the necessity of each teacher receiving a copy of the pamphlet or book at a training session, instead of one per site. School E had a suggestion where they have samples for every food of the month, which Schools A and F receive from the kitchen since they are actively enrolled in the Farm to Preschool program.

Increasing Farm to Preschool Trainings

The most common idea on how to improve the trainings was to increase the number of them, which can also be seen as an accomplishment for Farm to Preschool because teachers see these trainings as helpful and worth their time, even though their schedules are so busy. Farm to Preschool can only do minimal tracking for those who attend trainings because many do not respond to attempts at contact. Also, Farm to Preschool cannot provide trainings for schools that do not contact them.

Years Teaching

Years Teaching Data

By using the mean to average the experience of the teachers I interviewed at each site, I found that School A had an average of 18 years, School B had an average of 14 years, School C had 12.5 years, School D had 10.88 years, School E had 9.5 years, School F had 17.5 years, School G had 15 years and School H did not answer the question.

Table 2: Average Number of Years Teaching Experience

<i>Average Type</i>	<i>Number of Years</i>
Mean of Schools A-H	13.53
Mean of School F	17.5
Mean of A-F	13.32
Mean of Schools G and H	15

Years Teaching Findings

Under Stronge's definition of "experienced" teaching, which usually involved five to eight years of experience, all of the teachers interviewed could be considered experienced. However, starting at three years of experience, teachers begin to show attributes of an experienced teacher and more attributes are expressed over time. Since School F has more

experience, they are likely to demonstrate more attributes than the other sites. Effective, experienced teachers are able to do more in less time, giving them more time to work on implementing the Farm to Preschool curriculum. They also would be more flexible and adaptable, which would mean that they might be more willing than novice teachers to take up a new curriculum, instead of sticking to the curriculum that they had used in the past. They might have better planning skills than less experienced teachers making it easier for them to fit in a Farm to Preschool nutrition lesson into the lesson plan for each week. Since all schools interviewed seemed to have experienced teachers, they may be able to handle the project of adopting the Farm to Preschool curriculum if they are properly supported. However, in order to adopt the curriculum, site directors need to be in frequent contact with Farm to Preschool.

Years at Current PACE Site

Years at Current PACE Site Data

By using the mean to average the amount years the interviewed teachers spent at their current preschool site, I found that School A had an average of 2.5 years, School B had 4.5 years, School C had 7 years, School D had 4.5 years, School E had 2.5 years, School F had 3, School G had 8.5 and School H did not answer the question.

Table 3: Average Years at Current Site per School Site

<i>Average Type</i>	<i>Years</i>
Mean of Schools A-G	4.06
Mean with Schools A-F	3.5
Mean of School F	3
Mean of Schools G	8.5

Years at Current PACE Site Findings

One of the reasons that the average amount of years at their current PACE site is only four years is because PACE recently had its budget cut, leaving not only the teachers stretched and under-resourced, but the agency as a whole. As a result, the staff size was reduced and many teachers were transferred to different sites.

School F has the lowest average no matter which average it is compared to. The program has been at School F longer than the teachers I interviewed have been at the site. This suggests two possibilities. One is that the presence of Farm to Preschool at the site when new teachers arrive improves the chances that the new teachers will implement the curriculum, since their peers are already doing so. This could explain why teachers already using the same curriculum as their peers, such as the PACE nutrition binder, may not switch over to the Farm to Preschool curriculum. Serving teachers that are new to the site increases the chance of implementation because teachers that are new may be more willing to learn new curriculum. However, teachers that are new to Head Start programs may not be as willing to learn a new curriculum because of the high learning curve for Head Start regulations. The third is the importance of site director stability rather than teacher stability. Since the site director has been stable at the site for the past five years, as teachers change, her support for Farm to Preschool remains at School F. Additionally, her stability in the same position and site means that she had had time to learn how to navigate the PACE bureaucracy, Head Start standards and regulations and how all of these apply to her specific site.

Teacher's Role

School Responses

The table below shows which of the three major themes each school mentioned when describing a teacher's role in the classroom:

Table 5

	School A	School B	School C	School D	School E	School F	School G	School H
Role Model	X	X	X	X	X	X	X	X
Teach Nutrition	X	X	X		X		X	X
Expose to New Food	X	X	X	X	X	X	X	X

100% of the sites thought that their role in nutrition education was to be a role model for the kids. While Birch LL and Fisher JO discuss how parents are the first ones to be role models for their kids, teachers suggested that many parents were not the best role models in terms of modeling healthy eating habits. Society for Nutrition Education and the CDC discuss the importance of forming good habits early; teachers fill an important role because they could be the student's perhaps first or only proper eating role models.

