

EQUITY, JUSTICE, AND SCHOOL LUNCHESES

A Thesis
by
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Equity, Justice, and School Lunches

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Abstract

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This thesis explores equity, justice, and dignity in relation to young children's access to equitable and fresh food. This thesis study attempts to answer the question of why farm to school programming is not more widely implemented. Another question addressed in this thesis is that of what barriers prevent children from having access to fresh, local produce. In-depth interviews with childcare directors participating in Farm to Early Care programming were conducted, coded, and analyzed with NVivo software. Through this process, eight obstacles were identified to carrying out this type of programming. Conclusions drawn define a need for support to be given to early care centers in order for them to continue operating and participating in fruitful programs.

Acknowledgements

I am incredibly grateful to Steve Vacendak and his creation of the Stephen Vacendak Fellowship in honor of his son. The completion of this thesis would not have been possible without this funding. I thank him for his continued support of Geography and Planning students at Appalachian State University. This fellowship has changed the lives of many, mine included. I would like to express gratitude for my thesis advisor, Dr. Kathleen Schroeder, and her invaluable support throughout this process. She has always placed her faith in me and is the reason I chose to pursue my degree at Appalachian State University. She is an inspiration and has encouraged me to pursue a doctoral degree and to have a career path I am truly passionate about.

I would like to thank my thesis committee members, Dr. Elizabeth Shay and Dr. Bhuwan Thapa, both of whom have shown me the intricacies of our discipline. Prior to my master's program, I only had a vague concept of planning as a profession. Since then, I have completed eighteen hours of planning coursework and have fallen in love with yet another subdiscipline of geography. I am forever grateful for the introduction to the planning world and will always appreciate what I have learned in their classes.

I am incredibly grateful to Matthew P. McGregor, who assisted in designing the maps displayed in this thesis. His skill in geographic information systems was key in developing a well-built visualization of Wilkes County, NC and the location of the childcare centers mentioned in the thesis, including the High Country Food Hub. Thank you also to the professors and students in the Department of Geography and Planning. Your kindness and comradery never went unnoticed.

Dedication

This thesis is dedicated to my parents, Kim Shaw and Richard Miller; their support made this study possible. This thesis is also dedicated to the Geography master's cohort (2021, 2023), who have kept me laughing and smiling throughout this process.

Table of Contents

Abstract	iv
Acknowledgments	v
Dedication	vii
Chapter 1: Introduction	1
Study Site	8
Methods.....	10
Chapter 2: Roots of the Lunch Program and Farm to Early Care	13
Roots of the Lunch Program	13
Modern Program	14
Fresh Produce.....	16
Farm to School Programs.....	21
North Carolina and Farm to School	22
Chapter 3: Barriers to Farm to ECE Programming	35
Chapter 4: Conclusions and Suggestions	62
High Country Food Hub.....	63
Alternative Gardening.....	66
Increased Communication with Regulatory Bodies.....	68
Additional Funding	69
References	71
Vita.....	78

Chapter 1: Introduction

Over time, geography as a discipline has observed and addressed questions of place. For much of that time, questions of equity and justice, when they arose, would be considered an ethical dilemma. There has been a shift in our discipline, however, as we begin to recognize the consequences of inequalities in specific places. Katrin Grossmann and Elena Trubina, in their recently published work, “Dignity in urban geography: Starting a conversation,” explore the future of the discipline as we begin to examine questions of equity and justice in place and populations. The article states that, “while dignity keeps turning up as a category of practice, e.g., in urban protests described in the literature, or as a moral category, such a conceptual conversation is largely absent from normative orientations informing the analysis of spatial politics” (Grossmann & Trubina, 2022).

The authors would like to see a change in the discipline of geography. Within the sub-discipline of food geography, this thesis addresses issues of equity and justice with regard to lunch. This thesis provides a study of a group that does not have much say in where their food is sourced or even in what they eat. That group is students, or rather young children. My research question is:

1. If Farm to School programming provides more nutritious meals for students, why is this type of programming not being widely implemented in rural western North Carolina?
2. What barriers prevent children from having access to locally sourced meals?

This thesis will identify key obstacles faced by Farm to School programming. Yi-Fu Tuan describes the humanistic perspective as one that addresses “geographical knowledge, territory, and place, crowding and privacy, livelihood and economics, and religion” through

“human experience, awareness, and knowledge” (Tuan, 1976). Yi-Fu Tuan notes in their writing that “a humanist geographer should have training in systematic thought, or philosophy” (Tuan, 1976). This approach allows researchers to have a better understanding of the various factors at play when attempting to understand or implement programming in a specific area or region.

Seay-Fleming, through her publication in the journal *Agriculture and Human Values*, “Feed the futureland: an actor-based approach to studying food security projects,” also notes the importance of the geographic discipline, specifically referring to the development of food security programming in a given region. Her work, she states, “is also in line with the work of development geographers who privilege the role of sociospatial difference and ‘contingency’ in understanding how development policies work on the ground” (Seay-Fleming, 2023). Understanding existing community relationships is of great importance when aid programs are in development or when changes to the current socio-economic landscape are in swing. In this thesis, centers for early childcare education will be explored. Understanding their current state is of great importance when considering what the future may hold for food programming in these settings.

Our education system is designed to keep children in the classroom from early morning until early to late afternoon. Children spend much of the day in the classroom creating a collaborative identity of place within the larger school building. This idea has been shown in research such as “Turning space into place: The place-making practices of schoolgirls in the informal spaces of their high school,” published in *Research in Education*. In this article, authors Aslam Fataar and Elzahn Rinqest state, “that while these students are negotiating their place-based identifications, they are actively busy making place through their

interactions at school” (Fataar & Rinqest, 2018). Place-making and place-based identifications are occurring in our education system on a regular basis. As our world progresses, it is important to examine how future generations will make and acknowledge place.

To keep a focus on the questions of equity and justice in this project, the article, “Dignity in urban geography: Starting a conversation” is instructive (Grossman & Trubina, 2022). While some would argue that geographers have long studied the inequalities of marginalized groups, Grossman and Trubina intend to specifically focus on “situations of indignity, analyzed as marginalization, discrimination, stigmatization, humiliation, or exclusion” (Grossman & Trubina, 2022). Food access and food security are intricately tied to equity and justice. Grossmann and Trubina’s article is foundational for understanding how to respectfully address these sensitive topics. Both theoretical and conceptional aspects of human dignity are discussed and provide a checkpoint for ethical research when addressing questions of (in)dignities.

After laying the groundwork for the research, this thesis explores the experience of children in the lunchroom prior to any programming. Although there is research into local food procurement, this study will provide information on what most children in our education system experience — the National School Lunch Program. This program provides a baseline. When making the change to locally produced food, centers are moving away from a system. Childcare or education centers may cater or buy food from big box stores, while public schools implement the United States Department of Agriculture’s National School Lunch Program. Because the National School Lunch Program is available for public schools nationwide, this thesis explores the effects on equity and justice within the school system.

In 2014, the Child Opportunity Index was developed by Dolores Acevedo-Garcia, Clemens Noelke, and Nancy McArdle to provide a data resource on opportunity across the 100 largest metropolitan areas in the United States. These findings were published in January 2020. The national measure of childhood opportunity found a geographic pattern. It was documented that “metros in the southern portion of the country have notably lower Child Opportunity Scores than those in the northern portion,” and that “children who grow up in poor families (defined as families at the 25th percentile of the U.S. income distribution) have very different chances of upward socioeconomic mobility as adults” (Acevedo-Garcia et al., 2020). The study notes that neighborhoods influence the perceived norms of their place in society, and whether it includes higher education or not. Anna Karnaze discusses these opportunity differences in her 2018 article (Acevedo-Garcia et al., 2020).

Anna Karnaze’s 2018 article, “You Are Where You Eat: Discrimination in the National School Lunch Program,” examines the implementation of the National School Lunch Program and its effects on students. The article focuses on “the physical separation of paying and nonpaying students in the cafeteria, often resulting in de facto racial segregation, and the practice of ‘shaming’ students who are unable to pay for their meals” (Karnaze, 2018). Implementing nutrition programming should increase children’s access to healthy and local foods; however, it should not be done at the expense of certain participants in the program. The obstacles in food procurement impact the dignity and equity of the people involved.

Anna Karnaze refers to the lunchroom that existed prior to the novel coronavirus (COVID-19) pandemic. The research titled “Addressing Food Insecurity through a Health Equity Lens: a Case Study of Large Urban School Districts during the COVID-19 Pandemic”

explores the alterations made to the lunchroom as a result of the coronavirus pandemic. Four large urban districts that implemented emergency meal distribution procedures were evaluated: Chicago Public Schools, Houston Independent School District, Los Angeles Unified School District, and New York City Department of Education. This study was done in part because “children who are food insecure are at increased risk for obesity and diabetes, two of the most common comorbidities associated with COVID-19 hospitalizations” (McLoughlin et al., 2020). These districts experienced closures, and when “school meals make up one-third to one-half of [students’] caloric intake in a day” it was clear that emergency assistance programs needed to be developed for these communities. The study found there was, across these four districts, a “breadth of geographic eligibility and distribution of free meals”; but while “all districts specified that food was available to students, ... only three of the four used language that made it clear adults could also pick up food,” emphasizing the importance of clear communication between schools and parents (McLoughlin et al., 2020).

Research carried out by Craig Gundersen and James P. Ziliak in 2014 provides a basis for understanding the food insecurity of younger children in the United States. The research titled “Childhood Food Insecurity in the U.S.: Trends, Causes, and Policy Options” found that “county rates of child food insecurity are highest in the South and in rural parts of the country more generally,” which describes the study area of this thesis. The research also explored childcare arrangements and their effects on childhood food insecurity. The finding was that “low-income preschoolers attending a child-care center had lower odds of both food insecurity in general and very low food security” and that children with other care

arrangements, such as being looked after by a relative or unrelated adult, were far more likely to experience food insecurity (Gundersen & Ziliak, 2014).

As exemplified in the research by Gundersen and Ziliak, childhood food insecurity does not impact all uniformly. This is reiterated in “The Role of Parents’ Nativity in Shaping Differential Risks of Food Insecurity Among US First Graders” (Rubio & Grineski, 2019), published in the *Maternal and Child Health Journal*. The research focuses on parental nativity and how it correlates with childhood food insecurity. It is known that childhood food insecurity can have many adverse effects on the child’s “academic development, social skills, and mental and physical health,” and minority children “suffer disproportionately from food insecurity” (Rubio & Grineski, 2019). The study revealed that children with at least one foreign-born parent have an increased risk of food insecurity, which is important considering nearly 25 percent of United States children are born to immigrant parents. This has a population-level health impact and divulges a necessity for equitable food programs that address issues of race and dignity (Rubio & Grineski, 2019).

Not only are minority children more likely to experience food insecurity, but Appalachian children are also at greater risk. In 2004, the *Journal of The American Dietetic Association* published “Food Security Status of Households in Appalachian Ohio with Children in Head Start” (Holben et al., 2004). The study sampled 297 households in Athens County, Ohio, and found that 41 of those households were classified as food insecure with childhood hunger. The research states that “the geography of the region often makes it difficult and costly to develop roads, communication systems, and public works facilities that support health care delivery and other services” (Holben et al., 2004). Geography influences participation in food banks, creates interdependence between family members, and can cause

difficulties with transportation and the development of gardens. Within rural Appalachia, poverty rates are much higher than what is usual for the state of Ohio or even the region. Childhood food insecurity in this region of Appalachia was found to be three times the national average. Because this thesis studies another Appalachian community, it is important to note the scale of childhood food insecurity within the Appalachian Mountains (Holben et al., 2004).

