AN ASSESSMENT OF IMPROVEMENT CHALLENGES & LESSONS LEARNED FROM FEEDING STUDENTS OF A LARGE URBAN SCHOOL DISTRICT DURING THE COVID-19 PANDEMIC

Jamar King

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AN ASSESSMENT OF IMPROVEMENT CHALLENGES & LESSONS LEARNED FROM
FEEDING STUDENTS OF A LARGE URBAN SCHOOL DISTRICT DURING
THE COVID-19 PANDEMIC

A Dissertation
Submitted to the School of Education

Duquesne University

In partial fulfillment of the requirements for
the degree of Doctor of Education

By
Jamar King

December 2022
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Jamar King

2022
AN ASSESSMENT OF IMPROVEMENT CHALLENGES & LESSONS LEARNED
FROM FEEDING STUDENTS OF A LARGE URBAN SCHOOL DISTRICT DURING
THE COVID-19 PANDEMIC

By

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Approved October 21, 2022

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ABSTRACT

AN ASSESSMENT OF IMPROVEMENT CHALLENGES & LESSONS LEARNED FROM FEEDING STUDENTS OF A LARGE URBAN CITY SCHOOL DISTRICT DURING THE COVID-19 PANDEMIC

By

Jamar King

December 2022

Dissertation supervised by Dr. Rick McCown

This qualitative dissertation study took place in the midst of the COVID-19 pandemic. The purpose of this study was to examine the work of school food service professionals as this has implications for all school food service staff. Specifically, this study focused on the role of the cafeteria managers, through their practices, beliefs, the support needed, and challenges they faced during a complicated reality of meeting student needs, and to contribute to the improvement practices in school food service for future emergencies. The research questions, methods, and data analysis are framed using the first three principles of Improvement Science described by Bryk et al. (2015). This study utilized a qualitative method approach using semi-structured interviews to understand the challenges presented and the lessons learned in how the school food service professionals at this research site are ensuring that students have continuous access to healthy nutritious meals during the COVID-19 pandemic.
The data analysis revealed emergent themes for both the challenges faced and the lessons learned by school cafeteria managers. Using thematic analysis to analyze the interview transcripts, the researcher was able to examine the participants’ lived experiences on serving students during the COVID-19 pandemic. The study found the following five themes from the challenges faced; (1) Location, (2) Supply Chain Issues, (3) Safety & Security, (4) Staffing, and (5) Negative Perception and the following three themes from the lessons learned; (1) Flexible Access, (2) Strong Support Systems with Community Partnerships, and (3) Rethinking the Operating Model. The importance of the findings can help address issues when implementing emergency feeding systems, and also provide support for future plans to those who work in school food service.
DEDICATION

This dissertation is dedicated to the devoted food service staff at the King City School District who showed up to work every day to provide nutritious school meals to ensure students had continuous access during the COVID-19 pandemic.
I would like to thank God first and foremost, for blessing me with this opportunity to be able to pursue a doctoral degree and giving me the faith and belief in myself to complete it. In addition, I want to thank my family and friends for their continued support over the years.

I want to acknowledge and thank my chair, Dr. Rick McCown, for your belief in me, knowledge provided, and time spent. Without your guidance this dissertation would not have been possible. I want to thank my committee members, Dr. Liliana Castrellón, for your invaluable patience and feedback, and Dr. Deborah Scigliano, for your recommendation of the EdD program and expertise.

A special thank you to my mentor throughout the EdD program, Ms. Curtistine Walker. Your encouragement, flexibility, and support has been greatly appreciated. In addition, I want to thank my coworkers for their support over the years.

To my cohort, each and every one of you have made a difference in my life. I could not have undertaken this journey without each of you. I am blessed and grateful for the opportunity to have been able to learn and grow with you.

Finally, I would like to express my deepest appreciation to my participants and to the entire food service staff at the King City School District. This dissertation was about you and for you. I am honored to work with such a passionate group of individuals.
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LIST OF ABBREVIATIONS

King City School District (KCSD) - Pseudonym for research site
Community Eligibility Provision (CEP)
Community Learning Exchange (CLE)
Continuing Education Units (CEU’s)
Food and Nutrition Service (FNS)
Food Research & Action Center (FRAC)
Healthy Hunger Free Kids Act (HHFKA)
National School Lunch Program (NSLP)
School Food Authority (SFA)
School Nutrition Association (SNA)
United States Department of Agriculture (USDA)
Chapter 1 Introduction

The COVID-19 pandemic has brought about profound changes and challenges that have affected the education system. Students went from shaking hands to wearing masks and social distancing, from in-person learning to virtual instruction, and socialization and personal interaction to lockdowns and quarantines. However, one thing that has not changed is the importance of school meals and how students are still reliant on them. Nevertheless, the modality used to serve food quickly shifted due to the pandemic. As a response to school closures brought on by the COVID-19 pandemic, school food service operations have transformed into emergency community feeding systems (Schwabish et al., 2021) without any guidelines.

Normal emergency school closings are usually a result of a power outage, water shutoff, or snow day due to inclement weather. These types of emergency closings usually last for a day or two. When schools are closed this means no school meals are available. Eating at school provides a consistent routine and reliable source of at least two meals that students would receive each day during the school week. In March of 2020, the COVID-19 pandemic caused schools to shut down for an undetermined amount of time. Research shows that students who regularly participate in the National School Lunch Program (NSLP) have significantly lower rates of food insecurity and improved academic performance (Ralston et al., 2017). This is important as the school district this research is conducted at offers free meals to all students regardless of income. Closed schools mean students do not have access to routinely healthy nutritious meals. Given the undetermined amount of time schools may be closed, it can cause a subsequent surge in food insecurity, especially for those students who rely on school meals.

To ensure food security and access to healthy nutritious meals for students while schools are closed, it is important to recognize the dedicated personnel who are willing to risk their own
lives to work in schools, like many other public spaces, that have been determined as unsafe.

School cafeteria managers and workers are continuously overcoming the challenges of feeding students, with little to no guidance and minimum resources. Park et al. (2021) detail some of the experiences of working in food service during the COVID-19 pandemic:

The need to protect and support food system workers is paramount, given that these groups are unexpectedly, and in many cases, unpreparedly, being pushed to the front-line of this pandemic. Food system workers did not knowingly “sign up” to be serving on the front-line of a pandemic and are often not prepared with adequate knowledge and safety measures to ensure their health and wellbeing and are not compensated accordingly (p. 1).

Despite the critical role that school food service departments play in their communities for ensuring access to school meals, little research is known about how to implement emergency feeding systems and how to respond to the challenges of serving students during emergencies. The cafeteria managers have first-hand experience with the implications of the effects that school closures have on nutrition and the challenges to feed students during the COVID-19 pandemic. So, it is essential to hear their stories and gain a deep understanding of this issue.

The King City School District (KCSD) is the research site in this study. The surface challenges of how to operate based on the different phases of how instruction for students is being provided are described. KCSD created emergency meal service provisions by utilizing 27 of its school cafeterias to provide students with access to meals using Grab & Go distribution from March 2020 to February 2021. In February 2021, KCSD operated on a hybrid model using AA & BB cohorts for student in-person and remote instruction. During this time, the school food
service professionals faced another challenge of having to feed students in school on their respected cohort days and provide access to meals for students who were at home learning remotely. In September 2021, and up until the time of this writing June 2022, KCSD schools reopened for in-person instruction. The school food service professionals are now juggling the challenges of feeding students in-person and providing meals for students who opted to stay remote or for those who must quarantine when they contract the virus. In addition, they must also now report to a different school location to provide meals for students when their normal work location/school has to close temporarily until it is sanitized in the event an outbreak occurs.

The focus of this research was to examine the changes of the current school food program, and the challenges of feeding students during the COVID-19 pandemic through the role of the cafeteria managers as the program operators. This study interviewed school food service professionals from the KCSD to learn how can the role of the cafeteria manager help us understand the realistic challenges and efforts of feeding students while schools are closed, operating during hybrid, and fully in-person.

**Rationale for Study**

School food service departments are a critical resource for communities as they foster a culture of innovation and dedication to serving students and families. School food service departments have always created different innovative feeding models to ensure all students have continued access to healthy nutritious meals. However, normal in-school feeding service was disrupted in March of 2020, when Tom Wolf, the governor of Pennsylvania, ordered schools to close throughout the commonwealth as a safety response to the threat of the COVID-19 virus (PA State, 2020). Since then, in the face of a global pandemic, the KCSD Food Service Department, like many others across the nation, restlessly upheld its stance to serve its students.
by providing nutritious meals and being as accessible as possible through its established Grab & Go meal distribution system. Grab & Go meals are critically needed as they provide relief to many families who have been hit-hard by the COVID-19 pandemic (Dunn et al., 2020).

The School Nutrition Association (SNA), which represents school food service departments nationwide, describes the anticipated “new normal” of school feeding that the pandemic has changed. For students to receive healthy nutritious school meals during the pandemic, meal service would need to enable social distancing or serve in non-congregate settings with flexible serving times (Back to School 2021 Report A SUMMARY OF SURVEY RESULTS, 2021). The KCSD Food Service Department has embraced SNA’s new normal flexibilities with additions like allowing parents to pick up meals, into their current school food program.

The KCSD Food Service Department’s goal is to do everything they can to make sure students get access to healthy nutritious meals regardless of their families’ financial circumstances. The purpose of school meals is to contribute to the quality of education free of hunger (Mulvaney, 2021). Adopting this attitude, the school food service professionals at KCSD show their students that they are valued by serving, caring, and nurturing them. This was evident as they continued to serve students meals during the COVID-19 pandemic, despite schools being closed. Food is the currency to human connection (Mulvaney, 2021), and as part of their job, the cafeteria managers ensure they prioritize nutrition.

Trying to prioritize nutrition and ensure access to meals has been challenging as issues such as fear of transmission or contracting the virus was prevalent, dealing with staff shortages, food shortages, and transportation have made it hard to produce and serve meals. These
continued challenges to feed students are starting to become its own pandemic for school food service departments.

**Statement of the Problem**

School meals are essential as they play a critical role in student health, well-being, and help to alleviate food insecurity. However, as a precautionary measure against the threat of the COVID-19 pandemic, school districts across the nation have been closed from March 2020 until August of 2021. As the COVID-19 pandemic continues, schools are now operating through a hybrid model or have in-person instruction up until the time of this writing, during June 2022. One of the most challenging issues that school food service departments are faced with, as a response to the COVID-19 pandemic, is identifying ways to serve students healthy and nutritional meals. In the school year 2019, twenty-two million children nationwide depended on schools for their lunch meals. During this same time, about fourteen million children were not getting enough to eat (Bauer, 2020). This large number indicates there are a lot of students lacking the nourishment they need to perform in school. Given the uncertainty surrounding the COVID-19 pandemic, the exacerbated number of parents, guardians, and adult caretakers that are becoming unemployed, and an increased number of families now experiencing homelessness, this crisis has brought on an even more urgent attention to getting students fed (Dunn et al., 2020). The COVID-19 pandemic has caused many students to lose access to school meals and has increased severe food insecurity (Kinsey et al., 2020). The declined access to school meals also highlights the fragile financial health of families in the federal nutrition safety net (Dunn et al., 2020). Families have asked concerning questions such as:

- How will students get access to school meals?
- Who is eligible to receive meals while schools are closed due to COVID-19?
Looking at the physical significant distance of our students and the high prevalence of the COVID-19 virus, solutions for feeding students who usually participate in eating school lunch need to be “flexible, tailored, and thoughtful — so as not to stigmatize children for receiving emergency meals, which might discourage participation” (Dunn et al., 2020, p. 2).

One of the main social justice issues that has come to the forefront because of the COVID-19 pandemic is the limited access in which students have to healthy and nutritional meals. This issue affects the overall nutrition of the students. While districts such as King City School District have worked to create and implement solutions to feed their students during this time of crisis, school food service departments are not designed to be emergency feeding systems. After further examining this issue as a matter of social justice, the following questions arose as a means to drive the researchers’ thinking of the improvement process:

- What type of evaluation system is in place to determine the effectiveness of the emergency feeding model adopted by the district?
- How do districts know if the implemented emergency feeding models are meeting the nutritional needs of students?
- What tools are needed to safely serve school meals?

Utilizing these questions and understanding the importance of nutrition, this research aimed to question the participants about realistic challenges such as how effective the feeding solutions are, the importance of school nutrition, and the dilemma for school food service staff to fight the COVID-19 virus or student hunger.

**Problem of Practice**

The physical closure of schools creates a disruption in meal access (Jabbari et al., 2021), for many students who rely on school meals. Many school food service departments, like the
KCSD Food Service Department, acted quickly to create an innovated emergency feeding model through their established Grab & Go distribution system, but also created serving solutions for hybrid and in-person style learning once schools started re-opening. The problem that the food service department is facing is the need to feed all its students, because not all students have access to healthy and nutritious food during the COVID-19 pandemic. The preparation and distribution of healthy meals to all students during a crisis or emergency presents enormous challenges. The problem of practice that drove this study is revealed in the following question: How can the practice of food preparation and distribution be informed by the lessons learned in KCSD during the COVID-19 pandemic?

**Purpose of the Study**

The COVID-19 pandemic has shut down much of the economy. The governor of Pennsylvania had issued executive orders that only permitted “essential workers,” to continue to work in-person at places of business that were considered life-sustaining. Life-sustaining businesses typically include emergency services, health care, food service, and public transportation (Burstyn & Huynh, 2021). Educational services that included elementary and secondary schools were not permitted to have in-person instruction or continue physical operations. However, the school food service professionals still showed up and continued working at the same schools that have been closed and deemed too dangerous for students and teachers to attend due to the exception of falling under the guidelines of emergency feeding relief. The purpose of this study is twofold. First, to understand the challenges being faced by school food service professionals in an urban school district as the pandemic continues to evolve from the start of March 2020 up until the time of this writing. Second, to contribute to the improvement of school food service operations during emergencies.
Research Questions

This qualitative research study explored the lived experiences of cafeteria managers employed within the King City School District as they directly served on the frontlines to ensure their students had access to healthy nutritional school meals during the COVID-19 pandemic. The following research questions were investigated in this study using a qualitative methods approach:

1. How do cafeteria managers in a large urban school district in Pennsylvania describe the challenges that they and their employees faced while serving students during the COVID-19 pandemic?

2a. What lessons were learned during the pandemic by cafeteria managers that could inform a theory of practice improvement for emergency food service in an urban school district?

2b. What lessons were learned during the pandemic by cafeteria managers that could inform on the inequities experienced when it comes to access to school meals, but also improve service for students and families in an urban school district?

Improvement Science

Improvement Science will take on a problem-solving approach centered on continuous inquiry by investigating improvement strategies within the KCSD’s food service organization and school food service policies. Applying the first three Improvement Science principles described by Bryk et al. (2015) to help answer the research questions, principle one, Make the Work Problem-Specific and User-Centered, tells us to focus directly on the perspectives of the users of the system who best understand the problems we are trying to address. The questions during the interviews aimed to reveal the participants’ opinions, experiences, and personal
accounts. Some of the interview questions were about the performance of the system/the current school food program. What parts of the system work best? What are some situations where the system was disruptive and not working well?

Making use of principle two, **Focus on Variation in Performance**, allowed the researcher to ask questions that focused on variability and learn about what efforts are needed in attacking the disparities in the current school food program. The types of questions that were asked during the interviews as an example are:

- What are the inequities of the current school food program?
- Which kinds of students are being affected?

Utilizing principle three, **See the System That Produces the Current Outcomes**, the researcher was able to provide detailed descriptions from the interviews. Qualitative descriptions of an account inform the improvement process (Hill, 2019). They also are particularly useful to gain insights into a certain setting (Busetto et al., 2020). It is critical to see the system’s design at the base level in order to find out what may be causing the problems. Bryk et al. (2015) tells us it is important to investigate the underlying design in which we “organize the work that we ask people to carry out” (p. 61), to understand the source of the problem as well as the system in which it exists.

**Significance of the Study**

The KCSD Department of Food Service recognizes the value in continuing to provide free healthy meals to students even in the time of a global pandemic. This new way of feeding and supporting students brings awareness to the equity and social justice challenges that school food service departments are facing while trying to implement during the COVID-19 pandemic. Serving school meals during the COVID-19 pandemic has also revealed many structural
challenges that have plagued school food service departments and professionals for decades. Some of the institutional and structural challenges are how school food service is seen as a support service and the food service personnel are viewed as non-professionals. This type of bias comes from the fact that school food service personnel have held some of the lowest paying jobs in education systems (Park et al., 2021), and as it is apparent on most school cafeteria job descriptions the position does not require a four-year college degree. The perception of school meals is then heavily influenced by those who serve them. Flores et al. (2021) describes this view as, “Everyone recognizes that food is critical to learning—but the education system does not currently prioritize school meals” (p. 27). School meals are not a priority because school food service personnel are not seen as educators, nor is the subject of learning about nutrition a focal point in the department of education’s curriculum.

The significance of this research is how a school food service organization can make decisions and implement changes in the moment of practice. The COVID-19 pandemic has created an opportunity to learn from what happened during a pandemic or crisis situation to create a better set of emergency plans for school food service operations. This dissertation will stand as a model of the application of Improvement Science methodology in the field of school food service. In addition, this research argues the theory of addressing school food service professionals as educators, how they contribute to the community, and help shape the culture of schools. It also challenges how school districts think about their food programs. Implications from this study address how an Improvement Science approach that school food service departments can utilize to address future challenges during emergency feeding situations and how to adapt new feeding services in their communities.
Summary

The COVID-19 pandemic has presented unique barriers in getting students fed. Chapter 1 discussed the idea to explore the best practices and different scenarios utilized for feeding students to find out the challenges and lessons learned in providing school meals in a large urban school district. Improvement Science as a framework was used as a problem-solving approach to learn about and to make suggestions to improve the current school food program in this district and in school food service practices. Next, Chapter 2 provides an overview of significant literature specifically related to school food service and highlights the available evidence on central issues related to feeding students during the COVID-19 pandemic.


Chapter 2 Literature Review

The primary purpose of this literature review is to establish familiarity with current policies and practices in school food service, stress the importance of providing healthy nutritious meals, and to identify the challenges and lessons learned on feeding students during a crisis as there is limited research specific to this topic. This review of the literature begins with a background of the lunch program at the King City School District (KCSD) with a focus on nutrition through the United States Department of Agriculture’s (USDA) school nutrition guidelines, also referred to as “the meal pattern.” The background of the lunch program continues with a detailed context of two federal statues, The National School Lunch Program (1946), and The Healthy, Hunger-Free Kids Act (2010), which both historically, ensures that U.S. children have access to nutritionally adequate meals during the school day. Within this section is an examination of the Community Eligibility Provision (2014), a more recent policy which makes school meal programs more efficient and enables eligible school districts, like the KCSD, to serve free meals to all students.