75% of the sites and 66.67% of the Farm to Preschool sites mention that their role is teaching nutrition. Teaching nutrition in a lesson once a week is required and all sites are in compliance, so their responses do not mean that these lessons does not occur.

100% of the sites listed exposing the children to new foods as one of their roles. Exposing the children to new foods includes more than just putting the food on the table. It involves correct portion sizes, eating the food themselves, explaining how the food can help their bodies, and encouraging the students to try the food.

Teacher's Role Main Themes

When asked to define a teacher's role in nutrition education there were three major themes: being a role model, teaching nutrition and exposing children to new foods.

School C described what it meant to be a role model in some detail. It was more than just modeling eating the fruits and vegetables. It also meant starting conversations about how it is important to eat healthy in order to grow and develop properly. They expressed how, over time, after the children see their teachers and other students trying the food, that even the children who were most hesitant start to try new foods and like them. A major part of the role modeling occurs during the family style mealtimes where teachers can bring up and reinforce the advantages of certain foods; for example, that kids need to drink milk for strong teeth and bones.

Teaching nutrition education meant including nutrition lessons in the weekly lesson plan and exposing children to new foods meant talking about different foods, serving the meals in the classroom, and encouraging the children to try the new foods. However, teachers have limited to no control of which foods are provided in meals. The variety of foods given to schools is determined by the central kitchen, which can be frustrating to teachers trying to give their students repeated access to the fruit or vegetable of the month for the Farm to Preschool nutrition curriculum. The central kitchen also tries to provide food that most children like, limiting the variety of foods that will be offered to the children. The bureaucracy makes it difficult for teachers to request and see change in the central kitchen in a way that would support teachers' efforts to teach nutrition in the classroom.

Not Addressed at Home

50% of the eight sites and 50% of the Farm to Preschool sites saw that nutrition was not addressed at home because of a lack of parent knowledge. School F did not bring up this issue, but it is unclear why. It may be because the topic did not come to mind during the interview.

62.5% of all sites and 66.67% of Farm to Preschool sites saw junk food given as a treat, reward, or snack as an issue at home, which aligns with the statement by Society for Nutrition Education about homemakers deciding the feeding habits of the family. The one who takes care of the children or homemaker is the one picking up their children with junk food. School F did not address this as an issue. This may be a result of the fact that the program is successful, however that cannot be determined from the data.

37.5% of all sites and 33.33% of the Farm to Preschool sites, including School F, talked about the issue of not enough variety of foods provided at home. 87.5% of all sites and 83.3% of Farm to Preschool sites noted an issue of a lack of nutritious foods at home. There seems to be many barriers to parents to provide a variety of nutritious foods such as time, money, knowledge, culture and accessibility of these foods. PACE and Farm to Preschool have tried to host parent informational meetings before, but lack of advertising by PACE and issues scheduling dates with site directors, among other reasons, led to low parent turnout. Without major organizing, the issue of inadequate amounts of nutritious food at home will remain.

Support for Teachers

Experts

When asked about support, School A addressed the topic of experts. One teacher reported, “we also would like ‘Farmers’ or ‘Expert Gardeners’ to come once a month to the school. When Rosa and Victor came to pull weeds and get rid of Black Widows, the kids all got very excited and wanted to interact with them. It would be awesome for them to come and teach not only the children about the garden and the growing process, but [the teachers] as well. They could even come to read to the children. They are so excited just to listen to them. [The teachers] would love for them to have a relationship with the children. If [the teachers] knew they would come once a month, [the teachers] could combine two sections on that day so [the teachers] had a section to devote to the Farmers. It would mean a lot to [the teachers] because none of [the teachers] are expert gardeners or have a botanical background.”

Training

School C demonstrated frustration with the fact that they are handed materials and told to use them in a lesson plan, but there is not instruction or training on *how* to use or introduce it and therefore lacked self-efficacy. Additionally, they would like some recipes that they could try out with the children and then share with the parents. One School E teacher felt that the food of the month should make more than one appearance to the children. Wanting recipes and not being able to show their students the fruits and vegetables more than once, shows that they are under-resourced. One idea involved a presentation that even parents could attend. It would feature the food of the month and

then it would be prepared in different meals. For example, they could put the food in a salad for the children and maybe parents to taste, and then also make it in a cooked food. However, all of these resources are provided by Farm to Preschool if the site director is willing to work and contact them. Unfortunately, the bureaucracy and budget cuts keep site directors from doing so.