The research cited thus far does not directly address farm to school or farm to early care programs; therefore, it is also important to look at research that has been previously conducted on this subject. “Exploring Models of Local Food Procurement in Farm to Early Care and Education Programs,” published in 2022 in the *Journal of Human Sciences and Extension*, analyzes the local food procurement by childcare facilities that participated in the Farm to Early Care and Education program led by the Center for Environmental Farming Systems. The study was conducted between 2016 and 2017, in response to the finding that “relatively little information [is] available concerning Farm to ECE procurement practices.” The research indicates this topic is relatively under-explored (Bloom et al., 2022), and sets a baseline for this thesis, specific to the state of North Carolina. An exploration of the state’s capacity to provide local food for care centers provides a needed addition to the work produced on the subject.

In the summer of 2022, I worked as an intern with the Center for Environmental Farming Systems for the Farm to Early Care and Education program. Because their program has continued past 2017, the initial research examines where the program started, why it was started, and how the Farm to Early Care and Education program performed in its infancy. This thesis examines the state of the program six years after its inception. In those six years,

our nation has changed leaders, we have lived through a global pandemic, and the Farm to Early Care and Education program has been called upon to address serious injustices.

These dramatic changes in the world have created a strain on our educational system and caused major disruptions to agricultural industries. It is important to continue researching the impacts on our schools and school programs at every level. This study adds to the geographical literature by examining the obstacles and successes of environmental and social programming under fluid and unstable conditions.

Study Site

During my internship with the Center for Environmental Farming Systems, I worked exclusively in Wilkes County, North Carolina. The county is home to two towns, Wilkesboro and North Wilkesboro. Located on the slope of the Blue Ridge Mountains, the county sits between the Mountain and Piedmont regions of the state. Wilkes County is home to many farming families and also to a Tyson Foods plant. The Tyson Foods plant is one of the primary employers in the area. This is important to note in this research, considering the effect of the recent COVID-19 pandemic on this community.

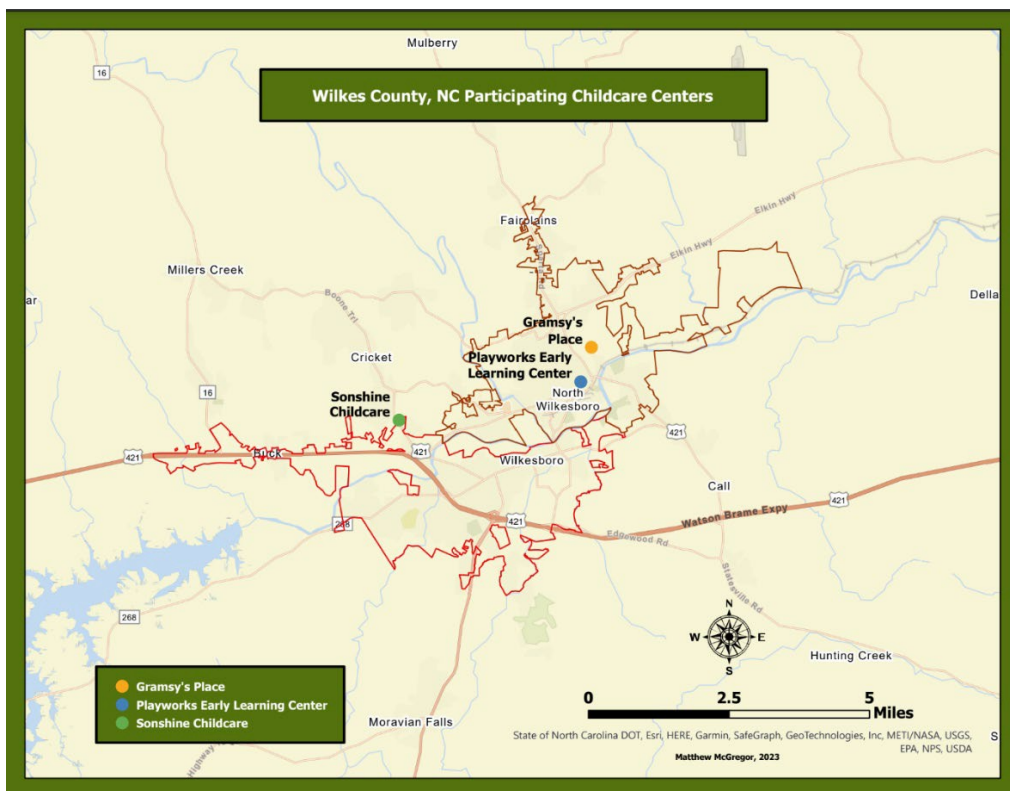
In research published in *Agriculture and Human Values*, “Thick critiques, thin solutions: news media coverage of meatpacking plants in the COVID-19 pandemic,” Trottier describes the effects of the pandemic on meatpacking plants such as the Tyson Foods plant. During the pandemic “some plants were forced to either halt or limit production” (Trottier, 2023). This caused significant financial loss to farmers and workers at the meatpacking plants. Plants that stayed open for some time also experienced a loss of workers or members of their families due to the spread of the virus. Trottier notes this in his research, stating, “early estimates suggest that the livestock industry experienced substantial financial loss and

contributed to staggeringly high transmission rate of COVID-19 among workers and their broader communities” (Trottier, 2023). This had a drastic effect on the community of Wilkes in particular, where many of the children enrolled in the participating childcare centers that will be reviewed were children of Tyson Foods workers or farmers.

Within the county, five childcare centers participated in the 2022 Farm to Early Care and Education program. Of these five childcare centers, three agreed to be interviewed for this thesis. The map in Figure 1 shows their locations within the county.

Figure 1

Location of Participating Childcare Centers in Wilkes County, NC (2023)



This thesis thus uses three primary sources: the director of PlayWorks Early Care and Learning Center, the director of Gramsy’s Place, and the previous director of Sonshine Childcare. The map in Figure 1 depicts the locations of these three centers, including

jurisdiction lines for North Wilkesboro and Wilkesboro. Relationships with these sources were developed over the summer of 2022 through involvement with the Farm to Early Care and Education program. The Farm to Early Care and Education (F2ECE) program was developed by the Center for Environmental Farming Systems (CEFS) in conjunction with North Carolina State University. Wilkes Community Partnership for Children worked in tandem with the Center to provide more local produce options for Wilkes County families and early childcare centers.

Methods

Collaborative Institutional Training Initiative (CITI) Program training was completed before beginning this thesis. This training was specifically designed for human subjects. Covered topics included research ethics, compliance, and safety. The program was completed in the fall of 2021, and certification was received.

The program, “Social Research Methods by Example: Applications in the Modern World” by Yasemin Besen-Cassino and Dan Cassino informed how the thesis would be carried out and provided instruction on interviewing human subjects and developing interview questions. It was decided that this thesis would contain in-depth qualitative interviews. This method was especially relevant because the focus is on “what happened, how it happened, and how the respondent felt throughout” (Besen-Cassino & Cassino, 2017). The questions would focus on discovering the program, implementing the program, and how the primary sources felt about the programming.

To collect information from the three primary sources, interview questions were developed in collaboration with Dr. Kathleen Schroeder. Each informant was interviewed over Zoom during March 2023. The interviews were audio and video recorded to ensure

accuracy and authenticity. The interview questions were designed for childcare professionals, specifically childcare directors. Confidentiality of potentially sensitive information was taken into consideration, and no one under the age of eighteen was interviewed. Each director had the choice to end the interview at any time and had full knowledge they did not have to answer any question they did not want to. Every person interviewed gave their consent to be interviewed and for their full names to be used. Each consent given was audio and video recorded prior to the beginning of questioning. The interviews lasted no longer than an hour for each participant. Participants were told the purpose of the research was to conduct this thesis, “Equity, Justice, and School Lunches,” and that it was in association with Appalachian State University.

Once the interviews were collected, I used the transcription software Temi to transcribe the interviews. After the transcription, I imported the file into the qualitative data analysis software, NVivo. By using NVivo I was able to conduct a deep analysis of the interviews collected. I began by organizing the stop words. Several of these stop words included the names of the people I was interviewing and my name. They also included filler words. By doing this I was able to run a word frequency query of the documents without including irrelevant frequencies.

After adding my stop words, I ran a word query to look for word frequencies throughout the documents. This led me to discover several popular themes within the interviews. I coded for words often used such as ‘kitchen,’ ‘participation,’ and ‘support.’ Following the word query, I began coding the words that I used in specific interview questions, such as ‘expect’ and ‘changes.’ This allowed me to quickly identify material that I had referenced and was significant to a certain subsection of the research. I was able to do this by using coding

stripes and the system highlighting my coded material. After everything was properly coded, I created a word cloud to exemplify the themes that had been identified. This word cloud is included in Figure 2 and acts as a prelude for what will be discussed in the following pages.

Figure 2

NVivo Word Frequency Cloud



Chapter 2: Roots of the Lunch Program and Farm to Early Care Programs

Roots of the Lunch Program

In order to explore farm-to-school or farm-to-early-care programs, there must be an established base for how meals have been handled in the United States in the past. School lunch programs in the United States have their roots in 1932. The New Deal spurred small-scale aid to several schools to pilot the program. The aid was expanded in 1935 as labor for school lunchrooms was provided and farm surplus was donated for lunches through the Agricultural Adjustment Act (USDA, 2012).

As New Deal agencies began to be dissolved and surplus donations were decreasing, there was the question of keeping or dissolving the aid given to schools. In 1943 it was decided that the aid would continue, and federal funds would be used for lunch programs. The aid given would be distributed on a yearly basis. Over the next three years, the government continued its efforts to preserve this programming. By 1946, the National School Lunch Act was adopted (USDA, 2012).

The National School Lunch Act detailed that public schools would continue receiving federal aid for meals, and the aid received would be based on a formula that relied on the per capita income and population at the state and local levels. The states were, and are, responsible for allocating the federal funding to individual districts within the state. Disbursements required the schools to meet the nutritional standards of the program, and with those standards in place, participation was not mandatory. This formula for determining aid was revised between the years 1962 and 1966 (Hinrichs, 2010). The new funding model, which is in place today, can be viewed below in the chart provided by the United States Department of Agriculture (USDA, 2012).