The second section of this literature review is aimed at looking at empirical literature that is focused on and surrounds the effects of the normal school meal service shut down in the KCSD and in other school districts nationwide. This section also centralizes on the initialization of the Grab & Go distribution system and reviews what obstacles are contributing to the challenges of the current school meal program. It also outlines the significance of the role of the cafeteria managers who operate the school meal program, their impact on feeding and building relationships with their students, and how their perception is important to this study as a primary source for qualitative research.
The third section of this literature review provides a critical overview of the significant literature to understanding the social justice implication of this research, that students are at risk of not being fed during this pandemic which affects childhood nutrition. As a result, of not having access to school meals during the COVID-19 pandemic, this research uses The Healthy, Hunger-Free Kids Act (2010) nutrition standards as a policy platform for implementing USDA’s mandate to outline the importance of childhood nutrition. The literature that is reviewed in this section addresses the significance of school food service departments providing healthy nutritionally balanced school meals and the potential effects that school meals have on student academic performance. This dissertation study also assessed the cafeteria managers beliefs and perceptions about how the COVID-19 pandemic has created challenges to follow USDA’s Healthy Hunger Free Kids Act (2010) nutrition standards through the established “meal pattern.”

The fourth section of this literature review is an analysis of the theoretical framework used to support and guide this research. The Improvement Science theory provides a particular lens to examine and inform the aspects of this study. It presents and explains the information used to show the connections among the ideas presented and how they relate to this research study. Using Improvement Science as a framework provided an opportunity for cafeteria managers to openly examine their experience and allow for them to share improvement measures on how to facilitate continued access to meals as the pandemic evolved. Questions were based on the discussion of common challenges that took place and address the limitations of the current school food program. This section introduces Bryk et al. (2015) principles of Improvement Science and its specific procedures as part of the methodology used to identify the information and to answer the research questions.
The last section ends with a summary of the identified gaps in the literature, how the theoretical framework guided this study, and how this study will add to the literature.

**Background**

The Lunch Program at KCSD

The Food Service Department of [King City School District] strives to keep the children of the district healthy and focused. Beginning in the 2012/2013 school year, the school menus were designed to meet strict guidelines from the United States Department of Agriculture. The guidelines are based on the latest nutrition research from leading associations and a panel of experts in health and nutrition. The school breakfast and lunch menus are prepared and analyzed to meet these nutrition guidelines (*All Students Eat For Free*, 2012).

The lunch program in the KCSD provides balanced meals offering the healthiest choices in the major food groups: fruits, vegetables, grains, protein, and dairy. This standard is carried out by meeting USDA’s meal pattern requirements. Figure 2.1 below provides a description of USDA’s meal pattern requirements. It is broken down into grade groups and outlines the required daily and weekly amounts of each food from the five food groups.
## National School Lunch Program Meal Pattern

<table>
<thead>
<tr>
<th>Food Components</th>
<th>Grades K-5</th>
<th>Grades 6-8</th>
<th>Grades 9-12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount of Food per Week (minimum per day)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruits (cups)</td>
<td>2 ½ (½)</td>
<td>2 ½ (½)</td>
<td>5 (1)</td>
</tr>
<tr>
<td>Vegetables (cups)</td>
<td>3 ¾ (¾)</td>
<td>3 ¾ (¾)</td>
<td>5 (1)</td>
</tr>
<tr>
<td>Dark green</td>
<td>½</td>
<td>½</td>
<td>½</td>
</tr>
<tr>
<td>Red/orange</td>
<td>¾</td>
<td>¾</td>
<td>1 ¼</td>
</tr>
<tr>
<td>Beans and peas (legumes)</td>
<td>½</td>
<td>½</td>
<td>½</td>
</tr>
<tr>
<td>Starchy</td>
<td>½</td>
<td>½</td>
<td>½</td>
</tr>
<tr>
<td>Other Subgroups</td>
<td>½</td>
<td>½</td>
<td>¾</td>
</tr>
<tr>
<td>Additional Vegetables to Reach Total</td>
<td>1</td>
<td>1</td>
<td>1 ½</td>
</tr>
<tr>
<td>Grains (oz eq)</td>
<td>8-9 (1)</td>
<td>8-10 (1)</td>
<td>10-12 (2)</td>
</tr>
<tr>
<td>Meats/Meat Alternates (oz eq)</td>
<td>8-9 (1)</td>
<td>8-10 (1)</td>
<td>10-12 (2)</td>
</tr>
<tr>
<td>Fluid milk (cups)</td>
<td>5 (1)</td>
<td>5 (1)</td>
<td>5 (1)</td>
</tr>
</tbody>
</table>

### Other Specifications: Daily Amount Based on the Average for a 5-Day Week

<table>
<thead>
<tr>
<th></th>
<th>Min-max calories (kcal)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>550-650</td>
</tr>
<tr>
<td>Saturated fat (% of total calories)</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Sodium Interim Target 1 (mg)</td>
<td>≤ 1,230</td>
</tr>
<tr>
<td>Sodium Interim Target 1A (mg)</td>
<td>≤ 1,110</td>
</tr>
<tr>
<td><strong>Trans</strong> fat</td>
<td>Nutrition label or manufacturer specifications must indicate zero grams of <strong>trans</strong> fat per serving.</td>
</tr>
</tbody>
</table>

schools nationwide follow uniform, science-based standards to deliver wholesome meals in the most efficient and effective way (Rushing, 2019).

The meal pattern specifies and is aligned to meet the required serving sizes for each age-appropriate grade groups K-5, 6-8, and 9-12 over a typical school week. In every KCSD cafeteria, students are provided with nutritious and appealing foods. The menus consist of a main entrée i.e., chicken sandwich or hamburger, whole grain bun or roll, variety of whole and fresh fruit to choose from, selection of both cooked and raw vegetables, and a range of white to different flavors of fat free milk.

For students with disabilities and special dietary needs (e.g., allergies, religious practices, vegetarians, etc.), meal accommodations are met according to USDA’s nondiscrimination regulations for school nutrition programs. Reasonable meal accommodations for students with disabilities and special dietary needs must be related to the disability or limitations caused by the disability require a licensed medical authority’s statement for students with disabilities from a recognized medical authority (FEDERAL REGISTER, 2019). Overall, the KCSD Department of Food Service knows meeting the needs and serving free appealing meals to all students keeps them coming back to the lunch line.

**Context of the Food Service Department**

In order to be a food service organization in a school district and to participate in the National School Lunch Program, a food service operation must first apply to become a School Food Authority (SFA) within the residing state. The department of Food Service is the School Food Authority (SFA), the administration of the organization. SFAs means the governing body, “Which is responsible for the administration of one or more schools and has legal authority to operate the National School Lunch Program therein or be otherwise approved by Food Nutrition
Service to operate the program. The school system superintendent is typically the person authorized by the governing body to sign legal documents for the SFA” (Code of Federal Regulations. [electronic resource]). The director of the KCSD Department Food Service states,

As the School Food Authority, we are responsible for the overall operation of food service in the [KCSD], which consists of approximately 23,000 students in Kindergarten through Grade 12 in 56 schools in addition to 5 Early Childhood programs. Because we are a large district, that requires greater central management. The job position alignment process fosters consistency across the organization and ensures there is adequate support to operate the program. These positions oversee procurement, financial administration, menu planning, nutrition education, catering/vending operations, production facility & warehouse management, training coordination, site supervision, and cooking & serving in schools (Walker, personal communication, September 4, 2019).
The entire food service department in KCSD is comprised of over 300 employees and manages all aspects of foodservice in all schools or site buildings, administering the school meal program in accordance with federal policies, and to improve student health and wellbeing. As an SFA, one of the key goals of the Department Food Service is, “To increase consumption of healthful foods during the school day and create an environment that reinforces the development of healthy eating habits” ([King City School District website], 2017).

**Federal Statues**

The National School Lunch Program (NSLP) is the nation's second largest food and nutrition assistance program (Karnaze, 2018). NSLP was established, “as a measure of national security to safeguard the health and wellbeing of the nation’s children” (Ralston et al., 2008, p. 9). The program was established under the National School Lunch Act, signed into law by President Harry S. Truman in 1946 (Stanek, 2001). This legislation came about as a response to
claims that many U.S. male citizens had been denied from serving during World War II due to
diet-related health problems (SNA-HSL, 2016). NSLP is a federally assisted meal program
operating in public and nonprofit private schools and residential childcare institutions. It
provides nutritionally balanced, low-cost, or free meals to students each school day. School
meals are healthy nutritious meals that are age-appropriate in range of calories, sodium, saturated
fat, and trans-fat. This requirement is enforced by strict federal nutrition standards.

The Food and Nutrition Service (FNS) of the United States Department of Agriculture
(USDA) administers the program at the federal level and sets the nutrition standards. At the state
level, the NSLP is administered by state agencies, which operate the program through
agreements with school districts and school food authorities (USDA-FNS, 2017). Participating
school districts and independent schools receive cash subsidies and USDA commodity foods for
each reimbursable meal they serve. In exchange, NSLP institutions must serve lunches that meet
federal meal pattern requirements and offer the lunches at a free or reduced price to eligible
children (USDA-FNS, 2017). According to the Food Research and Action Center (FRAC),
Nearly 97,000 schools participated in the National School Lunch Program in the 2017-2018
school year. Approximately, 95 percent of schools nationwide participate in the program,
providing meals to more than 30 million children on an average day (FRAC, 2018).

Throughout the last 75 years, school meals have been a target for scrutiny. Up until the
Healthy Hungry Free Kids Act of 2010 (HHFKA), society’s view on school meals was that they
were inadequate and unappealing (Golembiewski et al., 2015) and for families using food
assistance and welfare programs (Ahluwalia et al., 1998). This was mainly due to the
underfunding from the federal government to the NSLP.
The Healthy Hunger-Free Kids Act of 2010 (HHFKA) authorizes funding for federal school meal and child nutrition programs and increases access to healthy foods for low-income children. This policy requires most schools to increase the availability of fruits, vegetables, whole grains, and fat-free and low-fat fluid milk in school meals; reduce the levels of sodium, saturated fat, and trans-fat in meals; and meet the nutrition needs of school children within their calorie requirements (Johnson, Lichtveld, 2017). All NSLP schools are required to abide by HHFKA guidelines. The final rule contains a standardized food-based menu planning system to be used by all schools.

Food based menu planning sets daily/weekly requirements for nutrient dense foods from all food groups. HHFKA also includes the requirements that meals be within a caloric range based on the recommended daily allowance set forth by USDA, including both minimums and maximums for each grade group (K-5, 6-8, 9-12) (Smith et al., 2016). The new lunch meal pattern now includes two servings of vegetables and one serving of fruit for a reimbursable lunch meal. At least 50% of the grains in each meal must be whole grain rich, and schools may only offer 1% plain white or fat free flavored milk and/or plain skim milk. HHFKA allowed USDA, for the first time in over 30 years, the opportunity to make real reforms to the school lunch and breakfast programs by improving the critical nutrition and hunger safety net for millions of children (USDA-FNS, 2012a).

A study was conducted in 2017 getting middle and high school students’ perspective and recommendations on the new HHFKA standards of school meals. The study surveyed 25 students on school nutrition who represented local organizations from 9 different states. The overall responses in the study were positive perceptions of the new healthy standards and that formal education of healthy eating was highly recommended (Asada et al., 2017) The HHFKA
standards also improved access and in-school feeding service. Students now had access to salad bars, more plated meal items made from scratch-cooking, and an increased variety of fruit and vegetables. These different options in serving in school cafeterias helped to increase student participation in the NSLP. The HHFKA has also helped to improve the cafeteria environment as well. As noted from another study by researchers Alcaraz et al. (2014) “Social norms within the school cafeteria appear to influence student food selection” (p. 2). In-school cafeterias are social environments. Students tend to eat what their peers do. The daily positive interaction and encouragement to eat more fruits and vegetables from food service staff also helps to contribute to healthy eating habits (Alcaraz et al., 2014).

A key provision of the Healthy, Hunger-Free Kids Act of 2010 requires a standard minimum amount of annual continuing education training hours for all school food service professionals (USDA-FNS, 2019). The annual continuing education training, also known as Continuing Education Units (CEU’s), is completed at different levels in accordance with their respective roles to learn about school nutrition and school food service programs. For example, a school nutrition director is required to complete at least 12 hours of annual continuing education/training, while a cafeteria manager is required to complete 10 hours at a minimum. In addition to this training, all school food service professionals must complete 16 hours of food safety training and obtain ServSafe certification. Having school nutrition training and food safety certification allows school food service professionals to have the knowledge and become committed to improving the quality of school meals. The department of food service in KCSD operates as if the school meal program is a part of the educational system and a part of the community. To help better serve the community, the KCSD team of food service professionals are dedicated to educating students about nutrition.
Community Eligibility

USDA also established the Community Eligibility Provision (CEP), a non-pricing meal service option for schools and school districts in low-income areas (Logan et al., 2014). Traditional school meal programs require schools to determine children’s eligibility for free or reduce price school meals on an individual basis. CEP does not require this extensive paperwork burden and eliminates the need to collect money from students. CEP allows high poverty schools and districts to serve breakfast and lunch at no cost to all students. CEP provides an alternative method for claiming student meals but also potentially removes any stigma associated with participation (Soldavini & Ammerman, 2019). This means that participating school districts no longer have to collect household applications to determine free, reduce, and paid statuses. Instead, schools that adopt CEP are reimbursed by federal and state cash subsidies. The availability of free meals for all students, and the decline in stigma associated with receiving free meals, could directly incentivize regular meal participation and attendance for students whose families are economically or food insecure (Bartfeld et al., 2020). A school or district qualifies for Community Eligibility when predominantly serving low-income students or when at least 40% of its students are directly certified for free school meals (Hecht et al., 2020). In order to determine if a school district meets the 40% direct certified free school meals threshold, they must take the total number students who are categorically eligible for free school meals and divide that number by the total student enrollment.

As part of a holistic effort to improve the school nutrition environment, and to serve breakfast and lunch meals at no cost to all students, the Department of Food Service in the KCSD adopted CEP in the 2014-2015 school year. The KCSD has been able to operate under CEP since it has an identified student percentage of 40% or higher of students who are
categorically eligible for free meals. “The CEP program provides Food Service with a greater opportunity to support the district’s goals to increase student achievement,” said Director of Food Service, C. Walker. “Meals served without the hassle of long lines, overt identification and payment issues provide an atmosphere in which students can receive well-balanced nutritious meals that contribute to their overall health, increasing students' abilities to learn” (Walker, 2020). In general, CEP has improved the lunch experience by allowing all students access to free meals and simplified the process and procedures for tracking participation and claiming meals.

**Challenge to the System**

**COVID-19 School Closure**

Schwabish et al. (2020) article, Strategies and Challenges in Feeding Out-of-School Students: An Examination of School District Responses to the COVID-19 Pandemic, examines the unique challenges the COVID-19 pandemic is forcing school districts to navigate, and the variety of models that districts are currently using to deliver meals to students. While school districts are playing a critical role in providing access to healthy nutritious meals for students, little is known about the approach of distribution or implementation process. The authors have collected data from big city school districts from Fairfax, Chicago, New York City, Austin, Indiana, and Greensboro. All these cities are comparable to the KCSD, detailing some of the major challenges facing school food service departments and framed as the following questions:

- What services can and cannot be reimbursed in support of efficiently providing meals to students who need them?
- Are foods available in the right quantities for districts?
- How often are food sites open, or is food delivered?
• During what times of day are families able to pick up meals from food sites or have meals delivered?

• Is registration for meals required? Do students need to be present?

(Schwabish et al., 2020).

Facing all these present challenges, school food service departments are trying to adapt and feed as many students as possible. For many students, especially those in low-income households, a school lunch may often be the only meal they consume each day (McLoughlin et al., 2020).

To further emphasize that this is a national issue, researchers Kenney et al. (2021) conducted a study from June 2020 to Fall 2020 using semi-structured interviews with 12 school food service directors from large urban school districts from across regions of the U.S. The study investigated the challenges of implementation and maintaining food service operations during the COVID-19 pandemic. The study found 4 emergent themes:

1. Serving school meals during the COVID-19 pandemic was a highly complicated process.

2. External policies influenced implementation.

3. The existing culture of school food service sustained morale.

4. The normal financial model for operating school food programs does not work during emergencies (Kenney et al., 2021).

The study also noted majority of the districts operated under the CEP provision and had very high levels in student meal participation in school year 2018-2019. However, a precipitous drop in student meal participation occurred when schools closed.

Since the KCSD operates under the Community Eligibility Provision (CEP), the Pennsylvania Department of Education’s Division of Food and Nutrition state’s, “Meals may be served to all children 18 and under in the household if at least one child attends the dismissed
school” (PDE-DFN, 2020). The meals that students receive through the NSLP provide more than half of their daily caloric intake. It is essential that students from low-income families, who make up a high percentage of NSLP participants, continue to have access to these meals (Karnaze, 2018). To ensure that students who rely on school meals are able to get the nutrition they need during the COVID-19 pandemic, the Department of Food Service in the KCSD has initialized and implemented the Grab & Go system. Grab & go meals are an alternate version of school meals. Grab & Go sites are an adequate mitigation strategy for feeding students during the pandemic (CDC, 2021).

**Grab & Go Meals**

Unlike cafeteria style meals that are scratched cooked and prepared on site, Grab & Go meals are unitized meals. Unitized serving style means that meals must be individually portioned, packaged, delivered, and served as a unit. The milk or juice may be packaged and provided separately but must be served with the meal unit (USDA-SFSP, 2016). All five major food components of the meal must be given/served to the student at the same time. Unitized meals are a student must take what is being given concept. This is different from the Offer vs Serve style feeding that the students are used to receiving.

Offer versus Serve (OVS) is a meal style serving provision in the National School Lunch Program. Within this type of feeding style, students have options and are able to refuse some food items. Students must be offered all five required food components which are, meats/meat alternates; grains; fruit; vegetables; and fluid milk. Under OVS, a student must take at least three components. One of the selected components must be either the fruit or vegetable at the correct serving size of ½ cup (USDA-FNS, 2017).
Since Grab & Go meals are cold, prepackaged in plastic, and unitized, this takes away from the appeal of school meals that are normally hot, scratched cooked with a design to be plated, and offer students a different variety of food options and choices. While Grab & Go meals are not ideal because they are prepackaged, under the challenging circumstances brought on by the pandemic, creating a Grab & Go school meal distribution has been a way to make the most of school meals and to maintain safety measures.