Many of the teachers talked about training during the interview, when it came to support. 62.5% of all sites and 66.67% of Farm to Preschool sites asked for more Farm to Preschool trainings, including School F. This shows that the trainings are indeed helpful. While School C felt frustrated by not having training in instructing nutrition education, that frustration most likely comes from PACE trainings. School C has not attended Farm to Preschool trainings, whose focus is on how to implement the curriculum, the exact focus that School C felt was missing in their trainings.

Books and Literature

75% of the sites and 83.3% of the Farm to Preschool sites talked about books being a form of support. As Massey explains, books are ways to engage students with a concept and start meaningful discussions. The books need to be age appropriate and engaging to the kids. It is important to have a variety of these appropriate books. Books about food are a way for children to learn about foods on their own as they look at the pages, but also to bring nutrition into story time. Books are a way to bring in a mini lesson about food with little to no preparation on the teacher's part. 50% of the sites and 50% of the Farm to Preschool sites talked about needing or wanting more books. School F did not seem to need

more books, which suggests that having enough books on food is a building block for implementing the Farm to Preschool curriculum successfully.

50% of all the sites and 50% of the Farm to Preschool sites talked about wanting more literature in terms of information, research, and activities. This interested me because the Farm to Preschool curriculum does include activities. This suggested that the curriculum is not formatted in a way that is easily accessible to teachers, however in later research it was found not to be the case. PACE should be able to provide materials, like books to their school sites. However, budget cuts make it difficult to procure materials and the large size of the organization make it difficult to make sure all of the books end up in all classrooms.

Barriers to Teaching Nutrition Education

The table below demonstrates which schools brought up the four most common answers when asked about barriers to teaching nutrition education:

Table 6: Barriers to Teaching Nutrition Education

	School A	School B	School C	School D	School E	School F	School G	School H
Kitchen				X	X	X	X	X
Schedule	X		X	X	X	X		
Parents	X	X		X				X
Materials			X	X	X			

Kitchen

62.5% of all sites and 50% of Farm to Preschool sites found the central kitchen to be a serious barrier to nutrition education. They felt limited and stretched in terms of how

often they could include food into their lessons, but also felt that they had to choose between filling out paperwork for the activities or spending time with the children. This system was changed due to regulations in response to allergies. The large size of the organization makes bureaucracy and paperwork necessary to protect the organization from potential lawsuits and accidents. However, these precautions can hinder a teacher's ability to do his/her job well.

Schedule

62.5% of all sites and 83.33% of Farm to Preschool sites felt that the schedule was a barrier to teaching nutrition education. There was not enough time to teach the lessons they wanted to teach and they cannot teach nutrition as often as they would like. This is a critical barrier because according to Mullen and Shield, a minimum of fifty hours per school year is needed to be effective. Additionally, some teachers complained that the lessons that they are provided with are often too long in length to completely implement in the time allotted. How the schedule is formed is determined by the agency, but since the PACE preschools are part of the Head Start program, they are federally mandated to cover certain topics every week, so the flexibility that the programs have in creating the schedule is very limited. The issue of lesson length in Farm to Preschool lessons is addressed later in this paper. Smaller schools and non-government funded schools tend to have more flexibility in their schedules.

Parents

50% of all sites and 50% of Farm to Preschool sites said that parents were barriers to nutrition education. Children learn their food habits and are provided meals by their parents, so they are key members in the nutrition education of their children. The main issue was that parents were not reinforcing the nutrition education that was being taught in the classroom. School F did not mention parents as a barrier. This attitude of frustration with parents could impede other sites from fully implementing the Farm to Preschool curriculum if they feel that their lessons are not truly being helpful and internalized by their students. As mentioned earlier, attempts at parent informational meetings have not been very successful due to issues with PACE and its bureaucracy.

Materials

37.5% of all sites and 50% of Farm to Preschool sites described a lack of materials or being under-resourced as a barrier to nutrition education. Perhaps this feeling of not having enough materials gives teachers an idea of hopelessness, that even if they tried to implement the curriculum, they did not have enough resources to be successful; in other words, lacking materials may lead to lack of self-efficacy. School F did not see resources as a barrier for them. PACE tries to provide materials for all sites, but budget cuts have made that difficult.

Culture

School B also listed culture as a barrier to teaching nutrition education. They felt that many Hispanic parents do not bring certain fruits and vegetables home, so the children

do not like these foods. School D brought up the issue of many Hispanics using “a lot of salt in their food”, which can be unhealthy.