Figure 3

USDA Federal Income Eligibility for the National School Lunch Program

INCOME ELIGIBILITY GUIDELINES											
Effective from July 1, 2022 to June 30, 2023											
HOUSEHOLD SIZE	FEDERAL POVERTY GUIDELINES	REDUCED PRICE MEALS - 185 %					FREE MEALS - 130 %				
	ANNUAL	ANNUAL	MONTHLY	TWICE PER MONTH	EVERY TWO WEEKS	WEEKLY	ANNUAL	MONTHLY	TWICE PER MONTH	EVERY TWO WEEKS	WEEKLY
48 CONTIGUOUS STATES, DISTRICT OF COLUMBIA, GUAM, AND TERRITORIES											
1	13,590	25,142	2,096	1,048	967	484	17,667	1,473	737	680	340
2	18,310	33,874	2,823	1,412	1,303	652	23,803	1,984	992	916	458
3	23,030	42,606	3,551	1,776	1,639	820	29,939	2,495	1,248	1,152	576
4	27,750	51,338	4,279	2,140	1,975	988	36,075	3,007	1,504	1,388	694
5	32,470	60,070	5,006	2,503	2,311	1,156	42,211	3,518	1,759	1,624	812
6	37,190	68,802	5,734	2,867	2,647	1,324	48,347	4,029	2,015	1,860	930
7	41,910	77,534	6,462	3,231	2,983	1,492	54,483	4,541	2,271	2,096	1,048
8	46,630	86,266	7,189	3,595	3,318	1,659	60,619	5,052	2,526	2,332	1,166
For each add'l family member, add	4,720	8,732	728	364	336	168	6,136	512	256	236	118
ALASKA											
1	16,990	31,432	2,620	1,310	1,209	605	22,087	1,841	921	850	425
2	22,890	42,347	3,529	1,765	1,629	815	29,757	2,480	1,240	1,145	573
3	28,790	53,262	4,439	2,220	2,049	1,025	37,427	3,119	1,560	1,440	720
4	34,690	64,177	5,349	2,675	2,469	1,235	45,097	3,759	1,880	1,735	868
5	40,590	75,092	6,258	3,129	2,889	1,445	52,767	4,398	2,199	2,030	1,015
6	46,490	86,007	7,168	3,584	3,308	1,654	60,437	5,037	2,519	2,325	1,163
7	52,390	96,922	8,077	4,039	3,728	1,864	68,107	5,676	2,838	2,620	1,310
8	58,290	107,837	8,987	4,494	4,148	2,074	75,777	6,315	3,158	2,915	1,458
For each add'l family member, add	5,900	10,915	910	455	420	210	7,670	640	320	295	148
HAWAII											
1	15,630	28,916	2,410	1,205	1,113	557	20,319	1,694	847	782	391
2	21,060	38,961	3,247	1,624	1,499	750	27,378	2,282	1,141	1,053	527
3	26,490	49,007	4,084	2,042	1,885	943	34,437	2,870	1,435	1,325	663
4	31,920	59,052	4,921	2,461	2,272	1,136	41,496	3,458	1,729	1,596	798
5	37,350	69,098	5,759	2,880	2,658	1,329	48,555	4,047	2,024	1,868	934
6	42,780	79,143	6,596	3,298	3,044	1,522	55,614	4,635	2,318	2,139	1,070
7	48,210	89,189	7,433	3,717	3,431	1,716	62,673	5,223	2,612	2,411	1,206
8	53,640	99,234	8,270	4,135	3,817	1,909	69,732	5,811	2,906	2,682	1,341
For each add'l family member, add	5,430	10,046	838	419	387	194	7,059	589	295	272	136

It should be noted that the 185% of the poverty level cutoff for reduced meals is the same percentage of the poverty level used to determine Women, Infants, Children (WIC) eligibility. The 130% of the poverty level cutoff for free meals is the same cutoff used for food stamp eligibility. These requirements for school lunches inspired the requirements for the School Breakfast Program.

Modern Program

By the 2000s, the National School Lunch Program began providing more nutritional meals for students. In 2002, the Farm Security and Rural Investment Act was passed (later known as the 2002 Farm Bill). This act allowed for the pilot of the Fresh Fruit and Vegetable Program. The program was piloted for four years in four different states before it was

expanded nationwide in 2008. The early 2000s also saw the Child Nutrition and WIC Reauthorization Act passed in 2004. This act encouraged every school district participating in the National School Lunch Program to establish wellness policies. These policies would include physical and dietary wellness goals. The wellness goals were to be set by the community in tandem with the school district (USDA, 2012).

The most recent legislation related to the National School Lunch Program was the 2010 Healthy Hunger-Free Kids Act. It was signed into law in December of 2010, with the intent to provide farm to school grants and technical assistance. The Act authorizes up to \$100,000 per farm to school grant. Any agency seeking to improve children's access to local foods is eligible to apply, including nonprofit organizations and agricultural producers. In October 2012, the United States Department of Agriculture received their first yearly payment of five million dollars to begin administering these grants (USDA, 2012).

While the National School Lunch Program has been running strong for nearly 100 years now, participating schools are mainly public schools offering K-12 education. All the schools included in this study were licensed by the state of North Carolina, and they did not qualify for the National School Lunch Program. On the United States Department of Agriculture site, under Eligibility of Schools and Institutions to Participate in School Nutrition Programs, it plainly states:

Childcare institutions. Except in Puerto Rico, non-residential childcare institutions (including nursery school) are ineligible to participate in the National School Lunch Program, Commodity School Program, and the School Breakfast Program (USDA, 1988).

This is the reality for the eight independent childcare centers currently operating in Wilkes County, as well as for the four home centers and two religious childcare centers. Only independent or religious childcare centers offer infant to toddler care. Head Start programs enroll only children three-years of age or older. At the age of four, some children can be enrolled in public prekindergarten when space is available. At age five, they can then enter public kindergarten. Enrollment in independent childcare centers renders 476 children ineligible for the National School Lunch and Breakfast programs. It also means that center directors are left with the burden of finding and providing school meals. These data were gathered and published by the North Carolina Division of Health and Human Services.

Fresh Produce

When considering the introduction of fresh produce to children in childcare facilities, it is important to understand habit forming in young children. An informative study for habit formation was carried out by Issanchou on behalf of the Habeat consortium. This study, published in the *Annals of Nutrition & Metabolism* and titled “Determining Factors and Critical Periods in the Formation of Eating Habits: Results from the Habeat Project,” explored various methods of habit formation in children aged zero to six. The project spanned multiple European countries with various cohorts. Noted in the study is repeated exposure to vegetables, as well as diversification in that exposure to preserve interest. This diversification should also be carried out by making sure “the sensory properties of a novel vegetable are very close to the sensory properties of the “learned” vegetable” (Issanchou, 2017). These factors should be taken into account when incorporating fresh produce.

The childcare directors interviewed for this thesis wanted to incorporate freshly grown produce, but it was easier for some than for others. This will be further explained in

the upcoming chapter, but to get a sense of the outdoor spaces available to the centers, part of the discussion begins here. Sonshine Child Care, while it was in operation, was able to incorporate produce from its edible garden, but still had to rely on local groceries to create a full menu. The incorporation of garden-grown produce was highly dependent on variability, however. The former director, Tracy, explains:

We could only grow so much because of space and um, we did source a few local farmers and a few area farmers' markets, those types of things. But a lot of what it was, was just supply and demand. We were feeding 55 people every day and having that just available to us on a consistent basis was really important.

Tracy went above and beyond in her efforts to provide locally grown food to the families she served. On the property there were two fruit-producing trees the children could pick from. There were also strawberry bushes, sunflowers, and squash dotting the playground. She explains the activities she would do with the children involving the produce they were able to grow onsite.

I would show 'em how to can the tomatoes so that we could use them later in the season or we would, um, slice up and prepare zucchini and squash and freeze it so that we could use it further within the growing season. And they really enjoyed that, helping with that preparation.

Not all directors had the space or kitchen that would be required to grow, prepare, and store fruits and vegetables. Some childcare centers do not have a kitchen onsite, or if they do, the kitchen may not meet the requirements to prepare meals, such as a double basin sink or

range hood. These would be added hurdles that two of the directors I spoke to had in common.

PlayWorks Early Learning Center could expand their existing kitchen to meet the requirements to cook on site; however, they are located in the basement of a multipurpose building. Because they are in the basement, they would need a costly ventilation system installed, among other upgrades that the center simply cannot afford at this time. To stay within their budget, they had to hire a local restaurant to cater.

PlayWorks is able to have container gardens on their property, but a lack of green space means that expanding their gardening efforts laterally would be impossible at this time. Vertical gardening is a great way for most to utilize space, but for childcare centers it is unreasonable. Anything that could potentially fall on a child and cause harm is not allowed within the vicinity of a childcare center. For example, there can be no shelving above cribs because of the possibility of something falling into the crib. Such factors have caused the center to rely on Walmart and catering for the meals they serve.

PlayWorks usually makes a bulk order from Walmart for pick-up each week. Director Katy finds reliable, easy-to-prepare produce she can provide as snacks for the children. Buying in bulk, from a limited selection such as the Wilkes Fresh local mobile market, has proven difficult because only so produce can be stored on site. With what Katy buys, she is able to serve a two-food component snack in the mornings and afternoons. For lunch they cater from a local restaurant ensuring the children have *“a full hot lunch, you know, all five food components,”* as Katy puts it during our conversation. Making sure the children she serves are fed and well-nourished is important to Katy. Despite not being able to cook on the

property, she made sure they were serving new and interesting food to the children. She describes how she does this in the following statement.

We do serve, you know, some like cucumbers and we try some sweet peppers, things like that. But we do more things they're not used to as a taste test, just so we're making sure they actually do get some nutrients and they're not just throwing, you know, their food away.

Some of the produce she includes in these taste tests come from what is grown on site. They may be landlocked with very little green space surrounding them, but they do make use of what little space they have through container gardening. Since the gardening is limited to containers, however, and PlayWorks serves 40 to 45 children a day, some supplementary produce is needed.

This season, we're hoping to go, our local farmer's market is open on Tuesday afternoons and Friday mornings or Saturday mornings, so we're hoping to go maybe Tuesday afternoons and just to get a few, you know, servings of local things.

This decision may still bring its own share of stress. With only four teachers, Katy occasionally has to be in the classroom acting as a substitute since most early childcare centers do not have a substitute base to pull from. That may prevent her from attending the market on a Tuesday or Friday. She would be available to attend on a Saturday morning, but she is also a mother who only has two days to herself. If she were to only attend the market on a Saturday, her work week would stretch from five days to six.

Time is critical, especially so for childcare directors. Some have chosen not to spend any time at the grocery store and instead opt for food procurement options that ensure delivery. Like PlayWorks, Gramsy's Place orders from Walmart and caters. Unlike PlayWorks, they have their Walmart orders delivered rather than choosing to pick them up. Jenna Walker, the director of Gramsy's Place, details this process as follows:

Walmart basically, I know this sounds really bad, but they deliver to us so it's easier. So, we ordered on Fridays, and they deliver it on Monday morning, and we have everything for the week. We don't have to designate somebody go get it, pick it up, and leave work. They literally just bring it to the door and then um, Mountain View Cade delivers also. It's more of a convenience thing.

Gramsy's Place also has a garden they can pull from for snacks or tasting, but only when the produce is ripe and in-season. During the off-season they must fully rely on what's available on the store shelves. Jenna tells me she is waiting on the weather to continue the gardening efforts at the center. Below she describes the support she received for her efforts in implementing the Farm to Early Care and Education program in the summer of 2022.

I felt very supportive in talking to the partnership and them reaching out to get what we need. And didn't you help quite a bit too? I was thinking so, but you helped tremendously also, and I mean I didn't have no issues, so I don't have nothing negative to say.

Courtney works as a North Carolina Cooperative Extension agent in Wilkes County. The North Carolina Cooperative Extension and the Wilkes Community Partnership for Children have been instrumental in aiding the local childcare centers. Both agencies are

dedicated to strengthening their communities through programming like Farm to Early Care and Education. These centers and contributing cooperatives and partnerships have needed to be creative and driven in their food purchasing because there is no national or state meal programs for children under the age of four, and under the age of three if they are not enrolled in Head Start programs, which have limited space.

In Wilkes County alone, 476 children are enrolled in independent childcare centers; a number that does not include religious or at-home care centers. If we include religious and at-home care centers, the number of children enrolled in these programs rises to 587. With only three operating Head Start programs in Wilkes County, the total enrollment between all three centers is 82. That number is startling, considering the 82 are eligible to apply for the National School Lunch and Breakfast program, while 587 children are not (Division of Child Development and Early Education, 2023, p. 831).

Farm to School Programs

Though the concept of Farm to School may sound new-age, or at least like a product of the progressive 1960s, it has a much richer history than one would assume. Fresh produce on school grounds was widely available in the early 1900s, with the school garden's hey-days occurring between 1891 and 1920. During the First World War, the Department of Agriculture provided resources for public school teachers to familiarize themselves with maintaining the school gardens. This program that emerged alongside Victory Gardens was deemed the United States School Garden Army (Trelstad, 1997).