School food service departments have faced unexpected challenges when it comes to their health serving on the frontline, finances, food procurement, and distribution systems while trying to adapt to new models of serving meals (Kinsey & Hecht, Dunn et al., 2020). The Grab & Go system is designed to provide a seamless process and easy access to meals. In KCSD, it starts with the district’s dietitian creating a menu that fits the meal pattern as required by USDA and follows the guidelines of unitized style meals. Even though the consumption of the lunch meal is not taking place at school sites, the Grab & Go meals must still follow the nutritional standards mandated by the HHFKA.

The COVID-19 pandemic has abruptly changed how school food service departments are providing meals to students nationwide. As schools have shut down across the country, offering and creating Grab & Go meal distribution methods have become quite common. School Nutrition Association (SNA) conducted a survey titled, Impact of COVID-19 on School Nutrition Programs, from April 30, 2020, to May 8, 2020, to understand how school food programs are feeding students, and to reveal participation trends and other concerns. 1,894 school districts nationwide responded to the survey, revealing 95% of respondents were engaged in some sort of emergency meal assistance (SNA, 2020). Nearly all respondents reported offering Grab & Go style meals with the distinction of distributing meals in a variety of ways:
• 81% have drive-thru pick up sites; this model is the primary means of serving meals for 64% of districts that utilize multiple meal distribution methods.
• 58% allow students/families to walk up to feeding sites.
• 42% deliver meals directly to student homes.
• 32% utilize bus routes for distribution (SNA, 2020).

The vast majority of schools nationwide provide meals to more than 30 million children on an average day (FRAC, 2018). Schools around the country may have closed due to the COVID-19 pandemic, but there are students who still rely on school breakfast and lunch meals. Grab & Go meals have become critically important. Without them many students might not eat.

**Cafeteria Managers’ Perception**

School cafeteria managers are important stakeholders in the National School Lunch Program and their insight is essential regarding the supports and barriers for implementation and operation of the program. School cafeteria managers are a direct link to students eating school meals (Fulkerson et al., 2002) and getting the nutrition they need. Any new procedure or a new way of serving not only affects students, but also the school nutrition environment and the food service staff who prepare the food (Alcaraz & Cullen, 2014). The cafeteria manager’s perception is key as they are frontline workers who are dedicated to feeding students, even in a pandemic. They prepare healthy meals, adhere to strict nutrition standards, manage student food allergies, and offer service with a warm welcome and a smile.

In the KCSD, cafeteria managers see students twice a day every day, which is significant compared to other school staff personnel like an art or music teacher who may only see students once or twice a week. Breakfast and lunchtimes are usually the only time students get to
socialize during the school day. During this time, students are often asked or invited to talk about their day by their cafeteria manager or other school food service professionals. This type of interaction allows school food service professionals to know their students and what their likes and dislikes are. Another key perception that cafeteria managers are able to become aware of through their daily interactions with their students is that food options being served are known to have a huge influence on their food consumption (Rida et al., 2019). This is a positive example of the cafeteria manager’s perception as it has been theorized that students are most affected by any efforts to change or improve the educational experience, and this includes their lunchroom experience (Rida et al., 2019). However, very few opportunities do students get to have a direct opinion about what they like or dislike despite the potential for improved outcomes and greater engagement (Reich, Kay, & Lin, 2015).

A 2017 study cited that,

The department of food service serves over 31,000 meals daily to a student population of roughly 25,000. For many of these students, the meals they receive at school make up the majority of calories they eat in a day. Therefore, it is important that school meals are as nutritious and accessible as possible (Dunyak et al., 2017, p. 3).

The goal of this study was to better understand the challenges faced by schools in a large urban city, and to identify best food policies and practices in the local area and other comparable large cities, and to highlight recommendations for future work. The study reports that “the amount of students’ food waste is 26.1% of the budget” (p. 20). The school food service professionals know the cafeteria environment and that this food waste percentage is attributed to meal length and timing, a need to increase the appeal of lunch meals, and enhancing the school cafeteria
environment as noted in the study (Dunyak et al., 2017). The study highlights the strides the department of Food Service has made in creating a healthy school food environment that fosters student growth and success, and how important the relationship building with cafeteria staff and students boosts positive engagement. “One of the main strides was promoting student engagement with a focus on food culture allowing students to actively engage with their school meal programs increases participation” (p. 21). Other recommendations the study offers the food service department staff are taste tests, including more salad bars in schools, and reflecting student cultural background.

The Role of Data in Improving Grab & Go Meal Participation

According to Eagen et al. (2020), cited in Wechsler et al. (2020), “student participation is the number one concern of school foodservice personnel” (p. 3). This has become very evident by looking at the student meal participation while serving in new ways during the COVID-19 pandemic. Student participation is one of the main important key measures of the success of a school meal program (SNA, 2016). Looking again at SNA’s nationwide survey, The Impact of COVID-19 on School Nutrition Programs, student meal participation has been highly impacted by the COVID-19 closures to schools. The survey yielded responses from 1,894 school districts nationwide. Looking at participation trends, “80% of respondents reported their district is serving fewer meals since school closures and 59% have seen the number of meals served drop by 50% or more” (SNA, 2021, p. 14). About 200 districts of the large major cities in the U.S. reported to be serving at only 40% of their district’s enrollment during April 2020 (SNA, 2021). This survey was completed at the beginning of the COVID-19 pandemic. The numbers are more than likely to have increased as the pandemic has lasted much longer.
Social Justice Implication

School Food Justice

The COVID-19 pandemic has brought about a range of social justice issues when it comes to food security and the lack of access to healthy nutritional foods. Issues such as generating nutritional disparities in low-income communities, placing students and families in a position of being at risk for food insecurity, and creating a higher prevalence of health issues like obesity. These are historical issues in low-income communities that are often food deserts where access to affordable healthy food options is nonexistent due to the absence of supermarkets and grocery stores (Dutko et al., 2012). Hilmers et al. (2012), further argues this point that low-income neighborhoods’ already have greater access to food sources that promote unhealthy eating like fast food restaurants and convenience stores. These types of establishments offer mostly processed foods, yet they are often more affordable and accessible than grocery stores in areas that are food deserts.

The COVID-19 pandemic has created supply shortages nationwide and caused an increase in the cost of healthy foods (Zielińska-Chmielewska et al., 2021). Regardless of background, getting healthy and fresh food was difficult, for example, getting to the grocery store for those who are immunocompromised, limited hours of operations for grocery stores due to lockdown curfews, and transportation issues as bus capacities had new limits due to social distancing measures. These issues are universal on top of already historical injustices that are happening in low-income communities. The pandemic basically amplified these injustices. Going to the grocery store became a mission, and supplies were limited. Healthy foods went up in price from an already expensive price point. Low-income families have had no choice but to rely on the convenience of processed foods.
According to one study conducted by the CDC, the lack of access to healthy foods resulted in obesity rates doubling for persons aged 2 to 19 during the pandemic compared to a pre-pandemic period (Lange et al., 2021). Again, this was an issue that was already happening in low-income communities; therefore, it was amplified throughout the pandemic. National School Lunch Program was addressing obesity issues in students, but the circumstances of the pandemic have threatened that progress by creating obstacles to getting healthy foods to all children. While this study does not address obesity directly, it addresses the need to improve access to healthy nutritious meals for all students—particularly those of lower socioeconomic status.

The COVID-19 pandemic has furthered placed families of becoming food insecure as parents have been forced to stay home due to closed schools which resulted in higher unemployment rates (Bullinger et al., 2021). Being unemployed puts a financial strain on families and affects their ability to purchase affordable healthy foods and access to healthcare which directly connects to food. For parents, guardians, or caregivers who did have to work, the disparities to access of healthy foods were still a problem for students who were remote. Thus, it was a lot safer for students to go to their school and pick up free meals.

The KCSD addressed these social justice issues by partnering with food justice organizations like the Community Food Bank and United Way. School Grab & Go meal distribution sites provide a resource in communities where families need extra support to have access to healthy foods. The focus of this study, however, is not on these issues, but how school food service programs can lead this effort and provide solutions. NSLP was already working towards providing healthier foods to fight disparity in access, food insecurity, and obesity. Now NSLP will have to examine how they address these issues as they are now a much bigger problem.
Importance of School Nutrition

Nutritionally balanced meals are vital to a student’s health and overall well-being. School cafeterias are identified as optimum settings for providing nutritious food options and establishing healthy eating habits in children (Hildebrand et al., 2018). For the first time in thirty years, USDA made a monumental reform to school lunch and breakfast programs by improving the critical nutrition and hunger safety net for millions of children nationwide through the Healthy, Hunger-Free Kids Act (HHFKA) of 2010 (USDA-FNS, 2014). The HHFKA requires all school meal programs operating under the National School Lunch Program to offer healthy meals that meet the Dietary Guidelines for Americans standards through the established updated meal pattern (SNA, 2020).

“Research shows that students who participate in the school meal programs consume more whole grains, milk, fruits, and vegetables during mealtimes and have better overall diet quality, than nonparticipants” (Fox, et al., 2019, p. 6). Researchers, Kinderknecht, Harris, & Smith (2020), found using national data that, “eating school lunch reduces food insecurity by at least 3.8 percent and reduces poor health by at least 29 percent” (p. 362). Another study found similar data, among a sample of low-income elementary children in an urban school district in the U.S. where eating school lunch had reduced food insecurity by 4.3 percent (CDC, 2020). The HHFKA standards also have a positive impact on student food selection and consumption due to the increase of fruit and vegetables mandate which helps combat the social justice issue of this research that students are at risk of not being fed during this pandemic which effects childhood nutrition.
School Meals and Performance

School meals play a vital role in a child’s health and in their learning. Surveys show that nutrition affects student achievement. Compared to students with lower grades, students with higher grades eat breakfast on all 7 days, eat fruit or drink 100% fruit juice one or more times per day, eat vegetables one or more times per day, and drink one or more glasses per day of milk (USDA-FNS, 2012c). School meals are just as important to student success as textbooks and teachers are in the classroom (Vike, 2017). Students need to have nourishment to be able to focus while learning during class. Ideally, school cafeterias are providing meals as part of the daily educational services.

The Community Eligibility Provision (CEP) helps to increase meal participation. Schools also receive a higher reimbursement rate for each meal served under CEP than they would under the traditional meal programs, which in-turn increases revenue to provide healthy meals.

Providing healthy school meals is an essential way to address both food insecurity and hunger. A growing body of literature finds that schoolwide free meal programs lead to improved academic and non-academic outcomes for a lot of students (Schwartz, Rothbart, 2019). Researchers have found allowing all students to receive a free school meal increases breakfast and lunch consumption, improves test scores, and reduces the share of elementary and middle school students who are suspended. (Bartfeld et al., 2020; Gordon, & Ruffini, 2019).

Students who are hungry struggle to focus during class. Not having anything to eat because someone is experiencing food insecurity would cause any student to be unhappy and not want to participate or pay attention in class (Bartfeld et al., 2020; Gordon, & Ruffini, 2019). The whole point of the HHFKA implementing new nutritional guidelines and standards was to combat unhealthy eating and enforce the fact that students need to have a balance nutritional
meal. This final rule updates the meal patterns and nutrition standards for the National School Lunch and School Breakfast Programs to align them with the Dietary Guidelines for Americans (Bergman et al., 2014). This is important as students need healthy meals to learn and grow.

**Theoretical Framework**

**Improvement Science**

Improvement Science is a framework that asks and answers the question: How do we find out and understand the challenges and lessons learned to the current school lunch program that is designed to provide students with access to healthy nutritious meals? Improvement Science scholars Berwick (1996) & Langley et al. (2009), would answer using the Central Law of Improvement that, “Every system is perfectly designed to deliver the results it produces.” This means that by analyzing the current system/program and breaking it down into component parts an organization can implement changes leading to improvement. Lewis (2015) would argue that using Improvement Science as a set of principles and take an active learn-by-doing approach. This is the idea that we learn when we actually do the work.

Berwick (1996), Langley et al. (2009), and Lewis (2015), improvement theories are valid. However, Improvement Science needs to offer a way in which the data wield results that lead to reasoned improvements to offer better outcomes for students (Yeager et al., 2013). The results which are being produced by the current school lunch program need to be improved in the most effective way. In order to drive improvement in the system of education, which school food service falls under, a user-centered and disciplined inquiry approach is recommended in finding effective strategies (Bryk et al., 2015).

Using theories borrowed from Berwick (1996), Langley et al. (2009), Lewis (2015), and Yeager et al. (2013), authors, Bryk et al. (2015) explain, for organizations, how a process of
disciplined inquiry can be used to solve problems of practice. Improvement Science examines a system’s performance to understand the result of its design and how it is operated. Improvement Science does not look at individual efforts, but how an organization and its stakeholders can come together to understand how the system works, see where bottleneck issues or problems arise, and create solutions to improve the system.

Bryk et al. (2015), in their recent book, Learning to Improve: How America’s Schools Can Get Better at Getting Better, model on the foundational elements that guide Improvement Science is based on six core principles.

1) Make the work problem-specific and user-centered.
2) Focus on variation in performance.
3) See the system that produces the current outcomes.
4) We cannot improve at scale what we cannot measure.
5) Use disciplined inquiry to drive improvement.
6) Accelerate learning through networked communities (p. 12-17).

Each distinct principle is described below as a disciplined inquiry focusing on the problem of feeding students during the COVID-19 pandemic. Furthermore, each principle is applied as a theory or reasoning to help offer solutions to the challenges surrounding the current school food program to see if change efforts could lead to improvement.

**Principle 1- Make the Work Problem-Specific and User-Centered**

Bryk, et al. (2015) believe that becoming more user-centered is key. “Being user-centered means respecting the people who actually do the work by seeking to understand the problems they confront” (p. 32). Part of the objective of this research is to identify the people who are best situated in experiencing the challenges of feeding students during the COVID-19 pandemic.
Using a user-centered approach will allow for an explicit understanding of the participants’ experiences. Examples of inquiry questions that could be asked are:

1. What is working?
2. What is not working?
3. What are the obstacles that are causing a system disruption?

Looking at improvement scientist Senechal (2015), perspective on being user-centered is, “working to solve a problem means understanding how problems – and solutions to problems – exist in multiple practices that occur not only at the ground level, but also within administrative systems and in inter-organizational networks” (p. 10). What Senechal (2015) is describing is learning how to determine the nature of the problem, but also understanding how the problem and the solutions to problems exist within the organization/system itself. Bryk et al. (2015) would have an organization embrace principle one by being user-centered which means truly listening to the voices of the people who are most directly involved starting at ground level.

**Principle 2- Focus on Variation in Performance**

Bryk et al. 2015 second principle, **Focus on Variation in Performance**, is grounded in this research, as it will look at variability and the efforts needed in attacking the disparities in the current school food program. Variation in performance is a core problem to address. It asks the questions,

1. What works for whom, and under what set of conditions?
2. What are the inequities we aim to address?
3. What kinds of students are being affected?
To connect the second principle, it is apparent the distribution sites of KCSD’s Grab & Go meals are well established across the city, however, variability in the prevalence of food insecurity can still exist. The KCSD Food Service department chose schools in neighborhoods with the greatest need. But from an observational viewpoint, it is evident that the established sites are not as accessible for students as originally intended. This is due to many reasons such as lack of transportation, inclement weather, parents having to work, and health concerns or the fear of being exposed to COVID-19. In addition, quarantine measures further restricted students and families as Grab & Go sites had to be closed due to COVID outbreaks, creating further distance for some families to reach the next open site, and for those who were positive and to stay home to reduce exposure (Dunn et al., 2020).

**Principle 3- See the System that Produces the Current Outcomes**

During the COVID-19 pandemic, USDA has relaxed its rules allowing for non-congregate feeding and provided flexible meal service options to school food service departments from serving lunches in cafeterias to distributing take-home meals. However, despite these efforts, access to adequate nutrition among children in poverty remains insufficient, with only 11% of families reporting access to “grab-and-go” meals (Ananat, Gassman, 2020). Researchers of an April 2020 survey found that 35% of households with children under the age of 18 years old are now experiencing food insecurity, that is twice as great of an increase compared with 2018 (Wozniak et al., 2020).

This survey was conducted at the beginning of the pandemic. The numbers have gotten worse as the pandemic has lasted much longer, especially due to the accessibility challenges as described by Dunn et al. (2020). Currently in KCSD, now that schools are operating under hybrid style and in-person learning, Grab & Go meals are more of a challenge to disburse. This
is due to staff shortages, supply shortages, and the fact that it is hard to be in two places at once: serving students in school in the school cafeteria and standing at the school entrance for remote student meal pick-ups. The third principle, **See the System that Produces the Current Outcomes**, guides how problems are to be thought about. If we really care about addressing inequities and challenges in the current school food system, then we must “see the system,” and the connections within it.

Bryk, et al. (2015), understanding of system performance is, “The performance of any system, whether a hospital, a school, or any organization, is the product of interactions among the people engaged with it, the tools and materials they have at their disposal, and the processes through which these people and resources come together to do work” (p. 58). This study will learn from the perception of the cafeteria managers and address food insecurity to understand the variations of the current school food program. However, to recognize this variation an analysis about how the current school food program operates, this development is a working theory of improvement. Bryk et al. (2015) calls this a causal system analysis. In understanding the current state, an organization would begin with an analysis of root causes: “Why do we get the outcomes that we currently do?” (p. 66). Bryk et al. (2015) offers three tools, *Fishbone Diagram, The System Improvement Map, and The Driver Diagram*, as tools/processes to analyze the current problem and learn how to see the system. A fishbone diagram will be created as a visualization tool to categorize all the potential challenges that contribute to the problems of the current school food program in the KCSD as identified by the cafeteria managers once all data are collected.

The fishbone diagram (Figure 2.3) is a visual representation of the product or problem being discussed and it is an analysis that helps to track down the reasons for variations (Bryk et al., 2015). Using a fishbone diagram as a tool will help to conduct an emergent themes analysis.
From here, themes will be sorted into main categories that investigate the factors that make up the current school food program, but also will help to see any other plausible causes of problems that often remain unexamined. This tool is more of a “cause and effect” approach that allows an organization to identify, problem solve, and eventually correct the problems within the system. This type of analysis is important to prevent solutionitis and to prevent a rush of judgment before understanding the complexity of the problem entirely. “While one might contest any given reason shown in the fishbone diagram, one fact clearly stands out: no single person, process, or resource is to blame” (Bryk et al. 2015, p. 68).