Food Deserts

School C brings up that the neighborhood that the school resides in has a lack of fresh food options, making it harder for families to provide nutritious meals, but also is a barrier for teachers because they cannot take fieldtrips to these markets like they wish. School D also talked about the lack of local fresh food. The Food Justice movement is just beginning and is working on eliminating food deserts.

Allergies

One barrier that School G faced was that one of the foods regularly grown in the garden was an allergen for one of their students. In fact, allergens have affected the cooking preparation activities for all PACE schools. There used to be another system, where food activities only had to be approved by the office instead of filling out paperwork and receiving the items from the kitchen, but the raising prevalence of allergies required a change in policy that now seems to be a barrier for so many school sites. This new paperwork has only increased the size of the bureaucracy that teachers must work with.

Kitchen

Kitchen Data

A frequent barrier to nutrition education was the kitchen. To get more details, I interviewed the nutritionist for PACE. The PACE nutritionist explained that the Food

Service Dietitian provides daily supervision and management of their Central Kitchen. As the Nutrition Coordinator, she is responsible for the overall management of the Nutrition Service Area and works in the main office.

The kitchen needs one to two weeks advance notice on cooking preparation activities because most of the ingredients that are used are purchased by our Food Service Dietitian. Since many times the amount of the ingredients requested is not enough to necessitate a full order from one of their vendors, it is best to purchase small sizes from grocery or specialty stores. The Food Service Dietitian is the one who does this and needs time to put together shopping lists so he or she is not running to the store everyday picking up items for cooking activities.

Only one cooking preparation activity is allowed every month per site. "Even though nutrition lessons are required as part of the lesson plan, cooking activities are not reimbursable through [their] funding source, the Child and Adult Care Food Program (CACFP). Most of [their] funds for the food service program come from this reimbursement program and [they] are only reimbursed for meals provided to the children during class time (breakfast, lunch, snack, and supper). [They] limit the amount of cooking activities classes they can do to one per month so [the central kitchen] [doesn't] go over budget."

Farm to Preschool has tried to work with the PACE kitchen from the beginning. The staff seems willing to make changes, but is held back by Head Start regulations and budget issues. Capacity is also a huge issue because the kitchen has to feed all of the schools in its program three separate meals: breakfast, snack, and lunch. The kitchen seems open to change, however they are not proactive in making the change themselves, requiring pressure and organization on the part of others. Part of the Farm to Preschool movement is

local sourcing of food and Farm to Preschool helped facilitate a contract between PACE and West Central Produce, which has a local food branch. The kitchen has been willing to take suggestions in the past. For example, taste tests at the Farm to Preschool enrolled schools demonstrated that kids enjoyed cauliflower. With these test results, the kitchen said that they would add cauliflower to the menu. However, Farm to Preschool was unsure if that was actually implemented. The kitchen provides these taste tests, but it is thought to only be provided to the three Farm to Preschool enrolled and active sites.

Farm to Preschool has worked with the kitchen to incorporate the food of the month into the menu. Main discussions for this change happened between Farm to Preschool and the central kitchen in 2013, but has yet to be implemented. Farm to Preschool thinks the kitchen needs increased funding and to be pushed more for this change to be implemented. While Farm to Preschool is trying their best to help push for the change, it can only do so much because the Kitchen is not responding to their contact attempts.

Receiving Supplies

After trainings, there is often a point person to collect supplies for PACE sites. However, there is more than one way to manage these supplies. For example, after one training, books were handed out. The PACE point person in charge decided to hold onto the supplies, giving them only to the sites that knew to ask for them. However, not all school sites understood that these supplies were available or how to acquire them. This became even more complicated when that point person was moved to a different position. When there is no clear-cut mechanism of correspondence, lines of communication can fall short. However in terms of curriculum supplies and garden supplies, a Farm to Preschool

employee usually drops off supplies and checks in on the actively enrolled schools at least once a month.

Farm to Preschool lets the PACE agency manage how to dole out some supplies to schools. However, without a clear system in place that all sites understand, supplies end up unused and sites frustrated from being under resourced. According to Britten and Lai, without the proper supplies, extra time is necessary to find effective strategies to maximize the impact of supplies already on site. However, teachers are already complaining about not having enough time to complete all the tasks in a way that is satisfactory to them.

Curriculum

Lesson Length

A few teachers mentioned lesson length as an issue, but the Farm to Preschool director was able to point to data that showed that most teachers using the program were comfortable with lesson length. The decision about how long lessons should last in the Farm to Preschool curriculum was a process of trial and error with a significant amount of teacher input about what was manageable for the teachers and the students. Teachers did not want it to be too lengthy, suggesting some lessons be split into two. Through experimentation, once a week lessons about twenty minutes long fit well into daily routines, with some schools using more lessons.