Though the first school garden appeared in 1891, this effort was partly spurred by the First World War, resulting from implementation of rations. However, “in 1920, Congress cut

the Bureau of Education's appropriation for school gardens" (Trelstad, 1997). Despite the seemingly strong start, school gardens practically disappeared from the American landscape. We have seen a revival in the past thirty years, however. Fresh and local produce began to appear again in cafeterias in the late 1990s. Today the United States Department of Agriculture recognizes more than 67,000 schools across the nation that are participating in some type of farm to school programming (United States Department of Agriculture, n.d.). This number of 67,000 includes schools from all 50 states and all US territories. The nation gained five states, but the number of school gardens dropped by eight thousand.

North Carolina and Farm to School

Today the United States Department of Agriculture is attempting to raise this number through its recently retitled program, "The Patrick Leahy Farm to School Program." The program was named after a Vermont senator considered one of the program's largest supporters and advocates. Vermont is a leading state in farm to school programming, as is North Carolina. Just as the resurgence of local foods in cafeterias began in the late 1990's, the North Carolina Department of Agriculture and Consumer Services founded the North Carolina Farm to School Program in 1997 — not only for the benefit of the children, but to expand the markets of North Carolinian farmers, packagers, and processors. The first piloted crops were western apples and eastern strawberries. The North Carolina Farm to School Program was founded far earlier than many states would see farm to school efforts (North Carolina Farm to School, n.d.).

The program continued to grow, with all public schools in the state being encouraged to participate in recent years. North Carolina Governor Roy Cooper declared October Farm to School and Early Care Education Month in 2021, after seeing the success of the program

(Gov. Roy Cooper, Proclamation, 2022). This program gives public school children the ability to have a variety of fresh and North Carolina–grown produce in their cafeterias. There have been efforts to combat obesity and food insecurity in the nation and in the state of North Carolina, but only for public school children. Public schools enroll children aged five to eighteen, and Head Start enrolls low-income children, although open spaces remain limited. If, for whatever reason space continues to be limited, or a child does not meet the enrollment standards, many children will go five years without meal assistance.

The North Carolina Department of Agriculture and Consumer Services did, however, partner with North Carolina State University and North Carolina Agricultural and Technical State University to create the Center for Environmental Farming Systems in the early nineties. The center was, and is, focused on research and education in sustainable agriculture and local food systems (Center for Environmental Farming Systems, 2020).

The Center for Environmental Farming Systems (CEFS) has developed many initiatives such as Farm to Fork NC, NC Choices, and Farm to Senior Services. The Farm to Early Care and Education program focuses on introducing local produce “through meals and snacks, taste tests, lessons, farmer visits, cooking, growing food, and/or community and parent involvement” in early childcare centers across North Carolina (NC State Extension, 2023). This program is possible with the help of North Carolina Cooperative Extension and the North Carolina Partnership for Children. Both organizations are instrumental in the continuation of the program. The Farm to Early Care and Education also assists the North Carolina Farm to Preschool Network.

The program provides resources to partnered organizations and participating farmers or childcare centers, and to anyone who can access their website (<https://cefs.ncsu.edu/food->

[system-initiatives/nc-farm-to-early-care-and-education/](#)). The website provides resources for discussing racial equity with children, classroom curriculum printouts, gardening, and nutrition guides, as well as information on how to purchase locally and seasonally. These resources are mostly for the general public, interested families, or non-participating childcare centers that still want to be able to incorporate the lessons. There are also resources listed as “additional” that anyone participating with the initiative is expected to review and/or participate in.

These additional resources, titled “Learning Bursts,” are useful to the public. They are video classes that cover topics related to Farm to Early Care and Education. They are usually delivered by experts in association with the program, such as an Agriculture Cooperative Extension agent for a participating county. Topics covered in 2021 included gardening, local food purchasing, race equity, cooking, and curriculum. The target audiences are parents, care givers, and childcare directors; however, the information is available to and useful for anyone interested in expanding their knowledge of our food system.

When I spoke with Jenna Walker, the director of Gramsy’s Place in Wilkesboro, she said she was already in contact with the Agriculture Extension Agent for the county, Courtney, in hopes of getting the Farm to Early Care and Education ball rolling early. When I asked her about her participating this coming summer she responded with,

I will be participating again ‘cause we’re actually talking to Courtney and getting a grant to help redo our garden space because some of the stuff didn’t grow as it should have.

Jenna Walker is not the only director to share this sentiment about continued participation in the 2023 Summer. The former director of Sonshine Childcare, Tracy Lowder, spoke in her interview about how she has been a strong advocate for Farm to Early Care and Education and its future. Unfortunately, Tracy had to close her center when there was not enough staff to stay open. She acknowledges, however, that had her doors not closed she would be participating again. Despite the centers closing, she still hopes to be involved in some capacity to help ensure the programs future. It is no surprise when she describes her experience with Farm to Early Care.

We were very excited. We were thrilled with some of the stuff they were doing. We loved the information that they were providing. Um, it was exciting to get to share some of our experiences and some of our, some of our trials, some of our failures and, as well as get information from other groups. I enjoyed mentoring some of the other childcare centers, um, across the state and helping them build their program. We shared seeds with each other, so that was awesome. Um, and um photographs with our students so they could see what other schools were doing back and forth. So, it was a really good learning experience in many ways. Very enriching.

As exemplified in Tracy's statement, childcare directors go above and beyond when it comes to involving themselves in programming. With everything that childcare directors do in a day, a week, a month, their engagement is appreciated. This engagement coming from the directors can be very significant in maintaining engagement with the teachers. For this type of programming to do well, there must be support networks within the childcare centers

among the staff. Katy Henson, the director of PlayWorks, relays how she and her staff prepare for the Farm to Early Care and Education season.

We've had a great experience, you know, being a part of this initiative. Um, and I feel like we would, you know, continue our journey in this. You know, I told our staff, even if we do a little bit along the way, you know, it's better than not doing anything or exposing these children, um, to anything more. So, we're gonna make a pact to do one. We were requiring our staff to do at least one activity garden related or taste test related. Something is, you know along the Farm to ECE lines monthly, but we're starting in, we're gonna ask them to do something weekly, um, just to continue, you know, to build the momentum and hopefully continue the, this, program.

Not only is support from staff necessary, but support from every participating organization is instrumental in successfully carrying out the Farm to Early Care and Education program. Participants, whether teachers, farmers, or directors, all have gaps in their knowledge when first agreeing to participate. This is partially why the Agriculture Cooperative Extension aids in this program. Not all childcare directors or teachers have experience with gardening, and therefore need to be taught themselves in order to be able to teach the children. The Center for Environmental Farming Systems, the group that runs the Farm to Early Care and Education program, knows that not everyone starts out an expert, which is why they pepper training days or sessions throughout the program. Katy Henson, director of PlayWorks, discussed one of the training courses.

We highly encouraged them [teachers] to come and we had about 75% of our staff show up, so we were really excited, and they left excited. We were afraid

first it might be the same training we had already had, but it wasn't, it was all new, new faces, new activities, new information. So it was very helpful and I think it gave them [teachers] a little bit of boost and confidence that we can carry this out even if it's just little things along the way or, um, you know, more activities as far as our planning goes, um, will help spark the children's interest even more.

Without this type of hands-on training, who is to say the program would have been able to get off the ground. It takes effort on the part of all dedicated parties, the North Carolina Partnership for Children, the North Carolina Cooperative Extension, Center for Environmental Farming Systems, and the childcare directors. The training for this program was, and is, ongoing.

Training meetings would take place weekly via Zoom and discuss starting gardens, the proper storage of produce, and other North Carolina organizations making strides towards a more equitable food system. The children were therefore growing to lead healthy lives. Being able to understand the food system is really the whole point of this program. My interview with Tracy Lowder, former owner of Sonshine Child Care, pulls us back to the main motivation for childcare centers to involve themselves with the program. When asked about her motivation for initially choosing to participate she responded:

It's really important for children, not just their social emotional, but as well as their health and well-being. We know that working outside and having your hands in the dirt is very good for their social well-being, but it also starts a healthy dietary lifespan. So, children who are introduced and learn to grow their own foods, learn to take that time, have some input, will start out and

maintain a better diet throughout their lives. So that was really important to me.

She envisioned a future where her students, who ranged in age from infants to kindergarteners, could engage with and have a cognitive understanding of the food system. By all accounts, she achieved this while her center was open. All across the children's playground were sunflowers, strawberries, and cucumbers. Looming just over the fence, blocking the view of the parking lot behind, were two fruit trees for the children to pick from and enjoy. She recalls the dream she had for her students at the beginning of her participation.

I wanted our students to have that, that possibility, that ability to eat strawberries warm right out of the garden, and to pick apples off the trees and tomatoes and make their own tomato sauce, make their own spaghetti sauce. Just those things that help them to see where their food comes from, that it doesn't just come from the store. And to have that input and to be able to start them on a, a track towards healthy eating.

Tracy was able to turn her vision into reality within the confines of the Sunshine Childcare Center and the result was precious. Peach trees take approximately three to four years before they begin to produce fruit, which fits well into the five years a child would spend at the center. For about three years, the children at Sunshine Childcare watched the peach tree grow and grow in the small space between the parking lot and the gate. They waited eagerly for it to flower and fruit. I was lucky enough to be present on the day of the long-awaited harvest. Figures 4 and 5 depict Tracy's vision come to life.

Figure 4

Peach tree at Sunshine Childcare (2023)



The peach tree seemed to bend down her branches for the children. They barely had to reach to pluck their peaches and plop them down into their wooden baskets. When they had enough peaches for themselves, they would go inside and rinse them off and have them for a snack that day. They would also be allowed to save their peaches to share with their families. The kids were absolutely delighted, especially since this was the end to an exercise of their patience. It was a real joy for all who were present, and the moment reinforced the importance of Farm to Early Care programming.

Figure 5

Peach picking at Sonshine Childcare (2023)



The motivation for the Gramsy's Place and PlayWorks directors to participate in the Farm to Early Care and Education program was similar to Tracy's. All three women wanted to increase their students' exposure to the natural world and nutritious foods. When I asked

Jenna, director of Gramsy's Place, about the reason for her center's participation, this is what she had to say:

Just to get the children, 'cause some children, you know, don't know nothing about farming and knowing, you know, where this stuff comes from, eating healthy because it's cheaper to eat, not healthy. So it was just better so the kids could get a good look at what, how it happens, what goes on, all that.

With the median household income in Wilkesboro, North Carolina, being approximately \$46,079.00 per year (U.S. Census Bureau, 2021) it is unlikely most of the children who attend these childcare centers have much exposure to fresh produce. Katy, the director at PlayWorks, voiced similar concerns to Jenna when I spoke with her. When questioned about what inspired PlayWorks' participation, she replied:

Well, just exposure for the children. Um, you know, a lot of them probably aren't gardening at home. Um, maybe not be even served fresh fruit and vegetables. So, um, we wanna provide as much opportunity for those things to happen here while they're with us. Um, just, and just for better health, you know, for them we wanted to improve what we were serving here as well.

The good news for both of these women is that they did see changes in their students after the program went into dormancy to wait out the winter months. As the children became more familiar with gardening and trying a diverse range of seasonal fruits and vegetables, their interest in the natural world blossomed. Even with limited space, the children were able to experience small-scale cultivation such as container gardening. This gave the children the

knowledge that growing even a small bit of your own food is worthwhile and possible. Katy discussed the observed shift in her students as a result of the program:

We've seen more interest in the children, especially when they seen something they plant produce something. They're more interested, they're more engaged. Um, a lot of 'em will even try it, you know, if they were able to, after five years, our blueberry bushes finally produced last summer and that they were so excited 'cause they has, you know, they're by our sidewalk to the playground and every time they, you know, or every day they would observe the changes and they started green and we talked about waiting till they were blue. They'd get so excited to see that and pick it and we were able to serve it for snacks. So just seeing that play out, you know, you see the children engaged and interested and willing to try something that they had [a] part in.

