A Case Study Exploring Lunchtimes: Implications for Equitable Access to the National School Lunch Program

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ABSTRACT

It is recommended that 20 minutes be provided for students to eat lunch at school. Research has shown that adequate seated lunchtime can ensure that children consume enough food, which may help address child food insecurity concerns. It may also improve dietary quality. The school that is the focus of this case study is located in Lynchburg, Virginia, in a community with relatively high rates of food insecurity. The school participates in CEP, with all students eligible for free school meals. The goal of this study was to assess the current school lunch environment in the cafeteria, using the Strengths, Opportunities, Aspirations, and Results (SOAR) framework, to help inform strategies to increase seated lunch time and ultimately address food insecurity and dietary quality. The study involved 12 one-on-one interviews with cafeteria stakeholders, including cafeteria monitors, cafeteria staff, teachers, and administration. The interview results answered the four research questions and utilizing the asset-based SOAR framework, revealed what is going well in the cafeteria, what opportunities are available for improvement, the collective goals of the stakeholders, and how the stakeholders would define success. The strengths included mandatory quiet time at the start of each lunch period to focus on eating and verbal cues during lunch to provide structure and time management for the students. The opportunities included cafeteria staff providing quality images, detailed descriptions, and tastings of menu items for students and staff. The aspirations of the stakeholders include a deep passion for creating a safe and nurturing environment in the cafeteria. The goals are to increase the amount of time students have to eat lunch and build on the current strengths to continue to improve the cafeteria environment. Recommendations to achieve these goals are offered in a tiered approach and include uniform cafeteria monitor training, expanding nutrition education, and increasing time allotments for lunch.

INTRODUCTION

Background

In 2022, the national poverty rate in the U.S. was 11.5% or 37.9 million individuals (Shrider & Creamer, 2023). Additional 2022 data revealed that 17.3% of U.S. households with children are food-insecure with 8.8% or 3.3 million of those households including both food-insecure adults and children (Appendix A). In the state of Virginia, the average poverty rate for 2020-2022 was 8.6% impacting 733,000 individuals (Shrider & Creamer, 2023). The prevalence of food insecurity in Virginia for 2020-2022 was 9.3% and while below the national average of 11.2% for this timeframe, this figure represents over 800,000 Virginians (USDA ERS, 2022). The poverty rate in 2020 for the City of Lynchburg was 20.2% and 26% for youth under 18, which resulted in food insecurity in the home (U.S. Census, 2022). In 2021, the Asset Limited, Income Constrained, Employed (ALICE) households represented 37% of Lynchburg households (UnitedForALICE, 2021). These 10,467 households earn above the Federal Poverty Level but are unable to afford the basics (housing, child care, food, transportation, health care, and technology) in Lynchburg. Feeding America data for Lynchburg in 2021 revealed a 16.7% food insecurity rate for youth under 18, unfortunately, 22% of these families are likely ineligible for federal nutrition assistance programs due to family incomes above 185% of poverty (Hake, et al., 2023). The Lynchburg branch of the Blue Ridge Area Food Bank (BRAFB) has seen an increase in food distribution in Lynchburg to food-insecure families. In fiscal year 2023 (July 2022 – June 2023), the Lynchburg branch distributed 2,369,142 pounds of food to families in the City of Lynchburg. This number was an increase of 293,162 pounds from the fiscal year 2022 data (BRAFB, 2023). The Lynchburg Daily Bread (LDB), which serves nutritious hot meals 365 days a year to families in need, has seen its numbers increase

from 75,219 meals in 2020 to 88,261 meals in 2021 to 132,989 meals in 2022 to 173,262 meals from January to October 2023 (LDB, 2023). These increases in food assistance are not only reflective of increased family needs but also result in many of the students in Lynchburg City Schools (LCS) relying on school meals for sustenance (VDOE, 2022; U.S. Census, 2021).

The National School Lunch Program (NSLP) is designed to ensure that all children have access to a nutritious meal to address food insecurity and promote academic achievement. Ensuring that children have enough time to eat meals offered by the NSLP is critical to ensure that they can fully consume the meal. Adequate time also provides opportunities to develop relationships and establish good eating habits. The NSLP is the second-largest nutrition assistance program in the United States (USDA ERS, 2019). The NSLP is required to follow federal nutrition standards, including specific meal patterns that provide 1/3 of the nutrients required daily for children. During the 2021-2022 school year, over 130 million school lunches were served to Virginia public school students (VDOE, 2022).