Curriculum Confusion

When it comes to curriculum in PACE classrooms, there is a significant amount of confusion. Schools are receiving mixed messages of which curricula to use and may fail to

fully implement any of them. There is one curriculum federally mandated by Head Start called Be Choosy, Be Healthy. PACE has also adopted several other curricula including Color Me Healthy, a UCLA curriculum, and Farm to Preschool Curriculum. However, sites are unsure of which curriculum to use. Implementing lessons can be difficult because the curricula are more competitive than complementary. School F seems to use the Farm to Preschool curriculum as their main source of lesson plans.

Lesson Plan

PACE Curriculum

The PACE curriculum included the age ranges at the top of their lessons and divided the lessons into sub groups. The three lessons I looked at were under the subsections “Nutrition Activities for the Music Center” and “Information for Good Food Choices”. The lesson had two sections, the activity or lesson name, such as ““This is the Way We Eat Our Food” Song” and “Extend the Activity.” The activity was changing the lyrics to a well-known tune. The lesson gave example lyrics and guided the teacher on how to let their students have input on how to change the song. The second section on extending the activity gave examples on how to change the lyrics in another way, based on utensils. It also gave activities with the song that you might find in a drama class like showing eating hot or cold foods or using their imagination to exaggerate what they were eating like peanut butter sticking to the top of their mouths.

Farm to Preschool Curriculum

The Farm to Preschool Curriculum came in a lesson packet for September. The lessons are highly organized with several different sections, featured fruit, week number,

“Objectives”, “Materials”, “Learning Standards”, “In Preparation”, and “Directions.” The lesson included reading a specified book with example questions provided. The second half of the lesson included a discussion about what parts of the plants people eat, using flash cards as aids. At the end of the packet was a page on “Extending Learning Experiences” with additional activities and add-ons to the weekly lessons. Additionally, three recipes were provided.

Comparison

The PACE lesson plans may be easier to use because they seem to be shorter, one part lessons compared to the Farm to Preschool plans. This is important because teachers are already stretched for time, as displayed in the Barriers to Nutrition Education section. Dr. Prelip’s survey showed that many teachers balk at the idea of being assigned additional responsibilities, which a longer lesson would inevitably include. Additionally, Farm to Preschool lesson plans may seem longer because their directions have more steps. While there are more steps, it is because each lesson plan is broken down into many steps, to make the lesson clearer and easier to use. While both lesson plans had extending activities, having the activity on the same page as the main activity might make it more accessible to teachers. Additionally, while the PACE lesson plans seem not to build upon each other, some of the Farm to Preschool lesson plans involve reviewing topics covered in previous lessons, which according to Rutledge, increases knowledge retention. This can cause a problem, if that lesson was skipped or replaced with a lesson from another curriculum. However, this review supports the CDC guidelines for sequential health education. Reviewing topics is one of the best ways to make sure concepts are fully understood by the children. A few teachers also mentioned wanting recipes. If they used the Farm to

Preschool curriculum, that may satisfy that expressed need. Additionally, the Farm to Preschool lessons had the learning standards addressed in the lesson clearly stated on the page, which can be helpful for the teacher's and school's records and for weekly federally required paperwork.

While some teachers said that the PACE lesson plans were easier to use, it may not be because of the format. Some teachers felt pressure to use the PACE lesson plans and may have had more exposure to the PACE lesson plans than to the Farm to Preschool lesson plans. This might make them feel easier to use. From my comparison, I do not see the format of the lesson plan as a true issue in implementing the curriculum.

Limitations

Funding and Staff

Farm-to-Preschool would love to be on-site more often and go to every school once a month. However, funding can be a serious limitation since Farm to Preschool relies on grants and donations to run their programs. When it comes to teacher and parent workshops, funding is also an issue. While they can provide these to a limited amount of sites, it is not in the budget to have these at every school. Funding has become a serious issue for Farm to Preschool because it has passed the five-year mark. Funders tend to give grants to new organizations rather than continuing programs. They have to be very innovative to continue to receive grants. Right now, the best way to receive funding is by working with a "train the trainer model" where Farm to Preschool trains the person who will be training teachers on how to teach nutrition and how to use gardens. Additionally, they are working building a state-wide network to provide technical assistance as needed

and provide materials. These types of models do not require a large staff, as they involve less one-one types of interactions.