This is something that not only these directors witnessed. Published literature shows the many benefits of Farm to School and Farm to ECE programs. Research by North Carolina State University researchers titled, "Exploring Models of Local Food Procurement in Farm to Early Care and Education Programs" was published in the *Journal of Human Sciences and Extension*. It covers a wide range of purchasing options for childcare centers. The article further discusses the benefits of Farm to Early Care and Education, stating that studies found that "exposure to fresh produce provided by these programs contributes to children's greater willingness to try, like, and consume more fruits and vegetables, which corresponds to health benefits" (Bloom et al., 2022).

Farm to Early Care and Education is not only about fresh produce and nutritional benefits. It is an excellent introduction to the sciences, such as climatology and biology. Children can be introduced to a wide range of topics with Farm to Early Care being the nexus. Our food system is intertwined with our life cycle and the natural world. Tracy described how food was used as a jumping point in her classrooms.

The teachers were great about incorporating our, um, garden into their program, into their lesson plans in multiple ways. Um, it wasn't just the plants, but it was soil amendment talking about weather, um, beneficial insects even became part of our science conversations and our science lessons.

Figure 6

Sonshine Childcare playground and garden (2022)



The benefits of this program are becoming more widely recognized — by families, care centers, and the state of North Carolina. This growing recognition may soon change how we think about this type of programming, how it is funded, and what needs to be done to ensure its success. This thesis explores some of the most evident barriers to Farm to Early Care implementation and provides conclusions drawn from the study that may aid in future implementation of Farm to Early Care and Education programming.

Chapter 3: Barriers to Farm to ECE Programming

This thesis was informed by rich discussions with childcare professionals about the work they do with the Farm to Early Care and Education program, and the work they do daily. Because childcare directors are responsible for the meals served at their centers, it is imperative to understand how childcare centers operate in order to realize the barriers to equitable food access for children. What these amazing women have been able to accomplish within their centers is incredible. It is a demanding career that requires an assorted set of skills. To be more specific about what exactly the job demands, Figure 7 includes an excerpt from the North Carolina State University website page for Education and Training Careers.

Figure 7

North Carolina State University - Education and Training Careers - Childcare/Preschool Director Image (2023)

Childcare / Preschool Director

What Does a Professional in this Career Do?

Manages and directs programs for very young children. Supervises child care workers and pre-school teachers. Proposes policies, program fees and budgets for approval by a program board or administrative agency, or implements policies of a national organization. Meets with parents and staff to discuss the development, learning and behavior of children in the program or center. Orders supplies and monitors maintenance and cleaning at a facility. Ensures that the program or center meets state and federal guidelines.

Even though these directors have a grasp on all of these responsibilities, most will not make more than \$50,000 annually while working in this field. The availability of jobs in this field is also dwindling. In 2018 there were approximately 1,750 childcare director jobs in

North Carolina. This number dropped to 1,690 jobs in 2019, and again to 1,540 in 2020 (North Carolina State University, 2023).

The number of childcare director jobs may be decreasing, but the birth rate in North Carolina has stayed consistent throughout 2018 to 2020, with only a mild drop being seen in 2020 (NCDHHS, 2023). The need for childcare directors has not changed; in fact, many independent childcare centers in Wilkes County are operating at near maximum capacity (NCDHHS, 2023). An already demanding profession is becoming even more thinly pressed.

To get a better understanding of the position and their experience with the Farm to Early Care and Education program, directors of three participating childcare facilities were interviewed. All three directors consented to their names being used in this thesis. The directors interviewed were Katy Henson with PlayWorks Early Care and Learning Center and Jenna Walker with Gramsy's Place. The former director of Sonshine Childcare, Tracy Lowder, was also interviewed. Sadly, Sonshine Childcare closed its doors in the fall of 2022, shortly after the summer portion of the program. Tracy reflected on the changes that have taken place since the end of the summer programming.

Um, for us, I guess the big change for us is we did close the center, but that had nothing to do with our program per se, it just had to do with lack of, um, employment in the community. We just didn't have the teacher staff. Um, I think the population just could not support enough early childhood educators in this area. So, for us, I mean, our program was going strong. We had students, we had a waiting list, we just did not have teachers.

The following text reveals that keeping teachers in the classroom is a challenge for all directors. In spite of the trials childcare directors must face, they worked diligently to provide the best possible care. All three have a passion for the work, their teams, and the families they serve. They remain cheerful and maintain great hopefulness. Here, Tracy recalls her previous days as the childcare director of Sonshine Childcare, fondly noting how much there was to be done in a day.

So, the primary responsibilities of the day is working with parents, ensuring that every class, um, and parents and children are greeted and met each day. Before that, making sure that the teachers have what they need, that their classrooms are set up accordingly, the teachers are prepared, um, and then making sure that the center is running functionally. So, and within state guidelines, making sure we have our supplies that we need, that we're running according to policies and procedures set by the state, in this case North Carolina and the Department of Health and Human Services. So making sure the staff has their training, um, making sure that the building is up to code and that we have all of our, um, basically our, i's dotted t's crossed. And then of course there's the business aspect of it as well, making sure that I take care of the financials, um, payroll, those types of things.

There is appreciably more than childcare that directors do during their days, which does not immediately come to the mind for the general public. Their days often get changed around based on need or certain activities, which may require some noodling on their ends. Biannually several regulatory agencies may visit, teachers may call in, or a prospective

family may request a tour. When I spoke with Katy, director of PlayWorks, she relayed some of these scenarios in greater detail.

Well, a typical day is just handling, you know, the everyday things office wise. But my days are off, often altered by, um, jumping in the classroom if we ever need a sub, which does happen often. You know, we have four classrooms here, so we're lucky if everyone's here every day, but if not, I, I get to fill in the holes. But, um, when I'm not in the classroom, you know, I'm making sure all the records are up to date like they're supposed to be. Um, you know, monitoring for sanitation, compliance, um, our, you know, preparing for our state visits from our childcare consultant, things of that nature. In the last year or so, you know, maintaining our records for our stabilization grant funding that we've been receiving this the last, well, almost 18 months now. So little bit of everything.

Little bit of everything is certainly correct. After reading both of the previous answers to the question of what an average day for a childcare director looks like, it might seem hard to nail down a timeline. Even if it can seem chaotic, there is a tight schedule that each center creates and adheres to for their students. Jenna provided a very detailed account of the regular schedule at Gramsy's Place, one that normally starts as early as 6:30 AM and ends as late as 5:30 PM. She did not mention spending much time in the classroom; however, I was curious whether Jenna, like Katy, dipped into the classroom. I wondered if she wore two hats in one day, director and teacher.

No, um, I mean I'll periodically go in the classroom if a kid's crying. They need help, or I'll go in sometimes and help make sure to get plates ready and

stuff like that for our lunch person. So I'm in and outta the classroom quite a bit, but I'm not in there solid few hours or anything unless staff's out.

The reader will inevitably realize that all of these answers simply scratch the surface of what a childcare director contends with. None of these women answered in the same way when asked, but assuredly all would agree with one another's responses. All directors also have their own experiences with gardening and gathering fresh produce.

Not only was Tracy spending her time taking care of everything she described in a typical day, but she was also doing much more. She was researching farm to table options, picking up ingredients from various, and acting as the main cook for the center. Sonshine Childcare served breakfast, lunch, and afternoon snack Monday through Friday. She gardened with the children often, and when the garden would bloom and produce, she would use those ingredients in the meals served. She described this to me in detail when I inquired about how she sourced ingredients for the center.

Um, we used, did source a lot from local grocery stores. Um, and then we, um, during different growing seasons, we would, we would supply that, we would backfill the menu with a lot of our stuff from our garden.

Directors have a fluidity in themselves, and those that I have spoken to share a thirst for knowledge. This allows them to take on this taxing position, along with their passion. Despite a thirst for knowledge, gaps in one's education can require time to fill. It can be difficult to find the time when one's schedule is already full. In the following section, knowledge surrounding aspects of Farm to Early Care programming is explored.

One of the directors I spoke to grew up gardening, had the land available for gardening, and respectfully had a bit of a head start when joining the Farm to Early Care and Education initiative. Katy on the other hand working at PlayWorks had very little available gardening space, and she was someone with little gardening knowledge, but she persevered. We discussed some of these challenges in our interview.

I think so overall, I mean, um, me personally, I'm just, I don't feel like I have all the knowledge I need to, to, you know, do all the gardening and stuff like that. But, you know, through the trainings that Shonda's hosted for us and, um, some, you know, of the local, like the cooperative extension office have been very helpful. So I feel like we maybe only made a few baby steps last season, but this year I feel like we're more prepared. I just feel like it's just a lot to know as far as the gardening aspect of it goes, you know, what does best here and, you know, sunlight and soil and, uh, so going into it, I don't feel like we were prepared. No, but I think we're gaining knowledge, you know, as we go through the programs and the trainings and what they are offering.

When met with challenges she utilized her resources, stayed motivated, and is looking forward to her participation in the following year, 2023. The ability for childcare directors to persevere and overcome will always astound and inspire me as I hope it does others. This chapter is to simply outline the role of a childcare director and that their involvement in outside programming is a gift to the families they serve. It is in no way obligatory. As we dive deeper into the intricacies of Farm to Early Care and Education programming, this is important to keep in mind.

Before ever deciding to enroll in a Farm to Early Care and Education program, directors are aware of what they will be able to serve in their centers. Not all childcare centers have the proper kitchen equipment to prepare fresh food and others do not have adequate green space to carry out gardening activities. Focusing on the kitchen equipment, North Carolina's Department of Health and Human Services is moderately clear about what is required of a center in order to prepare meals in house. Requirements include 'adequate' countertop space, refrigeration, and cooking equipment, which is quite vague; otherwise, the sanitation handbook is rather clear.

Each childcare center must have a two-compartment sink unless they do not have a dishwasher. In that case, a three-compartment sink would be required. There must be a separate sink altogether for handwashing. There absolutely must be a commercial hood installed if meat is ever cooked on the stove. These are just a few examples from a 34-page document. The directors I spoke to all understand the rules for operating a childcare facility and all have stayed within the boundaries set for them. Nevertheless, not having a kitchen or an adequate kitchen can prevent local produce from being used in meals throughout the day. The cost of renovation can sometimes be astronomical, and other times renovations simply aren't possible.

Only one director I spoke with had a full, operating kitchen. Two of the directors I spoke with would have to go through major renovations to make that happen and to standard. There are many points to consider when remodeling, whether on a home or a place of business. One of those considerations is cost. I spoke with Jenna Walker of Gramsy's Place about the barriers she experienced to feeding her students the way she would like, and this is what she had to say:

Um, some of it is cost because some of it is very expensive but at the same time it's worth it for the kids to have the nutrition's or nutritious foods, but that's basically the price and getting it and knowing who to go get it from and you know, that type of thing.

When a director's time is already pressed, it can be quite a daunting challenge trying to find reliable and affordable produce. Not only would she be looking for more than one farmer to supply her, because most do not grow every crop needed for a facility; but she would also have to establish pick-up times and bulk order purchasing, which may or may not be advantageous for the farmer. If all of this could be secured, then it comes to the actual preparation of meals. Jenna explained that Gramsy's Place has limited space for meal prep, and expansion would be required.

It would be nice to have another staff just to designate to do the food and have a kitchen to cook, but that's kinda gonna cost a lot to do because we'd have to knock out this closet, which I meant it, that wouldn't be a big deal but we'd have to make sure, you know, get the stove and all that stuff in there too, which would cost quite a bit.