Due to the high percentage of free and reduced lunch eligibility, LCS offers Community Eligibility Provision (CEP), a USDA program that provides all students in the division access to free breakfast and lunch daily. To increase the availability and diversity of fresh produce for students, the School Nutrition Director has worked to implement Farm to School offerings in the school cafeterias, sourcing and serving local fresh fruits and vegetables, which also supports local farmers and boosts the local economy. Additionally, this year, the school division was accepted into the national Brigaid program. This program partners with schools sharing their culinary expertise to help school nutrition improve the appeal and taste of food offered through the NSLP. Services provided by Brigaid include program assessments, chef placement, and staff training. These supports work to further train school cafeteria staff to create and incorporate a wider variety of fresh and scratch offerings to students resulting in a

reduction in processed foods (Brigaid, n.d.). The school also participates in the USDA Food and Nutrition Service Fresh Fruit and Vegetable Program which provides students with fresh produce regularly throughout the year. This program is designed for schools participating in the NSLP and prioritizes schools with the highest percentage of free and reduced eligibility (USDA, 2017). The goals of the program are to introduce students to fresh produce by offering a variety of produce tastings to increase familiarity in the hopes they will then choose more fresh options both in and out of school.

As the division increases whole food offerings to the menu, sufficient time will be needed to consume these more fibrous items, as foods such as whole grains, leafy greens, and fresh fruits, and vegetables require additional time to chew and consume. Developmentally, elementary school students often have missing teeth as part of normal growth, which can impact chewing. Many efforts are at work to improve the quality of calories in school lunches, however, no efforts are focused on ensuring students have sufficient time to consume their lunches.

Statement of the Problem

The School Nutrition Association (SNA), the American Academy of Pediatrics (AAP), and the Centers for Disease Control (CDC) recommend a minimum of 20 minutes of actual seated lunchtime for students (SNA, 2020; AAP, 2005; CDC, 2019). While the Healthy Hunger-Free Kids Act enacted policies outlining nutrition requirements for the National School Breakfast and Lunch Programs, there are currently no policies in place to ensure adequate time for the consumption of school meals (HHFKA, 2010). Currently, each lunch period is scheduled for 25 minutes, however, this includes student travel time to and from the cafeteria, as well as, time students spend in the single lunch line. The standard 25-minute lunch period does not provide students with the recommended 20-minute actual seated time to consume

their lunches (Hildebrand, et al., 2018). In 2022, the 117th Congress introduced a bill, H.R. 6526, to amend the Richard B. Russell National School Lunch Act requiring a study on the duration of school lunch periods, however, this bill has not been reintroduced in 2023 (Healthy Meal Time Act, 2022). The Virginia Governor's Scorecard on Nutrition and Physical Activity assessment contains one question reflecting meal times in schools based on the CDC recommendation, however, it contains a range of compliance percentages (VDOE, 2022). Lastly, the LCS School Wellness Policy assessment requires that students be provided adequate time to eat lunch, with no policy on minimum time requirement (LCS, 2021). Quantitative analysis of actual seated lunchtimes (Appendix B) revealed that students at the school do not have the 20-minute minimum actual seated lunchtime recommended. These results prompted research to investigate and understand the factors that impact adequate time for students to consume their lunches.

Significance of the Problem

Insufficient lunchtimes can impact the ability of students to perform optimally during the course of their day, both academically and behaviorally. Food insecurity can impact academic performance, while a balance of essential nutritional components, such as protein and carbohydrates, leads to an improvement in cognitive function, ability to concentrate, and increased energy levels (Bellisle, 2004; Sorhaindo & Feinstein, 2006). Proper nutrition can improve overall student well-being and contribute to decreases in discipline issues (Brown, et al., 2008). Additionally, little time in the student day is without direct led teacher instruction; lunchtime and recess are the only two opportunities during the school day that provide less structured time and the opportunity to nurture relationships and develop social skills (Valentine, 2000). Lastly, the social isolation resulting from the COVID-19 pandemic impacted

the emotional health of all ages, which affected social relationships (Pietrabiassa & Simpson, 2020). Students need the opportunity within the school day to develop meaningful relationships with one another. The time and space of the cafeteria environment are imperative for students to learn and practice social engagement (Mason, 2021).