Additionally, a larger budget would let Farm to Preschool have a larger staff than the two at the start of my project which was later reduced to one, allowing them to support schools more and support more schools. The ideas that Farm to Preschool have are huge, but funding and resources are very limiting factors. Ideally, Farm to Preschool would train schools and have monthly visits. However, Farm to Preschool lacks the funding to hire the staff, pay for the travel, and provide the supplies to do this at non-pilot schools.

Funding is so important because when Farm to Preschool does have the funds, they are able to travel to the sites, and they are able to have more one-on-one interaction; they are able to provide garden soil and supplies. They hope that in the next grant cycle they can have more funds that would allow them to give small stipends to schools to purchase these materials and to visit these schools more often.

PACE Bureaucracy

PACE is also a limitation. They do not give Farm to Preschool access to the teachers, such as their email addresses. The organization also is very large and navigating the bureaucracy can be confusing and frustrating. Additionally, messages sent through the bureaucracy can easily be lost. Recently, the organization has had to downsize by limiting the amount of administration and moving teachers around. This leads to administration employees having more responsibilities, making it less likely that they have time to respond to Farm to Preschool's requests.

Lack of Response

The lack of response to Farm to Preschool's attempt at contact is a serious limitation. Farm to Preschool was making progress with having Harvest of the Month included in the menu. However, the director of the central kitchen received more responsibilities as a result of the shrinking administration and soon afterwards, the kitchen stopped responding to Farm to Preschool's repeated attempts at communication. Farm to Preschool tells schools that they can have parent workshops, but that they need to ask. However, they never contact Farm to Preschool, even though they say they want these workshops in interviews. Farm to Preschool has even started planning events, only to have schools not want to give dates for these workshops.

One reason they are pulled in so many directions is that PACE received a funding cut. Instead of a site director for each site, there are site directors for multiple sites. This can make it difficult to contact the site directors that do actually support the program. For example, the site director at School A is a site director for other sites as well. This means that when one of the Farm to Preschool employees visits School A, the site director may not be there. Between site visits, calls, and emails, she might not have contact with her and if she does run into her she is working on several other high priority items.

Part of the reason behind site directors not responding is they are being pulled in many different directions and are limited in what they can do by the many regulations they have to follow. In order to get a response, it really has to be high on their priority list. Other site directors have other priorities like high literacy rates or keeping enrollment high at their school, all depending on what their demographics are. If nutrition education is a priority for the site director, they will take it on and respond to contact. Overall, in private

schools there is a lot less reporting that needs to be done and they are more likely than a state-funded or federally-funded preschools to take the curriculum on (Romero).

One reason that it could be a priority for site directors is that three year olds are coming into these classrooms and are pre-diabetic, something that most child-care personnel did not have to deal with ten years ago. They see this problem in their classroom and want to do something about it. They see nutrition curriculum, like Farm to Preschool's curriculum, as ways of not scolding kids or parents about eating bad food, but instead promoting the positive aspects of eating healthier. Support is something that works best when funneled down. Without support from the program director or site director, it can be very difficult for teachers to be able to use the Farm to Preschool Curriculum because of the supplies that are needed (Romero).

Teacher Turnover

In early childcare, teacher turnover is especially high. They are one of the least paid professionals. They are often just trying to make ends meet and if they are offered a high salary elsewhere, they often have little choice, but to take the offer and move to another site. This is extremely problematic for Farm to Preschool because there may be a great program or a great garden at a site, but then a teacher that has been the one really supporting the program leaves for another site and Farm to Preschool has to almost start from scratch again. Instead of the institution supporting the curriculum, it is often a teacher or site director who makes the program a priority. When they leave, the knowledge and support is lost; there seems to be a lack of institutional knowledge being passed down.

Conclusion

While I was told from information provided by PACE that six out of the eight schools interviewed had interactions with Farm to Preschool, it turned out only two were active in the program. The other schools used a variety of curriculums, but the most commonly used one was the binder made by the PACE nutritionist. There is a disconnect in communication between teachers and Farm to Preschool, resulting in Farm to Preschool thinking the sites were not interested, especially because many site directors do not respond to Farm to Preschool calls or emails. These teachers want more Farm to Preschool trainings and guidance in how to use the curriculum. They need more materials, especially so that they can start and maintain a garden. While some of these materials have been provided to PACE, it has not successfully handed out these all of the materials. Many teachers complained about how the kitchen works; Farm to Preschool has tried to address some issues with the kitchen in the past and does have some experience working with the kitchen staff, who have seemed open to change. However, recently, the kitchen has not been responsive to communication attempts.