Commercial kitchen equipment comes with a hefty price tag. Knocking down walls in order to build the kitchen may cause the center to close during remodel, which would inevitably cause them to lose profit. The entire project would take an immense amount of planning, energy, and money to carry out. The U.S Bureau of Labor Statistics reported in 2021 the median pay of preschool and childcare center directors is approximately \$47,310 per year (Bureau of Labor Statistics, 2022).

Sometimes the money just isn't there, and when money is there, there are big questions about what to do with it. Teachers need raises, children need books and toys replaced, and sometimes maintenance comes before adding any additional bells and whistles. Even if the center could afford to add a kitchen, they would then need to be able to hire kitchen staff, which is another long-term cost to consider before building. Katy Henson of PlayWorks echoes Jenna's sentiment regarding the upgrade of having a kitchen space.

Well, we've always been interested in cooking on site, but logistically we just can't make that work. As far as passing fire inspection, 'cause we're in the basement of a building, it was gonna require expensive, um, a vent and things like that for certain things we had on our menu. Not that's impossible, it's just a little bit of a hurdle. Um, and then it would, you know, be bringing on a full-time staff. We currently just have a part-time staff and just really, it's just logistics and that would be doubling our food purchasing or even more than doubling. We're still hoping to, in the future if we can, get through those hurdles. Sanitation is also another issue, pleasing them and cooking on site would be that much more that they have to assess, and we have to maintain.

Katy serves as much fresh and local produce as she can at PlayWorks through easily prepared snacks such as carrot sticks or apple slices. Both Katy and Jenna continue to stay positive and motivated even when a hurdle seems unsurmountable. Katy continues to have container gardens on the PlayWorks property and Jenna is waiting for the sowing season to get her playground plants growing.

Both of them know that providing local food on site is what is best and most nutritious for the children, but the funding for this or any other additional programming is not

readily available. Even when it is, it can be difficult to prioritize what the funds need to be spent on. PlayWorks did receive a stabilization grant, and here Katy explains her experience with the grant and how she has been able to utilize it.

So, it's federal funding that we were able to apply for. It's focused on, um, really, we can use it for anything, you know, basically to keep our doors open, any supplies, our food purchasing. Um, and also the biggie that some centers can't, could opt for and some chose not to, but was for staff salary increase, staff bonuses, and we opted to do both. So, we've been receiving funding for, um, just the center, you know, keeping it open basically. And then we did, we were able to give all of our teachers a raise, much needed raise, and then they're getting quarterly bonuses as well.

For Katy, it was better to use her funding to make sure her staff are better compensated and to ensure the PlayWorks doors stay open. The funding she refers to derives from the American Rescue Plan Act of 2021. Otherwise known as the ARP Act, Public Law 117-2 was signed into law in March 2021 and included an allocation of \$23.97 billion for states, territories, and Tribes to maintain their childcare facilities through stabilization grants. The act introduced by Representative John A. Yarmuth set out to provide “additional relief to address the continued impact of COVID-19 (i.e., coronavirus disease 2019) on the economy, public health, state and local governments, individuals, and businesses” (American Rescue Plan Act, H.R. 1319, 117th Congress, 2021). Subtitle C of the document specifically allocates funding for human services and community support. Figures 8 and 9 include an excerpt of its official summary of Subtitle C (American Rescue Plan Act of 2021, H.R.1319, 117th Congress, 2021).

Figure 8

H.R. 1319 American Rescue Plan Act of 2021, Subtitle C

Subtitle C--Human Services and Community Supports
Sec. 2201. Child Care and Development Block Grant Program.
Sec. 2202. Child Care Stabilization.
Sec. 2203. Head Start.
Sec. 2204. Programs for survivors.
Sec. 2205. Child abuse prevention and treatment.
Sec. 2206. Corporation for National and Community Service and the National Service Trust.

Figure 9

Summary: H.R. 1319 American Rescue Plan Act of 2021, Subtitle C

Subtitle C--Human Services and Community Supports
(Sec. 2201) This section provides additional funding for the Child Care and Development Block Grant program. States, territories, Indian tribes, and tribal organizations may use this funding to provide child care assistance to essential workers without regard to income eligibility requirements.
(Sec. 2202) This section provides funding for grants to lead child care agencies and providers for personnel costs, facility costs, the purchase of personal protective equipment, and other costs associated with responding to the COVID-19 public health emergency.
(Sec. 2203) This section provides additional funding through FY2022 to Head Start agencies based on their enrollment.
(Sec. 2204) This section provides additional FY2021 funding for programs supporting adult and youth victims of family violence, domestic violence, or dating violence, including grants for community-based services.
(Sec. 2205) This section provides additional FY2021 funding for child abuse or neglect prevention and treatment programs, including grants to states for community-based prevention services.
(Sec. 2206) This section provides additional FY2021 funding for the Corporation for National and Community Service to operate and support national service programs. The corporation must prioritize entities disproportionately impacted by COVID-19 and take into account the diversity of the communities and participants served by such entities.

As shown in the above figures, this section of the act specifically outlines a grant assistance program for childcare centers in order for them to continue providing their services. The grants for the centers are administered by the states, territories, and Tribes rather than the federal government. In North Carolina, the North Carolina Department of Health and Human Services Division of Child Development and Early Education became the administrators of said grant funding. It is known statewide as the North Carolina Child Care

Stabilization Grant. Wilkes County received \$870,197,593 dollars in child care center stabilization grant payments (NCDHHS, n.d.).

Applications for this funding are available for licensed childcare programs; however, they must meet the eligibility standard. One, the center must have held their license prior to the signing of the American Rescue Plan Act of 2021 which was signed into law in March of that year. Two, the center must hold a current license and be eligible for the Subsidized Child Care Assistance Program. The eligibility issue seems to be easily overcome, but the process to apply is arduous and extensive reports are due quarterly. There is also a spend-by date associated with each grant (NCDHHS, n.d.).

If a center received the grant between the first and sixth quarters, which PlayWorks did, their spend-by date is September 30, 2023, only a few short months away as of this writing. For any center awarded between the seventh and ninth quarter, spend-by date is September 30, 2024. The required quarterly updates ensure the spend-by date is met and no funds from the grant are left over. Katy comments on the upcoming September 30th cut-off (NCDHHS, 2022):

With our stabilization money ending, you know, we don't have, we're not gonna have those excess funds, wiggle room, to pay our staff more or our kitchen staff more.

Regardless of how supportive these types of grants can be for childcare centers; the funding eventually ends, and centers have to decide how to phase out of having that capital available. This can be a difficult task, especially when one has been operating with a steady subsidy for more than a year. Some centers may have chosen not to opt for the grant that

would have allowed them to give their teachers wages out of fear they could not sustain those wages after the grant ended. Some centers may have chosen to focus on one big project, such as a full kitchen renovation, in lieu of updating classroom items or replacing old doors.

Decisions and reasoning aside, the Child Care Stabilization Grant has been useful in keeping childcare centers open during the coronavirus pandemic. Its ending will be difficult for those who received the grant, however. Many of the childcare directors I spoke to were concerned with keeping their operating costs low, even with outside funding. Even with the funding still available, Katy discusses how cost is a major factor in how they currently source meals for the center.

Right now, it's, our caterer charges \$3.00 per child, per meal, or per lunch. So, um, we feel like, we feel like we could, you know, offset that a little bit and prepare them here a little bit cheaper. But, you know, to provide those fresh fruits and vegetables each meal, we feel it could be more expensive. Um, so we're trying to weigh, we, we know that's what we wanna do and we know that's what's best for, you know, the children is just working through all those obstacles and logistics of funding and staffing.

Cost can put a stop to the best of intentions. When considering Farm to Early Care and Education programming, there needs to be consciousness about the costs associated. It should be more advantageous for centers in the community to purchase from local farms, but often childcare facilities are underfunded and it simply cannot be an option for them. This barrier may be the most difficult to overcome.

Another ever-present hurdle exists, and that is regulations. The North Carolina government has regulations in place for the running of childcare services. These regulations keep the children safe. The regulations cover fire safety, sanitation, and more. Becoming familiar with the documents that outline these regulations can be an onerous task, however. Childcare directors hold positions that are already very time-intensive. Sometimes they are in the infant rooms giving a teacher a break, other times their giving a tour for an interested family, or they are in the kitchen doing the cooking for their center. Rarely would it seem they have time to find and pour over regulatory documents, especially when the documents can appear unintelligible. I spoke with the directors to try to see how they managed to stay within the confines of these governing bodies. When asked what regulatory agencies they encounter, Katy responded:

Well, we are, you know, licensed through the state of North Carolina. So, we have, um, ongoing visits from our licensing consultant, which typically only is twice a year. Um, but you know, they can stop in whenever they please. Um, and then sanitation is also, uh, twice a year or more if needed. Um, they can also come, you know, whenever, whenever they please. So those are the two, you know, main and then we're not really, um, overseen by them, but the partnership is very active, you know, too in assisting and, um, monitoring, you now, quality as far as the classrooms go.

Both Jenna and Tracy responded similarly to Katy when asked the same question. Jenna added only that the food program also checks in approximately every four months. Tracy was a bit more specific. She mentioned visits from the North Carolina Department of

Health and Human Services. They preside over many statewide matters, including childcare.

Tracy described her experience:

So, the primary regulatory facility for licensed childcare is the Department of Health and Human Services. We met with them usually twice a year, reached out as we needed, but they came in and did our licensing. Other things were, um, fire department would come in and do inspections. Um, health and sanitation would come in. We at least yearly, sometimes twice a year and do inspections. Um, and then we also had a, for us, we had a governing board that also came in, periodically toured the facility and made recommendations as well.

It was clear there were many standards to be upheld, and rightfully so. I asked all three if they felt they had a good grasp on the material outlining the agencies' expectations. Every center was certainly to code, but I wanted to know how much added stress there was surrounding meeting these standards.

I feel like, you know, we have the rule book. We know what's expected. Um, for the most part, you know, they don't catch us off guard or blindsides us with anything. Every now and then sanitation will, you know, maybe something that's been the same for, you know, the last three visits they'll mention or are status for, you know, that time. So it just, it varies really. But overall, you know, they are transparent and, you know, we know what to expect when they're here.

Jenna mentioned sanitation as well during our discussion. Sanitation inspections, for reference, are carried out by the local health department. In these cases, it would be carried out by the Wilkes County Health Department. As Katy mentioned, the sanitation department may not find anything noteworthy under certain circumstances and later on make a citation. Jenna echoed Katy's sentiment.

We've had trouble with sanitation but that's a different story for a different day. But um, they were just training somebody and they put all the daycares in Wilkes through the slammer, but we've got back to normal so.

Jenna and Katy mainly discussed local agencies in their answers of the question, but Tracy had a different experience. I inquired whether the regulatory agencies she encountered were transparent in their expectations. She did feel they were locally, but at the state level it was a different story. She reminds us of the difference in caseload for local versus state inspectors.

I felt that the local agencies were [transparent], so anything that we were working with locally, within Wilkes County was, but the state agency was a little more detached. They, um, because they were not there often enough and because they are trying to make things systematic for the entire state it's hard to be, it's hard when you're dealing with rural, suburban and then, you know, large city communities like Raleigh and Charlotte, they're bigger, their needs are very different. And, uh, Wilkes County is a small community, so not as much need there and not as much, um, so they just didn't spend as much time. But I think that's something that could have, could have been improved.

Appendix C NC Rules Governing the Sanitation of Child Care Centers is the document containing sanitation requirements for childcare facilities in North Carolina, last revised in August 2007. The 25-page document was released by the North Carolina Department of Environment and Natural Resources, Division of Child Development; first in 1991 and again in 2007. The department is located in Raleigh, North Carolina, and provides the standards for the state. While the document is incredibly important, it is barely legible. There are spaces between letters and words where there should not be, making the document difficult to read. Figure 10 and 11 provide two excerpts for clarity (North Carolina Department of Environment & Natural Resources, 2007).