**Figure 2.3**

*Fishbone Diagram Visual*

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**Principle 4. We Cannot Improve at Scale What We Cannot Measure**

Bryk et al. (2015) book, Learning to Improve: How America’s Schools Can Get Better at Getting Better, emphasizes the need to “identify improvement scales and the importance of having a method of measurement. The purpose of measurement for improvement is to inform efforts to change” (p. 92). In-order to know that an organization is implementing or seeing change with their improvement efforts, they need to establish a clear metric that can be measured, tracked, and defines the expected outcome or goals. The fourth principle, **We Cannot**
Improve at Scale What We Cannot Measure, “means to collect common measures of key outcomes, processes, and unintended consequences to see if changes are an improvement; track progress toward aim” (Bryk et al. 2015). The underlying focus of this principle is to understand that if organization cannot measure something, and know the progress or difference they are making, then they cannot expect to improve it. For example, if a person were trying to lose weight, but didn’t weigh themselves or track the progress of their weight loss, then how would they know if they are reaching their desired weight goal, or losing any weight at all?

Measurement is critical and a central component of this research for improvement to the Grab & Go system. If we expect to improve the current school food program and to continue to offer healthy nutritious meals to students, then we must use data and evidence to improve practice by measuring the impact of the new ways of serving meals during the COVID-19 pandemic. The text discusses using different types of measures for different purposes. This research uses the concept of practical measurement developed by authors, Bryk et al. (2015). The focus of this concept is on what is measured, how it is measured, and how the data results are used for targeted outcomes. Data use is fundamental to the process to understand “what is working and what is not in any particular setting, allowing site personnel to efficiently alter the program or practice in ways that will [make it more likely to spread] and achieve the desired ends” (Cohen-Vogel, et al., 2015). Bryk et al. (2015) argue that it’s not enough for an organization to assert they are working towards a common goal, but that focus should be around practical measures in the context of everyday practice.

Key Features of Practical Measures

- They are designed specifically to address an organization’s improvement goal.
• The practical measure intentionally includes language and a focus that is meaningful to the practitioners working in the context in which it will be implemented.

• The measure can be easily changed or adapted as the program process continues.

• The data collection phase of the practical measure is not too demanding and meant to be carried out in the context of daily practice.

• The resulting data produced by the practical measure are relevant to practitioners and includes information that they can use to improve practice (Bryk, et al., 2015 & Yeager, et al., 2013).

Practical measurement provides a process to design surveys, conduct small group discussions, perform observations, and examine data. The resulting data from practical measurement are of use to improving the system of current school food program at scale.

**Principle 5. Use Disciplined Inquiry to Drive Improvement**

Disciplined inquiry through Improvement Science is an explicit approach that brings organizations and networked communities together to observe and collaborate to solve specific problems. The fifth principle, **Use Disciplined Inquiry to Drive Improvement**, is a paradigm with the focus to move from implementing fast to learning fast in order to implement well. The intent is to answer the most basic improvement question, “How will we know whether each specific process change is actually an improvement?” (Bryk, et al. 2015, p. 111). The fifth principle works along with the other principles in the same process to determine root causes, define goals, and set up a theory of action to address the challenges and problems within a system. Bryk, et al. (2015) suggests that once an organization has established a specific problem
and developed measures to determine if change can lead to improvement, then it’s time to test those changes in the actual environment of interest. An organization engaged in this work might test change in the following ways:

- To increase belief that the change will result in improvement.
- To decide which of several proposed changes will lead to the desired improvement.
- To evaluate how much improvement can be expected from the change.
- To decide whether the proposed change will work in the actual environment of interest.
- To decide which combinations of changes will have the desired effects on the important measures of quality.
- To evaluate costs, social impact, and side effects from a proposed change.
- To minimize resistance upon implementation (Barron et al., 2020).

However, Bryk, et al. (2015) recommend that an organization start with small, rapid tests and then gradually expand the initiative. The Plan-Do-Study-Act cycle is an iterative research-based improvement model implemented in ways that lead to sustained and measurable gains, “by planning it, trying it, observing the results, and acting on what is learned (Barron et al., 2020).

**Principle 6. Accelerate Learning Through Networked Communities**

Bryk et al. (2015) theory on learning to improve is, “Focusing on the specific tasks people do; the processes and tools they use; and how prevailing policies, organizational structures, and norms affect this” (p.7-8). The approach of Improvement Science is a learning-by-doing design. Even with policies and provisions put in place to keep students safe and healthy
there needs to be a strong system of support behind these initiatives. Networked Communities is a lens that draws from Improvement Science. This lens gives a deeper, networked problem-solving model to addresses the challenges and efforts to feeding students during the COVID-19 pandemic. The Networked Communities model serves as the structure and support for the different innovative strategies in which the department of Food Service in the KCSD maintains access. Networked Communities aim to address persistent problems of practice that have resisted previous reform efforts by linking diverse kinds of expertise from research, educational design, and practice in a joint quality improvement effort (Bryk et al., 2015). It is a process of developing relationships that enable stakeholders to work together. For this research, the model also serves as a systematic review of engagement in school nutrition looking at interventions using stakeholder involvement, planning engagement, and for shaping culture.

A School Food Service Model of Improvement Science as a Framework

Part of the objective of this study was to listen to the lived experiences of the cafeteria managers to learn about the causes of the problems they are facing while operating during the COVID-19 pandemic, and to identify improvement strategies. Healthcare improvement practitioners Leeman et al. (2021), would advise that a key component to Improvement Science is utilizing and applying a consistent model to understand meanings of natural actions and using meaningful data to best align efforts to drive change. Bryk et al. (2015), would agree, as using Improvement Science in education, you would use a “Model for Improvement,” that is designed to accelerate “learning-by-doing.” Learning-by-doing is the idea that we learn when we do the work and how people make sense of their experiences (Lewis 2015, & Bryk et al., 2015).

While there is considerable research on Improvement Science in healthcare or education, there is a gap in the research that examines Improvement Science and school food service. For
the purposes of this research, Bryk et al. (2015) first three principles of Improvement Science were adopted and applied as a framework, translated to the school food service setting, and used as part of the methodology to see the current school lunch program. From this point, the design of the study tackled the challenges and lessons learned on feeding students in the KCSD during the COVID-19 pandemic to know what works and what might not and offer solutions for future emergency feeding situations. The rationale behind using the first three principles is that this study is about generating an improvement agenda. The first three principles describe how to understand the problem as it exists. Principles four through six are about solving a problem and describe how improvement work will proceed.

Each of the three principles that were used is broken down (Table 2.1) and described below as a problem-solving approach centered on how it can effectively facilitate quality improvement in the current school lunch program. The first three principles systematically examined the methods and data collection from the participants to inform system improvements to the current school lunch program and to help answer the research questions. In addition, Table 2.1 embraces Bryk et al. (2015) user-centered and problem-centered approach.
Table 2.1

**Principles of Improvement Inquiry**

<table>
<thead>
<tr>
<th>Name of Principle</th>
<th>Description of Principle</th>
<th>How the Principle was Applied to the Study</th>
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</tr>
</thead>
</table>
| Principle 1- Make the Work Problem-Specific and User-Centered | - Engage key participants. Focus directly on the perspective of the users who face the problem every day and understand it best.  
- Asks the questions, what was working, not working, what are the challenges, and what are the lessons learned? | - Participants working within the system knows the issues firsthand. Participants are invited and expected to share their individual stories and experiences.  
- Learning from participants telling their own stories, the challenges that are brought up become options for change. The lessons learned by the participants become opportunities for improvement. |  |
| Principle 2- Focus on Variation in Performance | - Conduct research that investigates variation in the effectiveness of a system.  
- Learn from the experiences if variation has common causes and getting quality results under a variety of conditions. | - Focusing on the social justice implications, this study investigates meal access and food insecurity disparities through the lens of the people who are most directly involved.  
- Learn what was working, not working, for whom, and under the different phases of serving school meals during the COVID-19 pandemic. |  |
| Principle 3- See the System that Produces the Current Outcomes | - Structured way of looking at an entire system to identify problems.  
- Map out both the factors that are resulting in the problem of interest and the information learned to produce meaningful improvements. | - This study will use disciplined inquiry based on the current school meal program to learn about challenges that the participants believe are directly affecting the school meal program. In addition, to learn about the types of actions that participants |  |
might take to achieve improved outcomes.

- Fish-bone Diagram will be used to clearly identify the themes and sub themes and will serve as a graphic representation of the participant’s experiences.

**Summary**

The purpose of this literature review was to provide a solid background on the current policies and practices in school food service and stress the importance of providing healthy nutritious meals. In addition, this literature review sought to identify an approach to learn about the challenges and lessons learned on feeding students during a crisis as there is limited research specific to this topic. Improvement Science is introduced and expanded on in this chapter as the theoretical framework that guides this research. This literature review also indicates that there is limited existing research on Improvement Science and school food service. Understanding a core theory of Improvement Science, that we should look at an entire system and its design to identify problems, we can learn how a program or how a system works, understand where issues or breakdowns occur, and learn what actions can be taken to improve performance. Looking at the innovative strategies used for serving students, such as creating the Grab & Go meal distributing model, the discussion for this topic could add to the literature by proceeding with different examples for potential future innovations for school food service departments. Chapter 3 will provide an explanation of methods used for this research study and a detailed analysis procedure for interpreting the data.
Chapter 3 Methods

This study explores the lived experiences of school cafeteria managers in an urban school district as they engage with the challenges of developing innovative practices to ensure that students have access to healthy nutritious meals despite the COVID-19 pandemic. The purpose of this study was twofold. First, to understand the challenges faced by school food service professionals in an urban school district during a pandemic. Second, to contribute to the improvement of school food service operations during emergencies. This chapter outlines the methods used for the data collection, analysis, and interpretation of data to answer the following research questions:

1. How do cafeteria managers in a large urban school district in Pennsylvania describe the challenges that they and their employees faced while serving students during the COVID-19 pandemic?
2a. What lessons were learned during the pandemic by cafeteria managers that could inform a theory of practice improvement for emergency food service in an urban school district?
2b. What lessons were learned during the pandemic by cafeteria managers that could inform on the inequities experienced when it comes to access to school meals, but also improve service for students and families in an urban school district?

The general research design of this study is presented, including a brief reminder of how the first three principles of Improvement Science, described in Chapter 2 (Table 2.1), inform the data collection and analysis procedures. Next, the participants, research site, the researcher’s positionality, and the ethical and credibility stance are addressed and described. Finally, this chapter concludes with descriptions of the instruments that were used to
collect data and used in the analysis procedures.

**Research Design**

In order to answer the research questions, the researcher proposed, first, to understand the lived experiences of school cafeteria managers through their expertise, and then to collect the wisdom that arose from those lived experiences in the form of stories of the lessons they learned. The researcher chose the qualitative methods approach because qualitative research allows us to understand people’s real experiences and it aims at retaining true meaning when interpreting data (Stephen, Quartaroli, & Riemer, 2012). According to Busetto, Wick, & Gumbinger (2020), “Qualitative research inquiry is a descriptive methodology aimed at understanding how individuals make meaning of a phenomenon or a situation, based on 'what will work best' in finding answers for the questions under investigation” (p. 9). The researcher chose to use the first three Improvement Science principles,

1) Make the work problem-specific and user-centered.

2) Focus on variation in performance.

3) See the system that produces the current outcomes.

described by Bryk et al. (2015), to better understand how the current school food program works, to use theory to guide practice, and to find improvement strategies for future use. The researcher was able to collect data that supports and hinders school food service efforts for coping with the challenges of feeding students during a pandemic. Some examples of the challenges were operating with minimal staff, procurement shortages, and exposure to the COVID-19 virus. The researcher was able to gain information on new/shared ideas and strategies for managing the impact of the COVID-19 disruptions on school meal programs.
Bryk, et al. (2015) theory of Improvement Science and learning to improve is, “Focusing on the specific tasks people do; the processes and tools they use; and how prevailing policies, organizational structures, and norms affect this” (p. 7-8). The approach of Improvement Science is a learning-by-doing design. This study applied the first three principles described by Bryk et al. (2015) theory on Improvement Science to answer the research questions appropriately. Stakeholders play a critical role in the decision making and helping to improve a school’s food service operation when it comes to feeding students. One primary key stakeholder is the cafeteria manager. Using Improvement Science to answer the research questions also helped to ensure the representation of essential elements in the data collection process. These essential elements, more specifically, helped with the investigation process in how the researcher and participants collaboratively linked theory to practice in uncovering improvements in the current school food program.

**Participants**

Participant selection in qualitative research is purposeful; “participants are selected who can best inform the research questions and enhance understanding of the phenomenon under study” (Sargeant, 2012 & Creswell, Kuper, 2009, p. 3). For this study, the researcher decided to interview select school cafeteria managers, in the King City School District as the participants to collaboratively link the theory of Improvement Science research inquiry to school food service practice. Improvement Science uses a user-centered approach which means, “respecting the people who actually do the work by seeking to understand the problems they confront” (Bryk et al., 2015, p. 32). The cafeteria managers can give a first-hand perspective and an accurate representation of what obstacles are contributing to the challenges of the current system to
feeding students during the COVID-19 pandemic and their impact on feeding students as they are on the frontline daily as the system operators.

The cafeteria managers are school nutrition experts who make it their mission to positively impact the wellness of children (SNA, 2021) by ensuring healthy school meals are available in their community. However, the cafeteria managers are not just school nutrition professionals, but they are community members as well. When sharing their lived experiences, they are not just talking about their job, but how to best serve the students within their community. The pandemic has created unexpected challenges for school-based nutrition programs threatening access to meals (McLoughlin et al., 2020). When it comes to developing a plan for meal service for students as a response to school closures, action should be taken using community members, as they reflect the people they serve, to address community needs (Thomas et al., 2018).

Serving students’ school meals during the COVID-19 pandemic crisis has been a true testament of how a community can come together and create a positive outcome for students. The department of Food Service in the KCSD created a sub-committee group composed of different stakeholders that include participation by a diverse group of students, parents, community partners, health officials, local leaders, and the cafeteria managers. Each member has their own perspective to offer, but the commonality that everyone has is creating a sustainable way for students to get access to healthy nutritious meals during a pandemic crisis. The cafeteria managers are able to use the shared ideas from this community group to improve their serving models, but also can speak on their experience of being part of this conversation.

Understanding Improvement Science and its user-centered and problem-centered approach, the researcher felt that using the cafeteria managers as the participants is best to
understand the challenges and lessons learn. Five KCSD school cafeteria managers participated in this study. Each cafeteria manager that was asked to participate has over five years of experience of working in school food service and working for the KCSD school district. All participants were women due to the fact that 95% of the total cafeteria managers that are employed at the KCSD are female in the age range of 28 to 63. This study did request participation from a male participant who was actively working during the COVID-19 time period at one of the study’s sites. However, it was not possible to interview the potential male cafeteria manager due to health reasons during the time of interviewing. Of the five, three are White, and two are African American. Table 3.1 below provides a brief description of the cafeteria managers who were interviewed. These five cafeteria managers were chosen because they operated sites that particularly provided additional essential resources for families which will be further explained in the site selection below. For the purposes of protecting anonymity, and to comply with the stipulations of the IRB approval at the district where this study was conducted each cafeteria manager is identified by their title of their profession. Each cafeteria manager will be referred to as Cafeteria Manager (CM) CM 1, CM 2, CM 3, CM 4, and CM 5 and used respectfully to identify them throughout this dissertation.

Table 3.1

*Interviewed Cafeteria Manager Characteristics*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>CM 1</th>
<th>CM 2</th>
<th>CM 3</th>
<th>CM 4</th>
<th>CM 5</th>
</tr>
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<td>64</td>
<td>35</td>
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<td>Black</td>
<td>Black</td>
<td>White</td>
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<td>West</td>
<td>East</td>
<td>Central</td>
<td>North</td>
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<tr>
<td>Grades Served</td>
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<td>6-8</td>
<td>PreK-5</td>
<td>6-12</td>
<td>6-12</td>
</tr>
</tbody>
</table>

**Site Selection**

Drawing from the knowledge of community members, at the start of the COVID-19 pandemic the department of Food Services in the KCSD established twenty-seven Grab & Go meal distribution sites across the city. These twenty-seven sites were KCSD school buildings operated by the cafeteria managers who are employed at the district. Five of the twenty-seven school sites were set up to offer more essential resources to help families who are experiencing financial hardship during the pandemic. For the purpose of protecting anonymity, this research identified each of these five sites as site North, site South, site East, site West, and site Central. All Grab & Go meal distribution sites offer school-based meals. What sets these five sites apart from the rest is that they are also used to distribute essential resources such as produce, dairy, holiday meal boxes during each major holiday, and other resources provided from community partners, on top of offering grab & go meals.

These five sites distributed these extra resources because of the dynamic setup of each school building itself. Each one of these five sites has the cooler space inside the cafeterias to store large quantities of bulk food. The buildings have an overhang to protect staff standing outside from the weather like the sun or rain. These five sites also have a driveway that goes around the entire building. This is important as it works as a mitigation strategy of preventing the spread of the COVID-19 virus as families can drive around and have contactless interactions with the school food service professionals by placing items in the trunk of their car. Four out of these five sites are also located on the bus line for those families who may not have a vehicle for transportation.
Each one of these five sites is a site that is located in the North, South, East, West, and Central part of the city. These five school sites were selected as the sites to conduct the research because they have the highest participation and interaction due to the additional resources being offered, students and families were more prone to visit these sites. In addition, as a result of the extra resources, these sites are more likely to serve lower income families who might be having a harder time getting access to the resources they need.

**Positionality of the Researcher**

In the researcher’s current role as supervisor for the Department of Food Service in the KCSD, the supervisor position serves as the immediate administrator of the cafeteria managers at the schools, but also the point of contact to handle direct inquiries/issues of the school cafeterias. As the supervisor, the responsibilities of this job are to coordinate/facilitate the various aspects of the program and monitor it for compliance to ensure we are operating within local, state, and federal regulations. Looking at the community within our school district and the community of this urban city we serve, the supervisor’s primary responsibility within the department is addressing the dietary and preference needs of our students. This must be completed within budgetary changes, food service training, strategic procurement, and food safety. When it comes to working with outside partners like the Food Policy Council, our aim is to cut down the scrutiny of school food while following the increase of regulations set forth by USDA’s Healthy Hunger Free Kids Act (2010).

As the researcher of this study, the goal is to understand how school food service departments can improve school food programs during a state of emergency by examining the challenges that the COVID-19 pandemic has unfolded, to improve and sustain the health and well-being of all our students, and to contribute to the development of healthy eating habits.
Being trained in leadership, the supervisor is to assess, direct, support, and lead on enacting these goals. In this study, the researcher is taking on the role of the observer. This research is performed through an interpretivist lens/viewpoint using the interpretations of my participants, the cafeteria managers. To allow for transparency, the researcher acknowledges that his position influences how the research is conducted and the outcome of the results (Rowe, 2014).