Overall, School F may be been more successful in implementing the program for several reasons. The most essential is the support from the site director. Her consistency, garden expertise, and input in the creation of the curriculum may booster that support. Another possible factor in successful implementation may include teacher experience and attitude. One additional key to success was respect for School F from Farm to Preschool demonstrated by using teacher input and using School F as a demonstration site.

Recommendations

When it comes to recommendations, there are several issues. Many of the problems that teachers addressed, are not ones that Farm to Preschool can solve. For example, most of the issues are with the bureaucracy of PACE. For instance, they cannot change how much paperwork the teachers have to fill out, fix the regulations the kitchen has to follow or make site directors respond to emails or phone calls. Another main issue is that Farm to Preschool is having a hard time contacting Farm to Preschool sites because they simply are not responding to messages for a variety of reasons. Reaching these site directors and maintaining contact has been very difficult as PACE is an overburdened and overloaded organization. Others are just too big in terms of scope; such as, they cannot change how the food system works in the country. Other issues just cannot be fully addressed due to a lack of funding for Farm to Preschool. Additionally, Farm to Preschool is entering a complicated, crowded playing field when it comes to nutrition curriculum in Head Start programs.

Enrollment Recommendations

First and foremost, I would recommend trying to gauge the interest in schools for Farm to Preschool curriculum. From my interviews with teachers, the interest was higher than Farm to Preschool suspected. This could involve a survey for site directors, but also teachers. However, the PACE bureaucracy makes it very difficult to send out such a survey. In order to send out the survey, I would recommend that Farm to Preschool contact a point person inside of PACE to distribute it, since Farm to Preschool is not given access to teacher email addresses by PACE. However, the point person that Farm to Preschool does have rarely responds because PACE recently reorganized and the staffer has to do the work that

several employees used to do. One other idea is Farm to Preschool has also been told that they can attend teacher meetings. This is another location that surveys could be distributed; however, that would entail getting teacher meeting information and permission to attend from a point person at PACE. Additionally, future attempts for contact could be more focused at sites where the site director worked consistently at that site for a few years, as this may improve chances for successful implementation of the curriculum.

Guidance and Accessibility Recommendations

Farm to Preschool is already trying to increase schools' accessibility to Farm to Preschool. Since six out of the eight schools have the curriculum and/or attended trainings, they have been given a variety of ways to contact Farm to Preschool. Contact information has been given on business cards, flyers, in curriculum binders, etc. The schools have been given the contact information and Farm to Preschool has tried to contact them as well. Farm to Preschool cannot help these schools, unless they actually respond. Another way to keep teachers and PACE employees in contact with Farm to Preschool is a listserv. Farm to Preschool is in the process of building a listserv that would give updates, extra information, and recommendations. This could include workshop dates, growing tips, and garden grant due dates.

Additionally, if the staff size of Farm to Preschool were to increase, I would include more than a once a month site visit, such as adding a mid-month visit to additional sites. School A is already receiving more than one monthly visit. This mid-month visit could be a way to fulfill School A's other wish for an "expert gardener" or "farmer" to come visit the schools and work with the children. Farm to Preschool does not have it in the budget to do

this in every school. However, this could be implemented in a few schools. Since Farm to Preschool is linked to Occidental, the college could also be used as a resource. The college has its own garden with a club that works regularly in it. Perhaps students from that club could also visit these schools to act as an expert gardener or farmer.

Trainings Recommendations

At trainings, I recommend that any literature materials handed out at trainings, like binders or pamphlets be given to each person that attends the trainings instead of providing one for every school. This way, copies can be taken home with teachers, instead of the current PACE policy of binders not being allowed to leave the classroom.

Because many teachers complained that parents do not know enough about nutrition, I would recommend that Farm to Preschool host trainings that would include parents. However, Farm to Preschool already hosts these types of events that include child nutrition as well as presentations or activities for families and teachers that involve cooking the foods of the month. The problem is that scheduling the events with PACE is a challenge and the advertising for the event often gets lost in the bureaucracy of PACE. Because of limited to no advertising, PACE parent events often have low turnouts.

Garden Recommendations

All schools that are actively working with Farm to Preschool have gardens with proper supplies. Other PACE schools that I interviewed did not. Danielle Lyons addresses distribution and funding for garden materials in her paper examining wellness policies in PACE Head Start Preschools, titled “A Head Start On Health: The Benefits and Challenges of

Implementing Wellness Policies in Los Angeles Head Start Preschools”. However, both sites that are actively communicating with Farm to Preschool have gardens. Therefore, in terms of providing gardens, I have no recommendations.