Figure 9

Appendix C NC Rules Governing the Sanitation of Child Care Centers (pp.11-12)

(d) Fo od s hall be st ored a bove t he fl oor i n a manner t hat prot ects the fo od fr om spl ash an d other contamination and that permits easy cleaning of the storage area.

Figure 10

Appendix C NC Rules Governing the Sanitation of Child Care Centers (pp. 13 - 14)

(f) Ch ildren attending ch ild care cen ters sh all n ot b e in th e k itchen ex cept wh en p articipating in a supervised activity.

Not only is the formatting of the document problematic, but it also uses vague language that could be interpreted several different ways. An example of this can be found in subsection 15A NCAC 18A.2810 Specifications for Kitchens, Food Preparation Areas, and Food Service Areas. This example is the very first sentence:

Each child care center shall have at least a two-compartment sink, drainboards or countertop space of adequate size, adequate refrigeration equipment and, when needed, adequate cooking equipment, except for child care centers located in a school that receives all food supplies prepared and ready to serve

from a service establishment permitted by a local health department, which is located at the same school campus and provides food during all hours of child care operation (NC Dept. of Environment & Natural Resources, 2007).

The use of the word “adequate” is vague. Adequate size may mean something completely different to the director preparing the meals and the regulatory body. This kind of language should be clarified within in the document, but does not seem to be. If the reader is looking for specifics on the matter, the document suggests checking with other regulatory bodies. The same sub-section it states,

A commercial hood shall be installed when frying is used for food preparation on site. The hood shall be installed in accordance with the North Carolina Building Code and approved by the local building code enforcement agency (NC Dept. of Environment & Natural Resources, 2007).

The North Carolina Building Code provides clarification on how range hoods should be installed in chapter 15 of the document. This is the state code, however. If a director is interested in installing a vented hood, they would also have to check with the regulatory code of their town or county. This can be difficult when a center is located in a place like Wilkesboro, North Carolina, where there are two separate regulatory bodies — the North Wilkesboro planning department and the town of Wilkesboro planning department. The two have different regulatory documents and ways of doing things.

This can be challenging because friends and family may have knowledge of the regulatory documents of North Wilkesboro and make recommendations to someone operating under the Town of Wilkesboro regulatory bodies and vice versa. For example, one

director working to build a commercial kitchen to be able to better serve her students was receiving advice from a friend who worked for the county. No one was sure if he was familiar with the North Wilkesboro regulations. There was a chance that after all of that work, it might not meet the standards.

With the population of the county at approximately 65,000 as of 2021, this story may seem anecdotal; however, both North Wilkesboro and the Town of Wilkesboro have a smaller number of people living within or near the town centers. There is a small-town feel to the area. There may not be much difference between the residents of each town, but one of the big differences between North Wilkesboro and Wilkesboro is the information provided on their town websites.

Childcare facilities, which include public and non-public schools, must have a fire inspector come by twice in a year (North Carolina General Assembly, 2020). The website for the town of Wilkesboro provides a plethora of more information. It notes that all their inspectors are certified through North Carolina Department of Insurance and the North Carolina Code Officials Qualification Board. The schedule for fire inspections is provided, with the reminder that if the Fire Inspector sees fit, they may perform inspections more frequently. Below the schedule is a fire pre-inspection checklist that can be easily downloaded. Other forms such as exhaust hood permit applications, event tent permit applications, and more are available for downloading (Town of Wilkesboro, 2023).

The North Wilkesboro town site is a stark contrast. The Fire Department page includes a small section titled, “Inspections,” followed by two sentences: “The NWFD performs regular fire inspections for new businesses in town limits. Please contact them at the number listed, to schedule an inspection” (North Wilkesboro, n.d.). The number is

located at the bottom of the page. Without calling the listed number of the Interim Fire Chief, there is no real way to prepare for fire inspections or to ensure a new kitchen is built to code. In summary, tracking down, reading, and understanding the regulations of a town, county, or state can be onerous. It is especially onerous for those with careers, families, and other obligations. There is no central resource for childcare directors.

Joel Salatin, owner and operator of Polyface Farms, described the protocols he had to become familiar with as a farmer in his 2012 book *Folks, This Ain't Normal*. He relates his attempt to understand what is required for the food he grows to be delivered on a Sysco truck. He writes:

With the \$3 million liability umbrella under our belt, I called my Sysco lady back to get signed up and rolling. I was excited. She answered the phone and then hesitated: “Things have changed since March 2010. Sysco has put in some protocols.” My heart sank. I’d been working for two years to punch through this insurance thing, and now I was literally a couple of months behind a new protocol. I asked her to go ahead and send me the requirements and we’d talk later. I printed off the protocol: seventeen pages. I stared at the stack of papers. Outside, cows needed to be moved and chickens watered. I had post-it notes hanging all over the computer from serious institutional wanna-buys. I’d spent two years trying to punch through the insurance problem; now this. I wanted to cry (Salatin, 2011, p. 281).

Just as childcare directors are expected to know and be ahead of state agencies, farmers have to spend time learning and reviewing similar documents to be able to continue running their businesses. Both careers are incredibly time-demanding and require high

amounts of energy. The protocols to be able to deliver through Sysco read as well as Appendix C of the guide to the sanitation of childcare facilities. Both are incredibly dense, long documents that are not always clear. As Joel Salatin noted after printing the seventeen-page Sysco protocol, “it would take a day just to find out what all the abbreviations mean” (Salatin, 2012).

Directors are familiar with what they need to stay in line with their current facilities. Building a new kitchen, however, would require pouring over the documents to ensure no money was spent on something that could not be used. This goes for almost anything a center may need to add; it has to be in line with protocol. This is not to say that corners should be cut, but rather that there should be consideration for the added time and cost of any remodel. The decision to add a kitchen to a center is an enormous task. Regulatory requirements are certainly necessary, but they can act as barriers to progress when they are not easily accessible or unambiguous.

Another hurdle for directors and parents alike is time. Childcare providers always hope that parents will participate in any projects or programs that the children are engaged with during the day. Sometimes, for whatever reason, parents do not continue their children’s curriculum at home. Perhaps some simply cannot afford to integrate their children’s curriculum, or they may lack the time or energy. Census data revealed that in 2021, 32 percent of Wilkes County children were living in poverty. As for the parents, there are more people living in Wilkes County with a high school diploma than a bachelor’s degree. The percentage of those with a bachelor’s degree or higher is 19.5 percent, just three-fifths of the rate of the state or the country (U.S. Census Bureau, 2021).

Parents in Wilkes County also tend to be younger, with 32 percent of women who gave birth in 2020 being 20 to 24 years old, and 40 percent of women who gave birth aged 25 to 29. The fertility rate is nearly double that of the state and the county. The divorce rate is 17 percent for men and 12 percent for women. There are many confounding barriers to the level of participation a parent can provide (U.S. Census Bureau, 2021).

Dr. Priya Fielding-Singh (2021) describes the struggle of what to put on the plate for impoverished families in her book *How the Other Half Eats*. The book follows four families from different socio-economic and cultural backgrounds. Her work details the resources that are necessary, and sometimes finite, when cooking for a family and how inequality is interwoven in our food system. When spending time with one of the four families, she recalls that while Renata lives seemingly comfortably, she had constraints when it came to feeding her family.

One Tuesday evening, I spotted two Papa John's pizza boxes and some Panda Express containers peeking out of the recycling bin. Renata, I knew, was one of the modern mothers whom the food industry had in mind when it came up with processed products — the supposed “solutions” to moms’ desire to feed their kids nutritiously, quickly, and without complaints. But these solutions generally only left Renata feeling guilty about the shortcuts she’d had to take to get there (Fielding-Singh, 2021, pp. 153).

This quote illustrates that, while the vast majority of people want to feed their children in a healthy way, their options are sometimes limited by circumstance or situation. Compromises are made, and children are fed in the best way that their parents can provide. The purpose of the Farm to Early Care and Education program was, in part, to make

purchasing decisions easier for parents. In Wilkes County, parents could place an order online for either a small, medium, or large produce box. These boxes were titled Fresh Boxes and packed with fresh produce from nearby farms with the help of Wilkes Fresh.

Once the boxes were packaged at Wilkes Fresh, they were delivered to the care centers where the families who ordered had children enrolled. At the end of the day, when parents came to get their children, they would be able to pick up their Fresh Box. The idea was that by making these boxes relatively cheap to order, more families would be able to incorporate farm fresh produce into their meals. The small boxes sold for \$10, the medium for \$15, and the large for \$20.

In the beginning and throughout the summer, the Fresh Boxes were mainly promoted through posters hung in the centers, and then by a raffle as well. While all members of the team went into the project with high hopes, there was less participation by the parents than originally expected. I asked Jenna, director of Gramsy's Place, at the end of the program what level of participation she had expected when we started the project. She replied:

I expected a little more. We didn't have a real food turnout on that, but I'm hoping that it gets better as time goes on.

The children were still exposed to fresh produce and gardening at the center, but not many families decided to order produce boxes. Three out of the five participating centers had families place orders, but two centers did not have any families interested. The director of PlayWorks, Katy, shared similar feelings.

Unfortunately, we did, when we tried to do the weekly produce boxes, we did not get much activity at all. I think we had one or two, maybe three at the

most, you know, the whole summer. So, you know, it's kind of defeating there. Um, when we, you know, share the information each week, we let them know what's available, we take the hard work. I mean, they could pick it up from here, you know. Um, so that was, you know, disappointing.

Katy may have been disappointed by the turnout, although it is worth noting that PlayWorks had the second highest volume of orders out of all five centers, second only to Sonshine Childcare. Parent participation can be hard to come by, and the director of Sonshine, Tracy, was initially concerned about the level of involvement of the families she served. She was elated when the parents began partaking in the children's programming, some choosing to order Fresh Boxes as well. Here Tracy outlines the expectations she had for the families she served, and how they exceeded those expectations.

Um, we, that was one thing that we were a little concerned because everyone is so busy, but we were really pleased with the fact that our parents pitched in. If we'd had workdays, we had a number of parents show up, we'd have parents that would stay in the afternoon, help us weed our garden, help the students water. Um, and then we also had parents that were really excited to try some of the recipes that we sent home. So, if we were doing a unit of squash and we sent recipes home, we would get lots of feedback and sometimes pictures of the students where they were cooking those things at home and enjoying them at home as well. So our parents really did, um, they really did pick up on it and I think it was really a big selling point for our program.

Tracy did her best to involve everyone in the Farm to Early Care and Education program as much as she could. She understood early on it was going to be a team effort and they would need all the help they could get. By reaching out to her community and to other childcare directors, she was able to build a strong support network. Tracy described this network:

We really, we were very blessed to have the support from the community, from the Wilkes Partnership for Children, um, the, uh, extension office and like I said, the parents, the teachers and staff, um, as well as our governing board and, um, local churches.

Sonshine Childcare was not only supported by her community, but by the actual space in which Sonshine Childcare resided. Childcare facilities do not always have access to gardening space, and there are others that do not have access to a kitchen space. Sonshine had access to both. That did not go unnoticed or unutilized by Tracy.

I think as far as our staff and our kitchen setup, we were great. We had plenty of storage, we had a large refrigeration space. Um, the fact that we could grow stuff meant that it could stay on the vine, the bush, until we needed it. So we were very careful to, um, ro- plant our crops so that we had, um, things ripening at different times. So, we didn't plant everything at all the exact same time. We would stagger our, our plantings. So that kind of helped a little bit too. Um, but parents were great. They would help us provide stuff too. But as far as kitchen and our staff, that was not, that was not a drawback for us actually. I think it probably made it easier for us to pursue farm sale because we were doing all of our meals on site.