Part of the job as the supervisor in the food service department at the KCSD, is to talk to the cafeteria managers and find out what problems they are running into and have experienced. The supervisor’s job is to collect data from the cafeteria managers. What information that has been collected from them, the extant data that exists has informed this study when it comes to drafting the research questions, shaping the data collection questions in the semi-structured interview guide, and the way the researcher analyzed and interpreted the data. The researcher analyzed the data from two different perspectives as an expert. First, from an inside perspective as the study was conducted in the same field of school food service and within the same school district. Second, from an outside perspective as the researcher had the dual role of being the primary investigator and the supervisor of the cafeteria managers. Having both an “inside” and an “outside” perspective led to what is, hopefully, a more holistic set of findings and discussion.

Ethical and Credibility Stance

This research was guided by Improvement Science theory; however, the researcher did not seek to test changes or document results. Instead, this research sought to reconceptualize improvement by focusing on the reported experiences of the participants to then offer recommendations for future use. According to qualitative researchers, Davis & Buskist (2008), “The purpose of qualitative research is to describe or understand the phenomena of interest from the participant’s eyes, the participants are the only ones who can legitimately judge the
credibility of the results” (p. 100). To help validate the integrity in this qualitative study, the researcher’s relationship with the participants as their supervisor has allowed for prolonged engagement in which critical information has been received over the years from their perspectives. From this perspective, the supervisor, has been able to establish trust, learn skill sets, capabilities, work habits, and expertise of each participant. As part of the job as supervisor, was spending long hours and making continuous visits at the sites/schools interacting, assisting, and observing the operations.

Given the researcher’s positionality and the extensive rapport that the researcher has with the participants over the years, has allowed from previous experiences to develop trustworthy relationships, which is important to qualitative research. Over the years, the researcher has been in communication with these particular cafeteria managers in seeking their insight and expertise when it comes to creating policy, implementing changes for training, and coming up with new procedures on operating within the cafeterias. It’s part of the reason they are being selected as part of the sample for this study because we have had these kinds of honest conversations before. The cafeteria managers are dealing with the challenges firsthand. In this study, the researcher is linking the findings with everyday practices and current moments.

Given the researcher’s position as supervisor for the Department of Food Service, the researcher does have authority over the participants which means there is a potential influence factor based on their responses. The participants were advised to be as open and as honest as possible and that the role of the researcher in interviewing them is strictly from an investigator’s perspective, seeking to learn their thoughts and feelings on the study’s topic. During the interviews the researcher was able to summarize valuable information shared by the participants to affirm the accuracy of their responses. The researcher also reminded the participants that he
would not share his opinions as an attempt to limit any bias in the data. The participants were
given communication in writing and told verbally that their participation in this study, and any
identifiable personal information they provide, will be kept confidential to every extent possible.

**Data Collection**

As a supervisor who works for the KCSD, the researcher served as a research instrument
because part of collecting and analyzing the data was filtered through his own personal lens
(Sargeant, 2012). The data collection tool that was utilized in this study and to address the
research was semi structured interviews. The researcher chose semi-structured interviews
because they are an effective tool for data collection. Berwick (1996) believed, “The more
specific the aim, the more likely the improvement” (p. 2). Semi structured interviews also allow
for flexibility, the participants identity is protected, are easy to visualize and analyze, and the
data collected is usually very detailed. In addition, the participants preferred one-to-one
interviews rather than a focus group. This was due to scheduling purposes.

To collect data, the researcher reached out to each participant individually by email with
a letter of invitation to participate in this study. The researcher was able to conduct face to face
interviews with five of the KCSD’s cafeteria managers as the participants using an interview
guide (Appendix A). The researcher asked the participants key questions in one-on-one
conversations. The schedule for the in-person interviews began a week after the consent forms
were received and after IRB approvals were granted. The interviewing schedule spanned over a
two-week time frame. The schedule was non-directive and had no chronological order in-which
what participants would be interviewed first. Since some of the participants had to work, we had
to schedule a time when it was convenient for them. All interviews were recorded with consent
from participants. Each individual interview lasted between 45 to 69 minutes.
There were eight questions (Appendix A) that each participant was asked. The researcher felt that these eight questions were the most useful in answering the research questions as they are grounded in Improvement Science theory. The eight questions focused directly on the perspectives of the participants who the users of the system are, helped to understand the nature of the variation in performance, and collects answers to ensure that we see the system that produces the current outcomes. These eight questions also allowed the participants to delve deeply and be open with their lived experiences about the challenges. One of the things that this semi-structured interview did in Appendix A, as noted, is ask the participants about their experiences serving on the frontline. Frontline is a term that is understood within this group of participants and used in the context of working during the COVID-19 pandemic, as employees who provide their labor in-person, by risking their health while other staff members work from home. Another specification of this semi-structured interview is that it allows for probing questions to understand the participants’ constructions of reality of working during the COVID-19 pandemic. The probes served as a guide for the researcher to ask follow-up questions. For example, the interview guide starts with a prompt which gives the participants a heads up of what we will be talking about, then asks the question, and follows up with probes if warranted to get more details in depth that addresses the researcher’s questions.

Data Analysis

The researcher, as the primary interviewer, conducted semi-structured interviews as a way of collecting data for this study. The interviews took place over the summer of 2022 lasting between 45-69 minutes. The interview conversations and questions explored the participants experiences from March 2020 until June 2022 (See Appendix A for list of interview questions). The interviews were recorded using the secure video-conferencing platform, Zoom, with the
participants having the option to turn the camera off. To capture the data more effectively, the recording was used to auditorily capture the cafeteria managers reflections on their experiences, for the researcher to go back and reference to, and to aid in the process of transcription.

The semi-structured interviews followed a guide (Appendix A) that asked a number of questions specific to the topics from the research questions, for example, directly asking the participants how they felt about working during the COVID-19 pandemic. All 5 participants were asked the same open-ended questions (See Appendix A). The questions were designed to enable conversations about the different challenges and lessons learned while working during the COVID-19 pandemic. The questions were also based on comparing serving students during a normal school year pre-COVID-19 pandemic as opposed to operating during the pandemic. Using a semi-structured interview method allowed the researcher to probe, ask for clarification from the responses, or ask follow-up questions (Devonshire & Vaughn, 2019). All interviews were transcribed verbatim using a transcription software service and reviewed using the recordings for accuracy.

To answer the research questions, the researcher conducted a content analysis of the interviews to investigate and understand the challenges faced by school nutrition professionals in the KCSD while serving students during the COVID-19 pandemic. Content analysis is used to identify patterns or to reveal valuable information (Kleinheksel et al., 2020) by coding words, phrases or themes and then analyzing and synthesizing the findings.

The researcher used thematic analysis as suggested by Saldaña (2009) to analyze the data and to answer research questions 2a. & 2b. Thematic analysis was chosen as this approach allowed the researcher to find out the participants opinions, see the value in their knowledge and expertise, and to understand their experiences. During the interviews, each participant was
directly asked to describe or point out some of the most important lessons that they learned during the COVID-19 pandemic. Thematic analysis was performed throughout each transcript as the researcher actively looked for common meanings and patterns to derive themes that informs the research questions (Braun and Clarke, 2006). The same process of coding used to code the challenges faced; identifying patterns, creating codes, creating subset codes, and arranging codes into themes was used to find themes associated with the lessons learned. The approach was different as the researcher followed Saldana (2009) outline to thematic analysis, grouping, semantic analysis, and then coding. Nevertheless, the researcher wanted to be thorough paying very close attention to the explicit responses from the questions about the lessons learned. This was filtered through the Improvement Science framework, learning to improve. “Improvement Science addresses reality by focusing on the specific tasks people do; the processes and tools they use; and how prevailing policies, organizational structures, and norms affect this” (Bryk et al., 2015 p. 7-8). Using the Improvement Science framework allowed the researcher to know what kind of themes to expect from the data that revolved around lessons learned or improvement.

Summary

This qualitative study aimed to examine the changes of the current school food program, in the King City School District (KCSD), and the challenges of feeding students during the COVID-19 pandemic through the role of the cafeteria managers as the program operators. The researcher conducted a qualitative research design using an Improvement Science framework through Bryk et al. (2015) first three principles of Improvement Science. Utilizing the first three principles of Bryk et al. (2015) Improvement Science theory allowed the researcher to use a realist approach using semi-structured interviews to receive data from the participants and to
answer the research questions about their realistic challenges and what lessons they learned. In Chapter 4 the findings from the data collection and analysis process are discussed.
Chapter 4 Results

This study was conducted in order to examine the work of school cafeteria managers, through their practices, beliefs, the support needed, and challenges they faced during the COVID-19 pandemic. This chapter begins with a brief description of the participants, the cafeteria managers, who were the sources of data in which the researcher derived the findings of this study. This chapter then presents a discussion of the data gathered to address the research questions. This study used a qualitative research method through the use of semi-structured interviews to gather data. Data were analyzed using affective coding (Saldaña, 2009) and thematic analysis (Saldaña, 2009). The goal was to understand the participants’ experiences and gain insight, and then to identify themes to answer and address the research questions. Therefore, the findings of the data gathered are discussed in two parts which addresses research questions 1 & 2 (2a. 2b.) respectfully. The findings are supported and explained using excerpts from the participants’ shared experiences.

The findings of this study were guided by the following research questions that are restated below. The purpose of research question 1 was to understand the experience of school cafeteria managers by focusing on the challenges faced during the COVID-19 pandemic that could lead to practice improvement. The purpose of research question 2 (2a. 2b.) was to understand the lessons learned by school cafeteria managers working during the COVID-19 pandemic that could inform an improvement agenda and improve practice for future use.

Research Questions:

1. How do cafeteria managers in a large urban school district in Pennsylvania describe the challenges that they and their employees faced while serving students during the COVID-19 pandemic?
2a. What lessons were learned during the pandemic by cafeteria managers that could inform a theory of practice improvement for emergency food service in an urban school district?

2b. What lessons were learned during the pandemic by cafeteria managers that could inform on the inequities experienced when it comes to access to school meals, but also improve service for students and families in an urban school district?

Participants

The participants in this study were a small, selected group of cafeteria managers that are employed at the King City School District (KCSD). To identify appropriate participants, school cafeteria managers were chosen as they represent the study’s topic and can best inform the research questions (Sargeant, 2012). Their purpose in this study was to participate in a research project that is investigating the lived experiences of school food service professionals in a large urban school district as they engage with the challenges of developing innovative practices to ensure that students have access to healthy nutritious meals during a time of crisis in the time period of the COVID-19 pandemic from March 2020 until June 2022. School cafeteria managers were also selected as their perspectives can enhance the understanding of the subject of this investigation (Creswell, 2009) through their personal experience and insight. A total of five KCSD cafeteria managers participated. In order to protect the identity of the participants and to maintain respondent confidentiality, the participants are identified as Cafeteria Manager (CM) CM 1, CM 2, CM 3, CM 4, and CM 5. The participants were not aware of or informed about who the other participants were that participated in this study. Only the researcher knew who each cafeteria manager was and associated their responses accordingly.
Findings

This section breaks down how the researcher organized the presentation of the findings. The findings from the data were broken into two parts to answer each research question respectfully. Research question 1 resulted in the following themes that emerge from the challenges faced: (1) Location, (2) Supply Chain Issues, (3) Safety & Security, (4) Staffing, and (5) Negative Perception. Research question 2 resulted in the following themes that emerged that represent the lessons learned: (1) Flexible Access, (2) Strong Support Systems with Community Partnerships, and (3) Rethinking the Operating Model.

Part of what the researcher found from the data was not just these themes, but that these themes emerged from the codes that were assigned. The researcher analyzed the data according to common words and/or phrases that emerged from the interviews on the topic of the challenges faced and the specific questions that were related or referenced the challenges faced. This process was conducted through manual coding, as the researcher read through the data and manually assigned codes as an interpretive act. The researcher chose manual affective coding (Saldaña, 2009) as the functions of using a software program like Nvivo was overwhelming. Affective coding investigates personal qualities of the human experience, for example, their emotions, or values they have. In addition, using manual coding through content analysis helped to best uncover the participants purpose and reveal differences in their perspectives of what they were saying. It also allowed the researcher to make inferences about the data analyzed. To effectively outline the themes, the researcher reviewed responses creating an initial code set, then went through the codes again and created a subset of codes, and finally defined or sorted the data into categories that became themes. Some codes became themes in their own right, like Supply Chain Issues, as it is an accurate representation of the data, and it represented the codes
incorporated under it. Table 4.1 is an example of how the researcher initially coded. The bolded words and phrases indicate the assigned codes.

**Table 4.1**

**Coding Process**

Question: What were some of the consistent challenges faced while serving during the COVID-19 pandemic?

<table>
<thead>
<tr>
<th>Participants Responses</th>
<th>Assigned Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Just going into work every day. It was a scary time. A new time. I was always concerned with wondering how fast can you get it.”</td>
<td>Fear</td>
</tr>
<tr>
<td></td>
<td>Health &amp; Safety</td>
</tr>
<tr>
<td></td>
<td>Unknown</td>
</tr>
<tr>
<td></td>
<td>Uncertainty</td>
</tr>
<tr>
<td>&quot;Food deliveries were always messed up. You never knew what you were going to get. Deliveries didn’t come on time. What you ordered would be substituted with something different and the case quantities never matched, so then you wouldn’t have enough servings. It was so challenging trying to figure out what to serve some days.”</td>
<td>Disruptions</td>
</tr>
<tr>
<td></td>
<td>Uncertainty</td>
</tr>
<tr>
<td></td>
<td>Replacement</td>
</tr>
<tr>
<td></td>
<td>Out of Stock</td>
</tr>
<tr>
<td>&quot;Staffing was a major issue. I’ve had to perform my job and the job of the workers. This is the hardest I’ve worked in the twenty years I’ve been here.”</td>
<td>Labor Reductions</td>
</tr>
<tr>
<td></td>
<td>“Jack of all Trades”</td>
</tr>
<tr>
<td></td>
<td>Burnout</td>
</tr>
</tbody>
</table>

The data was extracted and coded into manageable content categories and subcategories. These categories are indicative of research question 1. The analysis of the interviews was evaluated through an Improvement Science lens. The data collected was organized using Improvement Science tool, Fishbone Diagram (Bryk et al., 2015). The “Fishbone Diagram” (Figure 4.1), as displayed below, was used as an organizational tool to identify the most significant repeated challenges.

**Figure 4.1**
This fishbone diagram is a visual representation of the significant challenges found and serves as a graphic representation of the participant’s experiences. “Each major bone represents a key factor thought to contribute to the unsatisfactory outcomes” (Bryk et al., 2015 p. 68). The main cause of the problem is placed in the head of the fishbone, in this case it’s the challenges to serving students during the COVID-19 pandemic. Next, the bones or branches represent major categories of causes of the problem, in this case they represent the challenges. These challenges are major factors sorted into useful categories on the fishbone diagram that represents the themes to answer research question 1. For example, one of the factors that was explicitly repeated was Safety & Security as all 5 participants shared experiences related to the challenge of being physically worried about their health and wellbeing, while serving on the frontline. Finally, the layers under each bone are subcategories. The subcategories are additional details or “causes of
the problem” (Bryk et al., 2015) that have been made apparent by the participants that help to flesh out the major factors. The value in using a fishbone diagram allows an organization to see the problems by focusing on causes of the system rather than symptoms (Bryk et al., 2015), so that they can be addressed.

**Research Question 1**

1. How do cafeteria managers in a large urban school district in Pennsylvania describe the challenges that they and their employees faced while serving students during the COVID-19 pandemic?

The main challenges that were encountered while serving students during the COVID-19 pandemic in the KCSD are categorized by the following five themes, (1) Location, (2) Supply Chain Issues, (3) Safety & Security, (4) Staffing, and (5) Negative Perception. The following paragraphs provide a description of each challenge as a theme and uses excerpts from the participants as supporting details.

**Location-Sites**

School closures jeopardized access to school meals. However, like many other school districts, the King City School District food service professionals sprang into action to ensure that students would still have access to healthy nutritious school meals. They created a new model of serving and established multiple serving sites all around the city. The location of each of the 5 selected sites, Site North, Site South, Site East, Site West, and Site Central, was part of an implementation plan to ensure that each of the main areas in the city had a primary site that offered the same extra resources and supplies for families to have access to as a response to the COVID-19 pandemic. While these locations were successful at offering multiple resources to
help provide relief and support for families, the school food service personnel who had to operate them found them to be challenging.

Location of the sites or issues that fall under this category were addressed by 3 out of the 5 participants. Cafeteria Manager 1 stated, “My school is not on a bus line. It’s located in an odd area. You’d have to walk up a couple hills from the main road where the bus lets off to get there. I think this might have impacted our participation.” Most school districts from comparable cities sought to maximize program reach by establishing school meal distribution sites in central locations like community centers or churches (Kinsey et al., 2020). One take away from this theme is thinking about how best to improve convenience for all families and taking into consideration their means of transport. Cafeteria Manager 1 was the only participant that brought up the issue and discussed the closer of buildings when a Covid outbreak occurred with a few school-base staff. Cafeteria Manager 1 stated,

I didn’t like it when we had to relocate to another building because an outbreak occurred, and the building had to be deep cleaned. The custodians could have caught Covid and the building closes (sic), but we had to move. They should have just let us go remote until the building was usable again.

The researcher felt that this point was important to note because for the school food service professionals at the KCSD their serving locations were changing addresses. The researcher further probed this issue with Cafeteria Manager 1, learning that from her opinion, this was not a good safety or mitigation strategy.

The theme of location just didn’t cover the physical placement of sites in the city. When analyzing the data, the researcher coded the location of serving whether it was inside, outside, or
in the cafeteria, etc. Cafeteria Managers 4 and 5 talked about multiple issues that impacted those areas and the researcher coded accordingly. Both CM 4 and 5 revealed challenges from outside factors like the weather, due to the location where they were serving. Cafeteria Manager 5 recalls, “Serving outside or at the front door was hard because in the summer it was too hot or in the winter it was too cold. When it rained, parents really didn’t want to get out of their cars, so we had to run back and forth. Working in those types of conditions isn’t really in my job description.” Cafeteria Manager 4 expressed, “It was like challenge on top of challenge. We were outside in 80-to-90-degree weather. Wearing masks! You’re sweating, you can’t breathe, and we had no protection from the sun.” Outside factors such as inclement weather can affect school operations during a traditional school year. One thing to be considered from both Cafeteria Managers 4 and 5 perspectives, is that when the weather changes, the distribution and serving strategy needs to change too.