My only recommendation in terms of gardening, if Farm to Preschool had the staff and resources, would be to hold extra trainings available to one person per school site, so that one person at each site can be considered an expert gardener. Ideally, every teacher should attend these extra trainings. However, Farm to Preschool has limited resources and teachers have limited time. If one person was the point person for garden training, they may feel more obligated to attend.

Materials Recommendations

Farm to Preschool once provided supplies, like books to PACE through a point person. I suggest that in the future, Farm to Preschool personally gives the materials to the sites, so Farm to Preschool can assure that the materials are in the classroom and can give direct answers if a site asks about supplies. That way, Farm to Preschool does not have to deal with a point person, who can change positions at any point in the year. However, that would require a larger staff and a travel budget. How supplies are given out is often predetermined in an agreement with the school. If the agreement must include giving money to the schools to buy and distribute supplies, it can be hard to track what happens to these materials in an organization with a large bureaucracy.

Curriculum Recommendations

There seems to be confusion on which curriculum should be used. It will be difficult for schools to implement Farm to Preschool curriculum with other curricula without

extreme intervention like a pilot program. However, it is doubtful that PACE can narrow down the curriculum to just the Farm to Preschool curriculum because as a Head Start Program, they also have to use the Be Choosy, Be Healthy curriculum. All the same, it would be helpful to narrow down the curriculum choices for the schools to at least two curricula per site if not the same two curricula to all PACE Head Start schools. If schools had official support to focus one curriculum, they may be more successful in implementing it. However, this may not be possible, as Farm to Preschool has asked several times for an explanation on why more than one curriculum is used and have not received a response. They have also asked how PACE sees these programs working together or against each other and were told that the curriculum do not compete.

Continued Work with PACE

Currently, Farm to Preschool tries to work with PACE preschools. However, most site directors do not respond and neither does the kitchen. This is partly because they have too many other tasks and responsibilities to do, partly because of budget cuts. When Farm to Preschool does try to implement the programs, PACE and Head Start regulations can get in the way. With the limited budget and staff, I would recommend that Farm to Preschool continue to work with the three active sites where the site directors support the program. However, I would recommend limiting the time spent trying to contact other PACE schools. This is a hard recommendation because although PACE's bureaucracy can be difficult and frustrating, the children they serve sometimes need nutrition and nutrition education the most. Many are from the disadvantaged neighborhoods that are in food deserts with parents that do not know that much about childhood nutrition.

Conclusion

Nutrition education in preschool is integral in fighting the obesity epidemic and in producing healthy adults. Support for nutrition in schools has grown over the hundred years, with most of the focus on elementary schools. However, the focus has begun to include preschool. The ability to implement a nutrition curriculum can be improved by a supportive director, but can be greatly hindered by lack of funding and large bureaucracies. While Farm to Preschool is making a great effort to support the implementation of their curriculum in PACE Head Start preschools, both teachers and Farm to Preschool find barriers in both budget and PACE's bureaucracy.

Interviews

Note: Not all interviewees consented to having their names used in this paper. Their interviews are listed below with dates without their names.

Asfaw, Kelly, and Roy Sadakane. "In Person Interview with Two Teachers from PACE." Personal interview. 14 Feb. 2014.

Carrera, Amelia, and Ruth Hooks. "In Person Interview with Teacher from PACE." Personal interview. 21 Feb. 2014.

"In Person Interview with Teacher from PACE." Personal interview. 20 Feb. 2014.

"In Person Interview with Teacher from PACE." Personal interview. 21 Feb. 2014.

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"In Person Interview with Teacher from PACE." Personal interview. 4 Feb. 2014.

"In Person Interview with Two Teachers from PACE." Personal interview. 21 Feb. 2014.

"In Person Interview with Two Teachers from PACE." Personal interview. 7 Feb. 2014.

Jones, Stephanie. "In Person Interview with Two Teachers from PACE." Personal interview. 20 Feb. 2014.

Konysky, Kelly. "E-mail Interview with Nutritionist from PACE." E-mail interview. 6 Mar. 2014.

Phillips, Zoe. "In Person Interview with Zoe from Farm to Preschool." Personal interview. 5 Mar. 2014.

Romero, Rosa. "In Person Interview with Rosa Romero from Farm to Preschool." Personal interview. 5 Mar. 2014.

Segura, Miguel, and Irene Barajas. "In Person Interview with Two Teachers from PACE." Personal interview. 21 Feb. 2014.

Vargas, Claudia. "In Person Interview with Teacher from PACE." Personal interview. 20 Feb. 2014.

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