Tracy Lowder is an avid gardener with a green thumb, and she very much incorporated that into her childcare center before my involvement with Farm to Early Care and Education. Tracy for many years had been involving the families she served in gardening at the center. It is, and was, a passion for her. When I spoke with her about her main motivation for joining the Farm to Early Care and Education program, she made this clear.

So, I've been researching some farm to table options for the center before we ever opened because, um, home gardening is a big, it's a big thing for me, and I've taught that to my daughter and my stepchildren. So, it was really important to me to have this. Plus, it's very well known that children who grow their own foods tend to eat better, and they'll try more foods. So that was a big thing for me. So, um, I did do some research. I reached out to the state, reached out to the agricultural department as well as the Partnership for Children, and found out that there was a program when we started looking at different food options that we could join and become a part of. We did those training classes and really got the staff involved as well as the parents involved to our farm to table program.

Parent participation may be something that is amassed by consistent exposure to the programming over time. It is difficult to gather participation over one season, and what this tells me is sometimes having active parent participation develops over time. We learn too that with programming such Farm to Early Care or Farm to School, parent participation can make an incredible difference in the outcome. There is a dance of mutual support that is essential between families and their childcare providers.

Parental support can feel essential, and while to some degree it is, all three directors had different levels of support from the families enrolled in their centers. They all agreed that they were able to carry out this programming to the best of their ability. PlayWorks and Gramsy's Place will continue to be centers associated with and carrying out Farm to Early Care and Education programming. I believe with their continued involvement in the program, the support from the families they serve will strengthen over time.

Chapter 4: Conclusions and Suggestions

This thesis documents the current state of early care in the state of North Carolina and the United States. Childcare centers are operating with tight budgets, limited space, and tight confines on what they can and cannot do. In this conclusion, each assertion will be touched on and will include suggestions on how the barriers can be overcome. The table in Figure 12 provides a summary of proposed solutions to correct the identified barriers.

Figure 11

Table displaying barriers and their proposed solutions

Barrier	Proposed Solutions
Lack of staff	Additional funding
Variety of tasks	High County food hub, increased communication with regulatory bodies
Fresh produce	High County food hub, alternative gardening, additional funding
Lack of knowledge	Alternative gardening
Kitchen equipment	Alternative gardening, increased communication with regulatory bodies, additional funding
Funding	Alternative gardening, additional funding
Regulations	Increased communication with regulatory bodies
Time	High Country food hub

Centers often have to make advantageous purchasing decisions. Local groceries, such as Walmart, are utilized in effort to save time and to feed the most children for the lowest cost. This is exemplified by directors often leaning on Walmart delivery or another local grocery to provide their meals. With Walmart available in nearly every town in the United States, they are not difficult to find, and with their wide array of products they are a one-stop shop.

This is important when considering that part of the Farm to Early Care and Education program would entail putting directors in contact with local farmers to source ingredients for

their centers. Once the two are in contact, there would be meetings about how much the center wanted to purchase and how often. Farmers usually prefer to sell in bulk for their profit margins, and that could be problematic for a center, considering the produce has to be consumed relatively quickly.

Method of retrieval is another difficulty. Walmart offers delivery, but not all farmers do. Driving to a farm would necessitate time and gasoline. A farm situated even 30 minutes from a center would require more than an hour-long round trip. Because many directors act as substitute teachers, they may not be able to carve an hour out of their days. The smart decision, the easy decision, is for the director to continue ordering from a local grocery that provides delivery and/or online ordering services.

High County Food Hub

Currently, the offer of buying directly from farmers in Wilkes County is not standing up to the commercial giants. The question, then, is how methods of local food procurement can compete. For Wilkes County, the answer may be up the road in neighboring Watauga County. The High Country Food Hub operating in Watauga County serves Watauga, Caldwell, Ashe, Allegheny, Surry, Yadkin, Avery, Mitchell, Madison, Buncombe, and Wilkes counties. Its goal is simply to make purchasing locally easier for residents of the counties they serve. The idea of traveling to another county for food purchasing can seem daunting, especially because most produce needs to be transported in some type of cold storage. High Country Food Hub seems to understand this issue and therefore developed an online marketplace for direct sales (<https://www.ncfoodhubs.org/meet-the-nc-hubs/high-country-food-hub>).

This marketplace boasts upward of 3,000 products from more than 90 local businesses and farms. If an order is placed through the online marketplace, the organization will collect and disperse orders once a week at five different pick-up locations. Driving would still be required, but everything a center needed could be ordered. There would no need to travel to several different farms for different products.

Once the online order is placed, between Thursday and Monday, it can be retrieved in Deep Gap, the pick-up location closest to Wilkes County. There is a small five-dollar fee for not picking up in Boone, but there are usually some delivery charges associated with any business. Pickup takes place at Bald Guy Brew Coffee Roasting Company on Wednesdays between 3:30 and 5:30 PM. This pick-up time would be toward the end of the day for childcare centers. The map in Figure 13 displays the pick-up location in relation to the care centers.

Figure 12

Food Hub Pickup for Childcare Centers located in Wilkes County, NC 2023



Toward the end of the day, as children are being picked up, small groups are moved into other classrooms. This reduces the demand for teachers and may provide enough of a lull for a director to make the approximate 25-minute drive to Deep Gap. In the summer when interns are available for the Farm to Early Care and Education program, they could retrieve and deliver orders to the childcare facilities. With the program considering a switch to the High County Food Hub for the summer of 2023, it is my suggestion that they move on this opportunity. The High County Food Hub seems the most sustainable and comparable method of food procurement available.

It may not be possible to cook all meals on site, but those centers that do not have access to a commercial kitchen could still source their snack items. A center does not need access to a refrigerator to serve certain fruits and vegetables. Tomatoes, apples, peaches, and bananas can all be stored at room temperature before serving. For centers with commercial kitchens, ordering from High Country Food Hub could revolutionize the meals they serve. Centers located outside of Wilkes County could also benefit from a regional food hub in the same manner. There are several across the state of North Carolina. Some states do not have central food hubs. In light of this there should be a push nationwide for food hubs, not only to benefit childcare providers but to benefit all people.

An additional dilemma childcare directors must contend with when implementing Farm to Early Care programming is space and family participation. The center's topography can be incredibly limiting on the production of fruits and vegetables. There may be a gradient slope to the playground, or perhaps there is only so much outdoor space for the children to enjoy. Gardening can be challenging enough before these factors, and they only further complicate the situation. The land itself can be a formidable opponent; however, a few directors I had the pleasure of meeting had some creative solutions to their space problem.

Alternative Gardening

I met with one director who had chosen to repurpose old purses. She had decoratively hung them along the playground fence. After filling them with soil and sowing seeds, the children were able to watch these purses fill with herbs and flowers. The director explained to me that because the purses are made of fabric, they drain well. They acted as hanging pots. Some purses were donated, others purchased for an affordable price from a resale store. This was but one inexpensive and ingenious solution to limited space.

Taking inspiration from the aforementioned solution, this is something that could absolutely involve the children at the center. Another way to replicate the purse-gate would be a suggested activity for teachers to carry out with their classes. One would only need the following items: plastic cups, soil, seeds, and zip-ties. These items are low cost, but could also potentially be donated by the families. The teacher would create small drainage holes in the bottom of the plastic cups. They would then create two holes, close together, on one side of the cup. After the children filled the cups with their soil and seeds, the teacher could then zip-tie the cups onto the playground gate. Using certain plants that live well in small containers, such as mint, the children could witness their own plants growing.

Another suggestion, if one is keen on avoiding plastics, is versatile producing plants that can be grown along and up a fence line. Some of these climbers include cucumbers, beans, peas, and berries. When visiting one of the centers I served while an intern, I was met with several little smiling faces wanting to show me the cucumbers they had been growing. The cucumbers were in a one square foot raised bed, next to another bed housing a well-developed pumpkin. Cucumbers are great for growing on a playground, considering they grow relatively fast, do not need much attention, and thrive in a plethora of different soils. They are creepers as well, so even though they did well in that raised bed, they could do just as well as growing along a fence-line.

Gates can be carefully used as trestles, and plants could live on either side of the fence, when possible. If this is not an appealing solution, I return to the first. I have to highly recommend the repurposing of purses. Asking for donations to be made for these types of activities also engages the parents. This research suggests parent participation needs to be encouraged, and this is a great way to do it. This is something that can involve the teachers,

the children, and their parents. The purse-gate is one of the most incredible and empowering acts of reuse that I have seen. It not only teaches the children about gardening, but about the life cycle of our household products and how we can breathe new life into old items.

Increased Communication with Regulatory Bodies

The directors I spoke with essentially understand what their regulatory agencies expect, but even so, the governing document has not been updated since 2007, making it 16 years since it was revised. At minimum, the document should be reformatted to read legibly without gaps existing within words and letters.

Ease of access is important here. While there is a rule book for compliance and someone to assist in making sure the rules are met, consultations should be available for childcare centers that wish to expand their playgrounds or kitchens. My suggestion is for the North Carolina Department of Health and Human Services to make appointments available for childcare directors interested in making changes to their centers. Local regulatory agencies should follow suit. There needs to be a clear and open dialogue between regulatory bodies and those they oversee.

This dialogue could prevent centers from falling out of code because of a change they may have made without all the necessary information. It would make the information easily available and provide centers with an idea of where to start, instead of doing the research themselves on the back end. It is my belief that by offering consultation for those looking to make changes to their centers, improvement of childcare facilities would become far more streamlined and less time consuming. A significant number of factors demand a childcare director's energy, and increased communication with regulators could help ease the burden.

Additional Funding

There will always be a need for childcare facilities, and it is paramount that as a state we protect our childcare centers from closing their doors whenever possible. Funding is one way to accomplish that and allow childcare centers to be more involved in Farm to Early Care and Education programs. There is an opportunity for the state to assist in governmental funding for childcare centers looking to expand or upgrade as well. The stabilization grant is ending soon and will cause disruptions for many childcare providers.

The costs associated with a commercial kitchen and remodel are high, so much so that for many childcare centers, having an operating kitchen feels like an unattainable dream. State assistance in off-setting the cost for to-code renovations of childcare centers could have remarkable benefits for the centers and for North Carolina residents.

As discussed earlier, Governor Roy Cooper proclaimed October Farm to School and Early Care Education Month in 2021, now two years ago now. The government of North Carolina has recognized the importance of this programming. The state should also address the funding need of childcare centers to have functional kitchen spaces and adequate playground space that allows for gardening. In addition, funding should consider the need to retain staff in these centers, possibly offsetting the pay of teachers, particularly in underserved areas. Childcare directors have support from their communities, their staff, the Partnership for Children, and the agriculture extension office. They need tangible support from their state (Gov. Roy Cooper, Proclamation, 2021).

With these recommendations, some for childcare directors, some for their governing bodies, progress can be made. It is imperative that this matter be considered one of great

ethical value. Providing resources to those who aid in rearing our children and allowing our children direct, equitable access to our food system instills a sense of dignity for each party involved. This is feel-good at minimum for people at the highest level and life-changing for the children and North Carolina families that these recommendations would benefit.

The goal of this thesis was to discover barriers to Farm to Early Care and Education programming. Through my experience with the program and interviews with directors, I identified three hurdles for participating centers to overcome, and I have provided several suggestions on lowering these hurdles. While this research build on the existing literature related to Farm to Early Care programming, there is a need for further research. As the literature, and recognition of this kind of programming, continues to grow, it will be important to synthesize the research and find collaborative solutions to address some of the more innocuous barriers that childcare providers may encounter.

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Vita

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