Supply Chain Issues

All 5 participants reported that supply chain issues have been a major challenge for their school meal program. Their overall accounts express how the supply chain issues have made serving students during the COVID-19 pandemic even more difficult as problems of orders not arriving and food items not available continued. Question 5 in the Cafeteria Manager Interview Guide (Appendix A) references the nationwide supply chain issues and how this problem has disrupted school meal program’s ability to serve school meals. Each participant was asked how the supply chain issues affected their operation. As follows, Cafeteria Manager 1 described her concerns from her experience on this issue,

The supply chain issues are impacting everything everywhere. In the stores, in the restaurants, and in the schools. I swear, I can’t even
remember the last time I received an order and it being half right. It's just ridiculous. Some days I didn’t even know what to do.

Part of the cafeteria manager’s job is to provide flexibility and variety in food offerings to meet the daily dietary needs and accommodations of students (Greenhawt, et al., 2020). However, due to the supply chain issues this requirement became challenging in itself. Cafeteria Manager 5 reported anecdotally,

I have students with severe allergies and some who can only eat gluten free products. Every time I looked up most of what I ordered was being substituted or not sent at all because items were either discontinued or out of stock. I was feeding some of my students just cereal every day because that’s all I had to accommodate their dietary need. Every day I had to explain to the teachers and students that I didn’t have what they wanted or needed due to the supply shortages.

The supply chain issues brought on shortages and many substitutions, but how would a cafeteria manager react when it leaves them with nothing? Cafeteria Manager 2 recalls and shares her fears of no deliver,

Remember the first time when I didn’t get my delivery? Oh, geez that was something. Well, you know I usually get my food delivery every Wednesday and it usually comes around the same time each week and we receive it and put it away. I know there’s been times when the delivery has been late, but we usually receive some type of notice. I usually have extra food on hand and prepared to handle a delay. However, since all the supply issues and food shortages been going on my freezer has been bare.
I remember last year the first time when I received no delivery. I was told the delivery was going to be late and it would show up the next day. Well yeah that made me nervous. Okay, well the next day came and still no delivery. I used what I could to feed the kids that day but wasn’t able to prep for the next day. The next day came and still no delivery. I was able to drive to another school to get product to feed the kids that day. But now that was a Friday. I didn’t know what I was going to do come Monday. I figured there would be no deliver over the weekend. I remember all I could do was hope and pray that the truck would come that Monday morning. When that Monday came, and I had absolutely no food. I honestly didn’t know what to do. I remember my heart was pounding as cause (sic) I knew the students would be arriving for breakfast in like 2 hours. Thank God my supervisor was able to get me some product. I remember being so scared that time.

Cafeteria Manager 2 recollection of not getting a delivery as a result to the issue of the supply chain shortages, describes the emotional strains that school food service staff has had to face while trying to provide their students with timely nutritious meals. To gain more insight on how the supply chain issues affected the school meal program at the KCSD, Cafeteria Manager 3 described how difficult serving meals became,

The supply chain issues really complicated things. Some days we were serving the same thing at least twice in the same week. The students really got tired of grilled cheese and missed having PB&J’s. I think it really got
bad when we had no trays to serve on. At one point we were using salad container lids and even those weren’t lasting.

The ongoing challenges from the supply chain issues as depicted by Cafeteria Manager 3, shows how school food service operations had to create new approaches using limited resources like using salad container lids as serving trays. Answering question 5 from the interview guide, Cafeteria Manager 4 responded with fear and trepidation. “Oh, I don’t even want to think about it. We barely got through this school year with all the supply chain issues going on. I’m concerned about next school year. It’s not getting any better.” While the focus of this research is based on the time period of March 2020 to June 2022, it is important to note that this topic/issue is still causing significant concern for the cafeteria managers at KCSD as part of their responses was focusing on the challenges, they perceived for upcoming 2022/2023 school year still to come. It is important to acknowledge that this time period has continued implications for future years. Supply chain issues impacted from the pandemic, such as, closing of food production facilities, lockdowns, and consumers stockpiling products for food security continue to impact (Barman et al., 2021).

**Safety & Security**

Food system workers emerged as frontline workers and had to learn how to adapt to the everyday challenges that COVID-19 presented to the workforce with little to no guidance (Park et al., 2021). The school food service professionals at the KCSD are well-trained in food safety and well versed in the workplace safety rules. However, the COVID-19 virus has prompted a rise in new safety concerns that school food service professionals at the KCSD had to learn how to face and combat. When asked, what did you experience or how did you feel about working during the COVID-19 pandemic, Cafeteria Manager 1 response was full of emotions. “I felt
grateful to have a job and to be working, but then also fearful and aggravated. Just going into work every day. It was a scary time. A new time. I was always concerned with wondering how fast can you (sic) get it.” Cafeteria Manager 1 continued in describing her experience as challenging,

It became challenging and frustrating because we are basically risking our lives. Sometimes I didn’t feel safe. We didn’t have any real protection at the time. There weren’t any real guidelines. We just made them up as we went. There was (sic) no vaccine and people didn’t want to follow the mask mandate. What were we to do?

Rules regarding safety protocols were created as situations arose as operating during the time of a global pandemic was new to the KCSD and no previous guidance had been established. Since the school food service professionals at the KCSD were one of the only groups of staff working in-person at the schools, a lot of their challenges faced when it came to safety and security were used to set precedent. For example, questions that needed answered were, what were the reporting procedures and who responsible for testing and screening food service staff? Since students and teachers are remote, what’s the procedure on how to handle snow days and ensure the safety for food service staff?

Like the theme, Supply Chain Issues, both the words Safety & Security were consistently used throughout the interviews that the researcher found them as a repeated pattern and felt that combined they should be represented as a theme. The researcher also thought it was best to use Safety & Security as a theme because it defined or represented many codes or subcodes that were found more than two dozen times while analyzing the data like, safe, prevention, health, safety
measures, security, well-being, at-risk, protection, shield, and care. Cafeteria Manager 2 described this theme through the challenge of being at-risk,

There were many safety concerns for me while working because I was at-risk. I felt scared because anyone could get Covid. I heard some really nasty things from people who had it like they lost their sense of taste, their sense of smell, or got very very very deeply sick. I was concerned not just for my own health and well-being, but because I have a little boy, a little boy he’s six years old and he’s type one diabetic and I didn’t want to catch something and bring it home to him. He is easily susceptible, so I need to shield him from that.

Referring to the responses about the relationships and interactions with students, Cafeteria Manager 4 recalls her experience through a safety response, “It was so hard not being able to see the students everyday but then when we did finally get to see them, we couldn’t hug them, give them high fives or anything. They weren’t used to that treatment, and neither was I. But as a safety measure we had to keep our distance. It was hard trying to explain to them that you can catch Covid from physical touching.” What cafeteria manager 4 is describing has implications for relationship building. This is illustrated back in Chapter 2, Cafeteria Manager’s Perception, on the close, positive, and supportive relationships of cafeteria personnel and students.

The challenges of working during the COVID-19 pandemic brought on other Safety and Security concerns that didn’t necessarily focus on being exposed to the COVID-19 virus or trying to prevent contracting it. Cafeteria Manager 3 and 5 detail their experiences with Safety & Security and the challenges they faced. Cafeteria Manager 3 detailed,
I was grateful to be working during the pandemic, but the downside to it was knowing that I was missing out. You’d hear about the long lines at the stores or how you know people were buying out the stores or everything up. People at home were able to go out and get what they needed. I couldn’t do that because I was at work. That was a real health and safety concern for me. And that made me nervous because I thought to myself, well how am I supposed to take care of myself and I’m working. All of this is going on, and you know, the stores were closing early. People are off from work and they’re able to you know meet the demands of their life, but I have to be at work.

Cafeteria Manager 3 had brought up a significant issue that the pandemic has created and that the school food service professionals at the KCSD have had to grapple with. It’s the challenge of fight Coronavirus or student hunger. It’s the predicament of trying to best take care of yourself or trying to take care of those you deeply care about. Cafeteria Manager 3 wellbeing was at risk because she had to work instead of being able to go to the stores to get essential needs for her own health like food, water, clothing, toiletries etc. Having to work made it even more difficult as limited store hours, long lines, and supply chain issues were all negative factors contributing to not being able to get essential needs to live.

Cafeteria Manager 5 was worried about her personal well-being as well serving on the frontline. “One of the biggest challenges for me was sometimes being there by myself. Most of the time I had an employee with me but still we were just two older women standing in front of the door out there alone. That was a real safety and security issue because we had no one else. There was the custodian, but he was somewhere inside the building who knows where.”
Cafeteria Manager 5 seemed to be the most troubled when sharing her experience as the researcher could read her body language through the shaking of her hands and head. She had stated towards the end of her interview that, she, “felt defenseless with it all.” The researcher took this as an overwhelming reaction from her to the whole experience of serving students during the COVID-19 pandemic.

Staffing

Maintaining adequate staffing has been a primary objective for the food service department at the KCSD for years. However, despite the numerous vacant positions, very few people have been applying to fill them. Now, the disproportionate impact of the COVID-19 pandemic on the labor force that is being felt throughout the country (Gomez, 2022), has made it even more of a heavy burden on school food service operations. According to Cafeteria Manager 3, “I don’t think we’ve hired any new managers over the past two years, maybe just a few workers, but I know we have lost a good bit of staff. It was hard enough before the pandemic to get staff, now it just seems almost impossible because no one wants to work.” School cafeteria managers are now faced with coming up with strategies to manage the staff shortage on top of managing all the other challenges brought on by the pandemic as the balance of resignations is unparallel to the number of staff hired.

While analyzing the data, Staffing has been repeated a couple dozen times by the participants, and it is apparent that the staff shortage in the KCSD food service department has been a huge factor in a lot of the current challenges faced when trying to implement new ways of serving during the March 2020 to June 2022 time period. Cafeteria Manager 4 stated, “I honestly feel like no matter what we did or any ideas that we came up with being short staffed always seemed to get in the way or was the reason why somethings were too challenging when they
shouldn’t be.” Basically, what Cafeteria Manager 4 is describing is that the staff shortage poses more of a challenge to the sustainability efforts to facilitate any new innovative ideas. The conversation continued with the researcher probing for more specific examples. Cafeteria Manager 4 was able to oblige,

Majority of what we do is hands-on. Well, if you don’t have the hands to help, then the work falls on us. Even with us offering grab and go meals instead of full-service, someone has to pack them. The process should have been easier on us, but I had to prep, pack, and serve on top of my other responsibilities.

Overall, all the participants’ experiences were very similar to Cafeteria Manager 4 when they discussed staffing. After reviewing the data, it is evident that the staffing challenges have led to resignations, innovations not really working, and cafeteria managers having to pick up the slack in performing other duties on top of their own.

Negative Perception

The last theme, Negative Perception, with respect to research question 1, became another objective in this study as a result of the discussions around the negative perceptions of school food service profession. The theme of Negative Perception represents how the participants felt that they were taken advantage of, how they have always felt they are taken for granted, and how their position within the schools is not seen as important within the education profession. While closely listening to the participants’ personal accounts, the researcher took notes, jotting down their thoughts and feelings about having to work during the pandemic and how they thought they were perceived by other district personnel for doing so. While thoroughly examining the data, some of the code words found in connection to phrases or responses given by the participants
like misunderstood, overlooked, used, non-professional, of little significance, and not important shows that these feelings stemmed from a lack of support and a lack of misrepresentation in the school/education system. This coupled with expressing the length of time these thoughts and feelings the participants have festered long-term over the years of employment, shows the theme of Negative Perception has plagued the food service staff in the KCSD for years. In contrast, looking back at Chapter 2 section, Cafeteria Manager’s Perception and Chapter 3 section, Participants, this research aimed to develop a theory and provided detailed information in both sections to shed some light on how school cafeteria managers are educators, how they contribute to the community, and help shape the culture of schools by caring for and putting students first. While discussing how food service staff educates the student’s Cafeteria Manager 4 compares how the cafeteria is similar to the classroom. Cafeteria Manager 4 stated, “We have to have strong listening skills. The students want to be heard, so I encourage them to give their input or to ask questions about things they don’t know. Like, it’s crazy how many students don’t know what a baked potato is but that was a learning opportunity.” Cafeteria Manager 4 continued, “I try to implement new ideas on how to communicate with the students like making a suggestion box. I want them to feel welcomed and valued like they do in the classrooms. The cafeteria should be no different.” The cafeteria managers in the KCSD treat their cafeterias like a classroom. They offer interactive learning opportunities like doing taste tests with the students. In addition, they create school gardens where students learn to grow fruit and vegetables are eventually used and/or offered as part of the lunch.

Table 4.2 captures the excerpts as reactions from three of the participants responses found throughout the interviews that centralize on the characterization of the negative perceptions of the school food service profession. It is important to note that these are not responses to any
direct questions, but attitudes shared as responses to the other questions from the interview guide (Appendix A).

Table 4.2

*Cafeteria Manager Experience of the Negative Perceptions & Supporting Excerpts*

<table>
<thead>
<tr>
<th>Cafeteria Manager Experience of the Negative Perceptions of the School Food Service Profession</th>
<th>Supporting Excerpts</th>
</tr>
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<tbody>
<tr>
<td>“We did the best we could to continue to offer meals to the students. Where was our thanks? But if it were teachers out there, they’d be getting all kinds of recognition. Just shows how much we are not appreciated!” (CM 1).</td>
<td></td>
</tr>
<tr>
<td>“It was like everything was being decided for us without us having a say in anything” (CM 1).</td>
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</tr>
<tr>
<td>“We’ve always gotten treated and talked down to like we are nothing by other staff in the building. They act as if the students can be fed without us. Well, I’d like to see them try and do what we do” (CM 3).</td>
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<tr>
<td>“While other jobs were offering higher pay and sign-on bonuses, we were expected to do more work that really had nothing to do with food service. It was like we were just there to be used. I don’t think our feelings were considered at all” (CM 3).</td>
<td></td>
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<tr>
<td>“In my experience over the years, the focus has always been on catering or fixing the problems faced by the teachers. Well, what about us? We work here too and just as hard. But they don’t see us as important. We have always been overlooked because we are considered as non-professionals” (CM 3).</td>
<td></td>
</tr>
<tr>
<td>“We interact and teach students about good healthy food in our line of work as well. How’s that different from what a teacher</td>
<td></td>
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</table>
does? It’s unfortunate that we are just looked at as the help” (CM 3).

“You know school food service is looked at as the bottom tier. Everyone complains about the food they always say it’s nasty. They associate the food with the people who make it so we get looked at like we are trash” (CM 4).

In continuation, Cafeteria Manager 3 really expanded on and provided the most context out of all the participants surrounding this issue. When asked to describe what ideas or innovations that didn’t work her response was as follows,

Things that didn’t work, um. I don’t know if this is part of the answer or relevant to what you’re asking, but I didn’t think being made to take on all the extra responsibilities was fair or well it just wasn’t right. And I know I can tell you this but with the produces boxes and other things we handed out, they could have used other people. No not me and my staff. That was burdensome. We were forced to participate. I thought that was a bit much that really rubbed me the wrong way. Even Thanksgiving I didn’t particularly care for that because I felt like I was being used.

Cafeteria Manager 3 had further talked about her vast experience over the years working as a school cafeteria manager and how not much has changed even in a time of crisis working during a pandemic;

You know after working all these years at some point you are tired, and a bit worn out but that doesn’t matter to them. And it wasn’t as if you know I had not stepped-up other times as well over the years, but this time I just
thought I just knew things would be different because of our safety. Well, we were expected to do everything, regardless of any of that or what we want. It had to be done anyway.

The cafeteria managers and their staff were one of the only groups reporting to the school buildings to work in-person. Because of this, any resources or materials that were donated by community organizations for students was expected to be distributed by the food service staff. In addition, when stakeholders such as parents or caregivers showed up to the schools requesting information on things related to instruction or learning, the food service staff had to act as a liaison. When Cafeteria Manager 5 was asked how her job has changed from a normal school year to working during the pandemic, she replied, “My job hasn’t changed. I just got a lot more responsibilities.” The job of a school cafeteria manager was perceived to have not changed because they are dedicated to taking care of students. The COVID-19 pandemic did not change the commonality of the job, which is serving students. It just brought on uncommon challenges that added more work to the job. Overall, despite the extra effort and responsibilities taken on, the cafeteria managers in the KCSD felt that they are of little significance and that there’s a negative perception of them when it comes to their purpose.

**Research Question 2a and 2b**

2a. What lessons were learned during the pandemic by cafeteria managers that could inform a theory of practice improvement for emergency food service in an urban school district?

2b. What lessons were learned during the pandemic by cafeteria managers that could inform on the inequities experienced when it comes to access to school meals, but also improve service for students and families in an urban school district?
When analyzing the lived experiences of the participants, three themes emerged from the lessons learned. The themes are (1) Flexible Access, (2) Strong Support Systems with Community Engagement, and (3) Rethinking the Operating Model. Each emerging theme is discussed below with supporting excerpts from the participants.

**Flexible Access**

When asked the direct question; what important lessons were learned during the pandemic that we really should keep in mind, and address in plans to handle emergencies in the future, all 5 participants responded with being flexible and/or having flexibility in access to meals. After the researcher probed their answers for further explanation, a lot of their follow-up responses centered around having flexibility in mindset and being open to change. For example, Cafeteria Manager 2 stated, “I learned to be more flexible, and you know basically when you don’t have something you learn to make do. There was so many changes and differences in what or how we use to do things, so I learned to be more alert but to go with the flow and be more open minded to them too.” Cafeteria Manager 2 lesson is about being able to adapt to new circumstances and being responsive to change. Working during a pandemic you have to able to see and understand that change is going to occur. Being flexible means, you have to be able to act appropriately and effectively. For example, handing out meals in the evening after being asked to serve meals outside of your normal operating hours to meet the needs of students who are working remotely.

Normally, students are required to gather and eat their meals on site, in a group setting, and during the established breakfast and lunch time periods. However, in a public health emergency, USDA has the authority to waive the congregate group setting meal requirement, which is vital during a social distancing situation (USDA-FNS, 2020). For the time period of
March 2020 to June 2022, school meals were allowed to be taken home. Cafeteria Manager 5 describes her experience with the flexibility in policy, “At first it was hard trying to navigate through the misunderstandings on what was allowed now compared to what we were accustomed to, the rules and regulations because we were no longer cooking and serving. I’ve learned you definitely have to have patience and the willingness to explain what’s going on to everyone.” Learning from the participants shared accounts of working during the COVID-19 pandemic, it was apparent that the Department of Food Service in the KCSD was able to setup Grab & Go sites utilizing 27 school buildings out of the total schools in the district that operated Monday through Friday, except for holidays and school vacation days. The Grab & Go sites were open for two serving sessions from 7:00am to 9:00am and then again from 10:00am to 1:00pm while schools were closed. When schools opened for hybrid learning and then eventually, back to full week in-person instruction, grab and go meals were available from 7:00am to 10:00am at any school in the district, for those families of students who opted to stay remote. Cafeteria Manager 1 describes one of the lessons she learned when it comes to the flexibility in access that was instituted, “I think we went above and beyond to make sure the students got meals. But one of the things I’ve learned is there’s no one-size-fits-all approach to this.”

The Department of Food Service wanted to provide flexibility for students and families to be able to pick-up meals. To extend access, Cafeteria Manager 3 described the meal service strategies that were designed to ensure that students continued to receive the nutrition they need. “Families could pick up grab and go meals without their children being present. They could pick up both breakfast and lunch at the same time, or we even allowed families to pick up a full week’s worth of meals at a time to limit the number of trips and travel time”. The food service staff has even gone to lengths making direct deliveries to student homes for those families who
are in dire need. Cafeteria Manager 5 recounts traveling to families home delivering meals, “I remember we had one family in particular that wasn’t able to go out because the mother was at home and had really young kids and her husband was sick. So, every Monday I drove to their house and dropped off a weeks’ worth of meals. Sometimes I’d get to see the kids. Most times I just left the food on the porch.” The ultimate goal was for continuation of meal service and providing multiple ways of access for students and families to receive healthy nutritious meals.

Cafeteria Manager 4 response to the direct question; what important lessons were learned during the pandemic that we really should keep in mind, and address in plans to handle emergencies in the future, was focused on the essential need for flexibility, “One of the important lessons I think we learned is that students need to be able to get their meals. We already know that students need food to learn and to do well in class. But with them at home they need different ways to be able to get them. The 1-hour lunch they are giving them is not enough time to get here and go back home. I think us putting together multiples options for them to get meals was a great idea.” Cafeteria Manager 4 was able to make the connection between the importance of school meals and how they are needed to for students to learn. By learning to offer different solutions to increase access to meals, not only are students being fed nutritious healthy meals but increasing their ability to focus and learn while in school.

**Strong Support Systems with Community Partnerships**

One of the lessons learned is having a Strong Support System with Community Partnership is very beneficial in addressing socioeconomic issues. 3 out of the 5 participants acknowledged that the different community supports, and contributions received showed a significant commitment to the students and helped to create better opportunities of access for families to get essential resources needed. Cafeteria Manager 2 stated, “One of the ideas or
innovations that definitely worked was having the extra supply boxes. It was amazing to see how so many organizations offered all the extra supplies to support the kids, to support us. I know I was able to take extra produce and stuff home to my family. I remember how the cars were lined out to the street. Everyone was so grateful.” In spite of the fact that the COVID-19 pandemic created rising challenges to access to school meals, it also created a unique opportunity for community members to work together to keep students safe and feed.

From the established 27 sites, a diversity of community organizations worked through the sites to provide volunteer services and essential needs such as clothing and health supplies, technology, activities, and games. The sites also became information centers regarding additional resources for those in need. Five specific sites, Site North, Site South, Site East, Site West, and Site Central, distributed produce boxes, dairy boxes, holiday meal boxes during each major holiday, and other essential resources provided from community partners, on top of offering grab and go meals. Cafeteria Manager 2 recounts her experience working at Site West with all the multiple resources being handed out,

I think the setup in the way we did things provided an extra layer of security. We handed out product at the door so no one would enter the building and cars were able to drive up and we placed items in their trunks. This helped to mitigate transmission of COVID. Everyone was so thankful for what has been done, and for all the different products available especially because you couldn’t get some of these items at the store. Our vendors offering the different products like this was a very essential need and it warms my heart knowing that we were able to support and be there for our students.
Detailing what the participants described on the serving model that was designed to help the students, families, and the community it is evident the motivation for the work the cafeteria managers do is guided by a set of values and concepts that informs their thoughts and actions. This is an example of Bryk et al. (2015) Improvement Science model of learning through networked communities and how it works through the lenses of engaging learning and cooperation processes. The cafeteria managers are not just employees who are serving on the frontline, but also advocates who are enacting these processes into their daily practice and through community partnerships.

The researcher touches base on Bryk et al. (2015) Principle 6. *Accelerate Learning Through Networked Communities*, in Chapter 2. The focus of this principle centralizes on how serving students school meals during the COVID-19 pandemic crisis has been a true testament of how a community can come together and create a positive outcome for students and families. Working off an Improvement Science framework, Improvement Science invites everyone affected by the existing problem to collectively learn their way together into stronger performance and better outcomes (Bennett, Grunow, & Meyer, 2018). Networked Communities is shown to be a powerful vehicle as well, for bringing about change for students getting access to meals during a pandemic crisis. Stakeholders play a critical role in the decision making and helping to improve the food service department when it comes to feeding the students. The Department of Food Service in the KCSD, has a sub-committee group composed of different stakeholders that include participation by a diverse group of students, parents, community partners, health officials, local leaders, cafeteria managers, and district staff that work together. Each member has their own expertise and a perspective to offer, but the commonality that everyone has is to change the way in which families, schools, and communities work together to
create positive outcomes for the students during the pandemic. Cafeteria Manager 5 shares her experience of being part this network community,

I remember when we were in the discussion groups. I really learned a lot from all the different partners and such. They all had different ideas to offer, and everyone worked really well together. We were able to come up with different strategies to get meals to the students. Part of my job was to pack a week’s worth of meals every Monday for the food bank to come pick them up and deliver them to family’s homes.

Community Partnership involves implementing effective strategies. By everyone being able to do their part and collaborate with each other, like the example CM 5 provided, it allows each stakeholder or group to participate in a meaningful way and creates solutions to best serve those in need.

Now, between virtual remote learning, hybrid schedules, and in-person instruction, the model for serving safe, healthy, and nutritious meals has become more challenging than ever before. The department of Food Service in the KCSD knows how critically important it is to provide meals to students during this pandemic and what those efforts look like to navigate this new reality. In response, the department of Food Service was able to address the problem and come up with a new system by working with the community and expanding access to meals. Cafeteria Manager 4 recounts, “One of the lessons I learned was is that you definitely have to have open communication. There’s so much going on. We were basically the only ones at the schools, so parents and people were always bringing their questions to us.” The researcher probed CM 2 about the questions asked. It was found that a lot of the questions had to do with
how to access information on the established sites such as what’s being offered, serving times, and other locations.

Through Community Partnerships, the food service department worked in conjunction with the city’s Department of Parks and Recreation to establish over fifty grab and go sites all over the city for convenience, so students and families could go pick up meals. All Grab & Go meals for each of these sites were provided by the department of Food Service in the KCSD. The Grab & Go sites consisted of twenty-seven of the KCSD’S schools, recreation centers, churches, police stations, parks, and hubs. This information was posted on the district’s website, Citi Park’s website, and communicated through social media and radio.

Overall, in the process of learning how to create more effective solutions to serving students during a pandemic, is by having a Strong Support System with Community Engagement.

Rethinking the Operating Model

The last theme from the lessons learned was Rethinking the Operating Model. This theme is based on identifying what kinds of support can be implemented or what changes can be made to better plan for future emergencies. Learning from the challenges experienced by the participants, it is implied that the cafeteria managers in the KCSD had to contend with a new complex way of operating. From their compiled responses, and after coding the data, one key lesson to be learned for future plans is that the way of operating would need to change. All the participants talked about the supply chain shortages and its effects in great detail, but they also focused on how the “system” or process setup from placing orders to handing out meals needs to change. Cafeteria Manager 5 accounts,
We really couldn’t project how many kids we were going to feed. That made things complicated when it came time to order but then when you’re ordering your trying to save money and not waste food, so you don’t want to order too much. I think things could be different for next time if this ever happens again if we can get a general list of students in the area.

School meal participation diminished as students were at home learning remotely. What would help with planning for future emergencies when it comes to effective ordering would be if the school cafeteria managers could be provided with a general census of students in the surrounding area.

Cafeteria managers place their orders into the online ordering system based on average participation rates. The purchaser then receives the orders and compiles them to procure foods through the established vendors and distribution companies in bulk form. These same steps are completed in each serving phase (schools shut down, hybrid, and full week in-person instruction). However, this process was very difficult and time-consuming as a lot of order adjustments had to be made because of the fluctuating daily student attendance and from all of the emails about out-of-stock items. One of Cafeteria Manager 3 lessons for future plans was, “If there was a way for either us or the vendors to come up with a system that lets us know what inventory is on hand then I think we could have been able to order a lot better. Every order we did we were placing blindly then we’d get so many substitutions or just the wrong items in general.” Cafeteria Manager 3 is describing how hard things got especially when it came to ordering for the school meal program. Unfortunately, the COVID-19 pandemic created a complicated process of supply chain logistics for school food service operations.
Since the COVID-19 pandemic has put tremendous pressure on farming and food supply chains world-wide, it has been challenging to procure food (Baker, 2020). Other issues such as lack of transportation due to labor shortages, price inflation & rising food costs, and record-high fuel charges have also affected the food service operational process. Cafeteria Manager 4 understood the impact the supply chain issues had on the operation but offered a recommendation,

When we shut down, I was first placed at a school but unfortunately, no one ever came. I was moved to site Central and there wasn’t much participation there either because up the street at the community center they were also handing out meals. This was causing us to waste food that was already hard to get because of all the shortages. Again, that was disappointing. I think what should have happened was that we figured out who else was offering meals in the community and either work off them or had better communication with them that way we were not competing.

The COVID-19 pandemic placed significant pressure on the school cafeterias as serving became even more of a challenge once hybrid learning and full week in-person instruction began. Cafeteria Manager 2 described the challenges to this serving style, “Oh, you know what was very challenging, having to make grab and go meals every day, make meals for the learning centers, and prepare the meals for the day for students who were in school. So, doing the triple work was very difficult just to make sure children were fed. We were not used to this. This is something that has never happened before.” The school food service professionals in the KCSD were faced with a new challenge of preparing and serving meals for both students who were in school, and for students who were remote. The cafeteria staff was responsible for
bagging/boxing grab and go meals, prepping and cooking hot meals for in school consumption, and being at multiple serving locations whether at the front door to hand-out meals or down in the cafeteria serving breakfast and/or lunch. Cafeteria Manager 1 stated, “Oh it was ridiculous the way we were setup. Honestly, I don’t know how they thought we could serve in so many places at once. Part of the issue is that we didn’t get to be a part of those conversations when they were deciding things. I think if they would have gotten our input, we could have told them what works best.” Cafeteria Manager 1 brought up a good point in how districts implement one-off solutions that never really get readdressed for improvement and how they are often decided without any input of those who are going to be affected by it. Asking the cafeteria managers for their perspective on the serving setups inside the schools would be beneficial as they can speak on any perceived barriers.

This theme is important, because it allows us to see and understand the series of the action, the multiple steps included, and how things are managed in the process of school food service operations. However, any of the various COVID-19 challenges, like supply chain shortages, uncertain reliability of delivery, and staff shortages can create disruptions in any area like ordering or serving location and interrupt the whole process. This results in issues an ineffective operating system, but more importantly, students not having access to healthy nutritious school meals. Learning from these challenges and putting supports in place can lead to better ways to improve implementation for future use.

**Food Insecurity**

This study aimed to examine the inequities experienced by students through the perception of school cafeteria managers when it comes to access to school meals through the prevalence of food insecurity during the COVID-19 pandemic. To critically explore the
experience of the inequities the participants were asked in-depth questions about the impact of food insecurity when it comes to students having access to food and to offer recommendations to improve service for families who maybe experiencing food insecurity. Unfortunately, the findings in the data did not warrant lessons learned as the participants responses challenged research question 2. B.

All the participants did not have much to say or have any suggestions to offer on this topic. Two of the participants were unfamiliar with the terms until the research further elaborated on meaning. Cafeteria Manager 1 stated, “Oh I’m not sure. I don’t think we really have students that might be food insecure. Maybe a couple but they always have food.” The researcher sensed from analyzing the data and watching the in-person responses that one lesson that can be learned is educating school food service professionals on food insecurity and knowing what to look for. Cafeteria Manager 4 answer about the inequities after being defined by the researcher was, I think well maybe one or two students they might have some food insecurity because they always seem to be the most grateful to have something to eat. And now I feel bad. I feel bad because a lot of students waste so much like they will take a whole tray and literally throw it in the garbage just like that. And this is good food. You know fresh fruit and everything. It’s very hard you would think. None of these kids need a free meal the way they act.

Cafeteria Manager 3 response coincides with Cafeteria Manager 4 opinion, but it also implies that through the extra benefits offered by the federal government could have masked food insecurity. “I think they all might have had too much food. You figure all the stimuluses and food stamps being given out they had plenty of access. I know once families started getting their
PEBT cards our participation drop big time.” The state Department of Human Services issued Pandemic Electronic Benefit Transfer (P-EBT) to all families with students in the KCSD which supplied cash value to be used at grocery stores. Cafeteria Manager 3 brings up a good point in how one essential benefit to helping families can hinder or compete with another benefit. In this case, the KCSD was offering free school meals but with the introduction of the PEBT benefit, it caused sites to lose participation. At the same time this shows a history of food insecurity. Families were reliant on the Grab and go before receiving their P-EBT cards, then likely they need the extra support to not be food insecure. While the participants did not know what food insecure meant, they were aware of the support needed in the community. All participants agreed that the access that was set up for students and families to get school meals was sufficient overall.

Summary

This study was carried out in order to explore the lived experiences of school cafeteria managers working during the COVID-19 pandemic. In addition, this chapter reflects how different stakeholders and community members respond to a crisis and can come together to ensure students have continuous access to healthy nutritious school meals. Cafeteria managers are often neglected, marginalized, or not seen as important stakeholders in traditional education systems (Park et al., 2021). However, this study was designed to understand and uplift the voices of those directly serving on the frontline and to learn about their experiences through their shared stories and reflections. While operating and meeting the needs of students during a complicated reality, the school cafeteria managers in the KCSD faced a lot of challenges such as dealing with the effects of the covid virus while simultaneously trying to keep students fed. The Improvement Science framework used in this study focused on the work of the people who work within the
system and know the issues firsthand. Utilizing this framework, this study was able to understand and synthesize the cafeteria managers individual stories and experiences. The themes that were brought to the surface in this study become options for change and opportunities for improvement.
Chapter 5 Discussion

This qualitative research study explored the lived experiences of school cafeteria managers as they described their accounts on serving students in the King City School District while operating during the COVID-19 pandemic. The purpose of this study was twofold. First, to understand the challenges faced by school food service professionals in an urban school district during a pandemic. Second, to contribute to the improvement of school food service operations during emergencies. This study adopted Bryk et al. (2015) Improvement Science problem-solving approach to understand and explore the unprecedented changes the COVID-19 pandemic has forced school food service operations to navigate. A qualitative research method was used through the use of semi-structured interviews. The data revealed was analyzed using affective coding (Saldaña, 2009) and thematic analysis (Saldaña, 2009), and then synthesized through an Improvement Science lens. The findings are discussed in this chapter as themes and their implications and delves into the researcher’s interpretations. In addition, this chapter includes a discussion on Improvement Science and how the researcher presents a theory designed to assist school food service operations in making concrete improvements and recommendations for future research. This chapter concludes with a discussion of the researcher’s leadership agenda and the limitations of this study.

Discussion of Themes & Their Implications

The research questions that were used to guide this study are listed below. The findings from the data were broken into two parts to answer each research question respectfully. Part 1 were the themes that represent the challenges faced. These themes are location, supply chain issues, safety & security, staffing, and negative perception. Part 2 reflected the themes that represent the lessons learned; flexible access, strong support systems with community
partnership, and rethinking the operating model. The research questions this research answered are;

1. How do cafeteria managers in a large urban school district in Pennsylvania describe the challenges that they and their employees faced while serving students during the COVID-19 pandemic?
2a. What lessons were learned during the pandemic by cafeteria managers that could inform a theory of practice improvement for emergency food service in an urban school district?
2b. What lessons were learned during the pandemic by cafeteria managers that could inform on the inequities experienced when it comes to access to school meals, but also improve service for students and families in an urban school district?

**Discussion of Themes Part 1**

Answering research question 1 about the challenges faced by school food service professionals, a total of five themes emerged, location, supply chain issues, safety & security, staffing, and negative perception. These themes are new and continuing problems that have become apparent in the current school food program while serving students healthy nutritious meals during the COVID-19 pandemic. These five themes also represent the ripple effects of the pandemic creating negative implications for the dedicated school food service professionals who served on the frontlines, even after the time period of March 2020 to June 2022. This time period is where the participants, the cafeteria managers, were able to see the start of these issues, but the implications continued as they developed overtime. Researchers, Zemrani et al. (2021) would classify this as “the double burden,” where you are faced with the precautions of trying resolve one problem or challenge, however, in doing so, it gives rise to another problem. The researcher uses the double burden aspect as a casual effect to help identify the implications. From
understanding the participants’ points of view, the researcher was able to delve into these themes in greater depth to see the implications of what was happening as a result of summarizing the findings and putting them into context. Table 5.1 presents the themes, representation of the challenge to each theme, and the implications that follow.

Table 5.1

**Themes, Challenges, & Implications**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Challenge to Performing the Job</th>
<th>Implications</th>
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</thead>
<tbody>
<tr>
<td>Location</td>
<td>Represents the challenge of convenience/accessibility.</td>
<td>Implicates the challenge of creating a virus mitigation strategy.</td>
</tr>
<tr>
<td>Supply Chain Issues</td>
<td>Represents the challenge of getting food and supplies.</td>
<td>Implicates the challenge of trying to keep students healthy and accommodate dietary needs.</td>
</tr>
<tr>
<td>Safety &amp; Security</td>
<td>Represents the challenge of serving students on the frontline.</td>
<td>Implicates the challenge of protecting your own health and wellbeing.</td>
</tr>
<tr>
<td>Staffing</td>
<td>Represents the challenge of a labor shortage.</td>
<td>Implicates the challenge of the stainability of efforts to keep students healthy and fed.</td>
</tr>
<tr>
<td>Negative Perceptions</td>
<td>Represents the challenge of trying to do the right by students.</td>
<td>Implicates the challenge of being seen as expendable, district personnel who risked their health by having to show up to work in-person every day.</td>
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The next section will describe the themes from the lessons learned as respect to research questions 2a. & 2b. and their implications.
Discussion of Themes Part 2

Answering research question 2, the following themes emerged from the data on lessons learned by school cafeteria managers, flexible access, strong support systems with community engagement, and rethinking the operating model. These three themes represent implications for practice.

This research established familiarity with current policies and practices in school food service as indicated in Chapter 2. However, as stated by researchers, Schwabish et al. (2020), “We need to examine the unique challenges the COVID-19 pandemic is forcing school districts to navigate, the variety of models districts are currently using to deliver meals to students, and the situation’s implications for policy changes or future emergencies” (p. 1). After examining the data, all participants in this study expressed the need for flexibility. According to the participants, flexibility implies embracing change and new challenges. The theme of Flexibility represents being flexible in mindset and adaptable with serving in a different capacity. Serving students in a different capacity and outside the normal parameters was one of the main new circumstances the participants had to adapt to. In their article on feeding children during the COVID-19 pandemic, researchers Dunn et al. (2020) offer recommendations on meal service flexibility and access. “Centralize and widely distribute information about schools and school districts offering meals during school closure. Decrease social exposures and reduce the time and transportation burden for families by providing multiple days’ worth of meals, allowing for drive-through meal pickup (when reasonable), or coordinating meal delivery” (p. 3). Through the interview conversations with the participants, it was evident that there were issues related to communication, transportation, and creating solid safety or mitigation strategies. This research recommends improving convenience for all families by taking into consideration their means of
transport. This can be completed by raising the awareness of other location offerings that may be closer and/or lessening the load of travel by providing multiple days’ worth of meals. Learning to communicate different changes or directing families to the right source for their needs became an effective tool as well. In addition, providing more PPE equipment for staff and utilizing a drive-through meal with staff placing food items in trunks of vehicles are some best practices to minimize exposure to a virus. One of the things that added to theme of flexibility was the elasticity of networking or the aspect of community partnerships which is described as another theme for the lessons learned in the next paragraph.

During the interviews, the participants described their experiences with working with different community organizations and partners. The aim of the different established partnerships was to address the community issue of ensuring students continue to receive the nutrition they need during the COVID-19 pandemic. Schools don’t often have a connection to the outside community (Mulvaney, 2021), as this is usually a result of the lack of time, capacity to participate, and effort put in by stakeholders. The food service department in the KCSD knows the importance of community involvement and was able prioritize the time to meet with the community partners at their convenience. The participants felt very strongly about the positive benefits that the community contributed. A best practice for future work would be to have strong supports and relationships with the community to help get the job done. Thus, the theme of Strong Support Systems with Community Partnership comes into play. The researcher integrates this theme with the methodologies of Improvement Science. Through its theory of participatory practices to engage, learn, inspire, and promote change, Bryk et al. (2015) Principle 6. promotes community engagement. Community Partnership is based on the sense of belongingness and wanting to make a difference in the community that you represent or are a part of. It models the
components of family, schools, organizations, cultural values, engagement, motivation, and exchanging best practices to learn how to solve problems.

The theme of Rethinking the Operating model has implications for creating a planning framework to support sustainable food systems and improve operational processes in school food service. The participants in this study expressed how frustrated they were with the challenges of getting food due to the supply chain issues. To further complicate things, the ordering system used to place food orders wasn’t reliable as the information on the order guides did not reflect the availability of products from the warehouse or the vendor distribution centers. According to the Regional Educational Laboratory Institute for Education Science, a core principle of Improvement Science is, “That a system’s performance is a result of its design and operation, not simply a result of individuals’ efforts within the system” (IES, 2020). Improvement science is designed to accelerate learning-by-doing. Taking this approach and looking at the design of how the ordering system is set up, we can see how the current system lacks the synchronicity to reflect the availability of food items. From this, we learned that a more sustainable system needs to be created. The researcher proposes creating a system that is aimed at achieving food and nutrition standards and more user friendly to ease the process for the users. The researcher proposes the following recommendations and opportunities to establish a new sustainable system:

- Building new relationships and partnerships using locally grown foods.
- Join local food buying co-ops
- Become more economically viable using a farm-to-school approach.
- Grow and integrate school gardens.
· Redesign the system that aims at reducing food waste and food losses.
· Promote healthier food practices.
· Better budget planning and using real data.

Designing a new system in the way that school food service operates will help to resolve the other issues the participants made a point of. The participants resented the idea of having to operate in multiple locations and prepare meals for different entities like the learning centers for remote students on top of having to prepare and serve meals in the cafeterias. However, in rethinking the operating model, this theme encompasses improvements that need to happen with both the system and its users. From listening to the participants describe the set-up of operations from a physical standpoint in having to serve in multiple locations, researcher sensed the majority of the participants responses on this topic were a reflection of complaints. A lesson to be learned from this is recognizing our own attitudes, beliefs, and behaviors then taking a step back to see how we as individuals can take a different approach. While the overall operating system may not be ideal, the researcher believes it is important to understand why some systems may be in places, for example, having to serve at multiple locations in the school as a social distance measure for students, and not focus on how the system doesn’t work in your favor.

The researcher realized that the Fishbone Diagram portrayed the Problem of Practice, but then also realized a visual was needed to represent the Theory of Practice improvement as respects to research question 2a. Figure 5.1 is a driver diagram which illustrates a ‘theory of change’, that represents a plan to improvement using the lessons learning. The primary drivers are the themes of the lessons learned. The secondary drivers are what’s needed to be in place to positively influence the primary driver. The change ideas are the codes or ideas described by the
participants that the researcher thought was a priority. These ideas are expected to help achieve the aim.

**Figure 5.1**

*Improvement Science Tool: Driver Diagram*

![Diagram of Driver Diagram](image)

**Food Insecurity**

This study aimed to address the inequities experienced by students through the perception of school cafeteria managers when it comes to access to school meals through the prevalence of food insecurity during the COVID-19 pandemic. However, from the explicit reactions and responses from the participants the researcher was able to uncover that the cafeteria managers in the KCSD knew very little about food insecurity. As such, what happens when a student does come to school and is food insecure? How can school food service personnel support them? While this study sought to explore food insecurity in students in relation to the pandemic, what came out of the data also allowed the researcher to recognize an area of opportunity when it
comes to approaches to addressing food insecurity in school settings. The different responses from the participants imply that a lesson can be learned on educating school food service professionals on food insecurity. The learning implications that come out of this data is the aim to improve the education of school food professionals and the importance to learn about food insecurity. By reflecting on the findings from what has been learned by the participants, and aligning with the improvement agenda, the researcher recommends two new research questions for future work.

1. How are school food service professionals educated about food insecurity in students?

2. How are school food service professionals identifying students who are food insecure and supporting them?

Many students who are experiencing food insecurity are at risk for hunger and many families struggle to provide them the nutrition they need to thrive. As a result, students are often coming to school too distracted by their empty stomachs to focus on doing well in school. The National School Lunch Program is an essential way to provide needed food to students who would otherwise not have adequate access to food. Food insecurity impacted around 13 million (1 in 7) U.S. children in 2021 (Parekh et al., 2021) during the COVID-19 pandemic. Learning about food insecurity can lead school food service professionals to identify, approach, know the role it plays on nutrition, how it affects the community, and how to fight food insecurity and make a difference.

One issue that the participants touched on while serving students during the COVID-19 pandemic is the challenge of the National School Lunch Program competing with other food safety net programs such as the Pandemic-EBT (P-EBT) program. This has implications for trying to identify food insecurity in students as the benefits provided by the EBT program were
perceived as reducing the participation in school meals. The participants had noticed that their meal participation had dropped when the EBT cards were disbursed to all families within the KCSD. The participants have also received feedback from families who were frequent visitors to the Grab & Go sites, stating to them that since they had a surplus in food using the EBT card and didn’t need the grab and go meals. Following the onset of the pandemic, in a situation where school meals were trying to alleviate food insecurity, the P-EBT program disrupted the process since we do not know how long this benefit will last. The participants felt that if students were experiencing food insecurity it was masked by the increased access to free food through the Pandemic-EBT program. While this perception is temporary, there is a permanent need to still address food insecurity.

**Model for Improvement Recommendation**

Bryk, et al. (2015) theory of Improvement Science and learning to improve is, “Focusing on the specific tasks people do; the processes and tools they use; and how prevailing policies, organizational structures, and norms affect this” (p.7-8). The approach of Improvement Science is a learning-by-doing design. Improvement Science as outlined by Bryk et al. (2015) consists of the following 6 principles.

1. Make the work problem-specific and user-centered.
2. Focus on variation in performance.
3. See the system that produces the current outcomes.
4. We cannot improve at scale what we cannot measure.
5. Use disciplined inquiry to drive improvement.
6. Accelerate learning through networked communities (p. 12-17).
These six principles present a proposal on how to evaluate a problem within an organization or system and come up with a solution or an improvement by applying a user-centered approach.

This study utilized Bryk, et al. (2015) first three principles of Improvement Science to effectively evaluate and analyze the issues facing the current school food program in the KCSD during the COVID-19 pandemic. The first three principles describe how to understand a problem(s) as it exists. The rationale behind using the first three principles was that part of this study’s focus was generating an improvement agenda. By applying a user-centered approach, the researcher focused on users of the school food program, the school cafeteria managers. Research Question 1 was centered around the problem of working during the COVID-19 pandemic that the participants were dealing with challenges every day and knew these challenges firsthand. Using principle three, See the System that Produces the Current Outcomes, this research was able to answer research question 1 by identifying the challenges and disparities and determined the root causes of the issues through the data analysis.

Research questions 2a. & 2b. were designed to investigate the effectiveness of the current school food program and to figure out what lessons could be learned from the users of the program. Using principle one, Make the Work Problem-Specific and User-Centered, and principle two, Focus on Variation in Performance, this research was able to answer research questions 2. A & 2. B by focusing directly on the perspective of the participants, learning from their experiences, and identifying the processes and procedures that can become opportunities for improvement. The next paragraph discusses the researcher’s recommendation for an Improvement Science model for school food service operations.

Improvement Science is a vehicle that helps generate ideas for change to learn fast and to implement well (Bryk et al., 2015). After conducting the data analysis and identifying the themes
as they emerged, the researcher was able to construct meaning based on the practices and processes in school food service as described by the participants. “In-order for Improvement Science to be effective (and viable), it has to connect with existing research that identifies effective innovations and practices at large” (Dynarski, 2015 p. 1). Using data is a strategy that identifies and evaluates how organizations can make meaning of information (Coburn et al., 2011), and how to create a plan of action for future use. It is evident that school food service operations were not designed to be emergency feeding systems. However, from the data collected and from the findings found in this study, the researcher was able to build a responsive model. Using the learn-by-doing approach, the researcher recommends the following model (Figure 5.2) as an Application of Improvement Science for school food service operations to utilize for improvement design or how to approach a problem.
Leadership Agenda

Given this section is on the researcher’s leadership agenda, the researcher will use first person. The most significant learning of this research study has focused on the significance of family, schools, organizations, cultural values, community engagement, motivation, and how to be accountable caused me to think of ways on how I can improve looking at my local context.

What I have learned about myself after writing this dissertation and from the participants is that as a leader you must have patience and have a growth mindset where you can take on challenges and learn from them. I know I would not get anything accomplished if I complained about the current challenges from the COVID-19 pandemic, went into meetings head strong and demanding change, or not willing to work with others, having to realize everyone has something to offer. I would get a black lash from the community, from the students, but also push back
from the people that work directly with me. I also learned that you need to know what it is that you are talking about. Research is critical for knowing what the plan is, or for trying to create or revise it. Being a leader and decision maker, you have to have different frames of references, research being one of them, but having your own expertise, experiences of others like student voice, expertise from the people who perform the job every day, and other resources such as organizations can all help to influence and create a plan. As an advocate, you have to be passionate about what it is that you are trying to accomplish and keep in mind the main reason why you are pushing for change, for the students. I have also learned of the different challenges to advocacy. This ranges from dealing with different points of view and public opinion, timelines, accessibility to resources and people, implementation, and the follow up.

In addition, this study addressed a range of issues related to the challenges of operating a school food service program during the COVID-19 pandemic. Looking at the challenges, lessons learned, and the implications that have come out of this study I know can use my position as a food service supervisor to combat some of the issues and advocate for change in the school meal program at KCSD. An important topic that came up during conversations that I noticed while listening to the participants was that the standards for child nutrition are continuously changing every year. However, there is still a lack of training to accommodate the continuous changes. Food service personnel are expected to comply with the standards and are held accountable during administrative reviews but are never given the tools and adequate information to do the job needed. Part of my goals are to provide more adequate training, not just on the standards of the food safety and food service, but also on food insecurity, creating positive environments, and how to approach issues using the Application of Improvement Science for School Food Service Operations.
Furthermore, the participants in this study expressed their discontent very strongly about the negative perceptions that are placed on them in their profession and how they are treated within the school/education community. As part of my leadership agenda, I can create ways to change the perception and the dynamic in the way in which school food service staff are viewed. This starts with giving school food service a platform to showcase how our staff contribute to the well-being of students as they are educators who serve as role models for healthy lifestyle practices (Stinson, & Lofton, 2009). More often than not, in the KCSD, the food service personnel are the first school staff members to see students during each day at the school breakfast serving period. They make the initial “Good morning” and ask, “How the students are.” Working off the cafeteria and student relationship dynamic discussed in chapter 2, students who come to school hungry or are not feeling well, make this initial disclosure to the food service staff. Ensuring that the students get the right treatment by directing them to the school nurse or providing them with extra food, helps to set them up to learn and be active in class.

Finally, helping to build a positive learning environment I feel that it is important for school food service staff to be a part of those important conversations when it comes to decision making and creating policy, especially on topics that directly are about or involve food service. The participants felt that a lot of decisions, not just during the COVID-19 pandemic, but in general, are made about them, without them. Having their voices, perspectives, and expertise heard could help to determine some best practices that work for all involved like when it comes to the wellness policy. During the pandemic, the district’s wellness policy needed to be updated on how breakfast and lunch periods would operate. However, decisions were made when it came to social distancing measures, giving the cafeteria staff directives to serve in multiple locations throughout the school building. Being part of these types of conversations can show how the role
of a school cafeteria manager is important to the overall climate of the school and allow for them to be seen in a different light as decision makers. Overall, I believe that changing the negative perception of school food service staff can be accomplished by increasing opportunities for school food service employees to be engaged in policy development, implementation, and sustainability of school reform efforts.

Limitations

The limitations of this study are associated with the researcher’s bias, the research site, and the framework used to guide this research. A researcher’s bias can be hard to eliminate in any study. The researcher of this study knew the participants first-hand due to preexisting work relationships. As a result, the researcher had high expectations for the participants which leads to potential bias in the data received. The Improvement Science framework that was used to guide this research has limitations, as Improvement Science is relatively new to the education field and to the field of school food service. The researcher was not able to find any research in the literature linking Improvement Science to school food service.

Conclusion

By examining the lived experiences of school cafeteria managers, this qualitative study was able to uncover the different innovated strategies and practices that were designed to provide students with access to nutritious meals during the COVID-19 pandemic. Furthermore, the researcher was able to identify crucial information to strengthen current and future needs for emergency school feeding, raise the awareness of the importance of school cafeteria managers in education, and showcase the dedication of school food service professionals. This study focused on the experiences of school cafeteria managers; however, the findings can have implications for all school food service professionals. School food service operations can utilize this information
in creating a plan of action for future emergency situations. These implications offer a better understanding of what issues can arise and what supports, or safeguards can be implemented to improve the experience of operating during a crisis.
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Cafeteria Manager Interview Protocol

**Introduction:**

I want to personally thank you for your willingness to participate in this study. Again, I want to reiterate that your participation in this study will be kept confidential. This interview is being recorded. Although this data will be published and presented in meetings and/or at public forums, your name and identifying information will not be revealed. For that matter, I would like for you to choose a pseudonym based on how you would like to be represented or identified by. This interview will last for about forty-five to sixty minutes. Before we proceed, do you have any questions about this interview?

Are you ready to proceed?

To start, please tell me who you are, a little more about your role in school food service, and how long you have been employed with the district.

Now, let’s turn to your experience of serving school meals during the COVID-19 pandemic.

1. What did you experience or how did you feel about working during the COVID-19 pandemic?

   Probe: What were your emotions?

   Probe: Please describe your outlook, not how did the pandemic just impact your job, but how did it impact you personally?
2. Please share some of your experiences about the relationships that you have with your students.

Probe: How have your relationships or interactions with your students changed from when you were in school under normal school days versus how they have been serving during the pandemic?

3. I’d like you to think about what it’s been like running a school food service program in a pandemic and serving on the frontline.

A. Please describe what ideas or innovations worked.

B. Please describe what didn’t work.

Probe: How has your job changed from normal school feeding service to serving on the frontline during a pandemic?

Probe: Please give me a specific example.

Probe: Do you feel your food service program/organization is prepared in the event of another pandemic? Please explain.

Probe: How do you see access to food, not just as a school lunch, but as an essential need?

Probe: How would you emphasize this thinking about potential future emergencies?

4. Thinking about your work as happening in three phases,
Phase 1: Schools completely closed. Time frame reminder (March 2020-February 2021)

Phase 2: Hybrid. Time frame reminder (February 2021-June 2021)

Phase 3: Full in person instruction. Time frame reminder (September 2021-June 2022, time of this writing)

Please describe what it was like working in the 3 different phases of serving what.

Probe: What were the circumstances?

Probe: What is the one biggest difference/challenge in each phase?

Probe: What was the number one consistent challenge in each phase?

5. Nationwide supply chain issues have disrupted school meal program’s ability to serve school meals setup. How have the supply chain issues affected your current school food program? Please describe the supply challenges for each phase.

Probe: What solutions did you come up with?

Probe: How were you able to manage food allergies?

Probe: How has this impacted the variety of menu items from day to day?

Probe: Given your experience with these supply chain issues, what lessons did you learn?
6. So, from the overall time frame from March 2020 until June 2022, what were the most important lessons you learned during the pandemic that we really should keep in mind, and address in plans to handle emergencies in the future?

Probe: Why do you think so?
Probe: I understand your reason, can you give me an example of when that happened once?

7. From your experience in serving students during a normal school year then to serving during a pandemic, what did you learn from those two periods of time about food insecurity?
Probe: The community depends on school cafeterias for nourishment. Can you describe the flexibility established for access to meals?
Probe: Do you feel that there was sufficient access?
Probe: What more, if possible, do you think could have been done to give students more access?

8. Given the challenges that you have seen arise, since the beginning of the COVID-19 pandemic, can you highlight a few inequities when it comes to students having access to food and nutrition?
Probe: What recommendations might you have to improve service, so that students and families can have more access?

Concluding:
Is there anything else that you would like to add or that you feel is important that should be presented?