Purpose of the Project

The purpose of this project is to identify barriers and benefits to offering adequate seated lunchtimes, utilizing opportunities for sufficient lunchtimes, determining what is going well, and assessing the strategies, both past, present, and potential, to improve the seated lunchtimes of students. Utilizing the Strengths, Opportunities, Aspirations, and Results (SOAR) framework (Appendix C), this study will assess the current strengths of the cafeteria environment from all stakeholders, opportunities for improvement, collective aspirations and goals, policies, procedures, and strategies to support these, and desired outcomes of the staff. The long-term congruous outcome of this case study is to improve the cafeteria experiences for both staff and students and increase the time allotted for students to consume their lunches.

Research questions:

1. What are the current strengths of the cafeteria environment?
2. What are the opportunities for improvement?
3. What are the values and ambitions of the stakeholders?
4. How will success be determined?

Key Terms

(Definitions provided by the USDA Food and Nutrition website https://www.fns.usda.gov/ with the exception of actual seated lunchtimes, which was determined by the data collection method)

Actual Seated Lunchtimes: The time students spend in their seats consuming their lunches.

ALICE: **A**sset **L**imited, **I**ncome **C**onstrained, **E**mployed. ALICE refers to those earning more than the Federal Poverty Level, but not enough to afford the basics where they live. These basics include housing, child care, food, transportation, health care, and a smartphone plan.

Community Eligibility Provision: USDA FNS program which designates schools to serve breakfast and lunch at no cost to all enrolled students without collecting household applications.

Food and Nutrition Service: USDA program consists of 16 nutrition assistance programs working to reduce hunger and increase food security for youth and families.

Food Insecurity: A lack of consistent access to enough food for every person in a household to live an active, healthy life.

Free and Reduced Lunch: Lunches served as part of the National School Lunch Program where pricing is based on family income, or in Virginia, participation in SNAP or TANF programs.

Healthy, Hunger Free-Kids Act of 2010: Passed by Congress in 2010 which strengthened nutrition standards for meals and beverages provided through the NBLP and NSLP.

Identified Student Percentage (ISP): Calculation of the total number of identified students (students eligible for no-cost school meals) by the total number of students enrolled.

National School Breakfast Program (NSBP): USDA FNS program that provides low-cost or free breakfasts to students, based on family income.

National School Lunch Program (NSLP): USDA FNS program that provides low-cost or free lunches to students, based on family income.

United States Department of Agriculture (USDA): Federal agency that coordinates and delivers the Food and Nutrition Service (FNS) nutrition programs aimed to reduce food insecurity and promote healthy food habits.

LITERATURE REVIEW

Benefits of School Lunch

Consistent consumption of a healthy school lunch promotes increased academic performance and behavior (Anderson et al., 2018; Wilder Foundation, n.d.; Schwartz & Rothbart, 2020 & Sorhaindo & Feinstein, 2006), intake of nutrient-dense foods (Burg et al., 2021; Cohen et al., 2016; Bergman et al., 2000; Hildebrand et al., 2018; Prescott et al., 2022; Ang et al., 2019), positive health outcomes (Au et al., 2018) and the development of healthy eating behaviors (Cohen et al., 2014; Pew Trusts, 2016). The school cafeteria also provides an opportunity for students to consume nutrient-dense foods that support learning, as well as, "provides a space for social and emotional education" (Weaver-Hightower, 2019 as cited in Sparks, 2019). However, students need sufficient time to consume nutrient-dense foods. The School Nutrition Association, American Academy of Pediatrics, and the Centers for Disease Control (CDC) recommend a minimum of 20 minutes of seated mealtime for students to consume their lunches (SNA, 2020; AAP, 2005; CDC, 2019).

Quality of School Lunch

The average public school student spends about 1200 hours in school every year. Given the poverty and food insecurity rates within the school and surrounding community, many students rely on school meals as their primary source of food and nutrients. A public school student will likely consume over 4,000 school meals by the time they graduate (Center for Ecoliteracy, 2010). One in ten students in Virginia is considered food insecure (Gundersen, et al., 2021). Fortunately, students benefit from the CEP program through the USDA which provides meals to all students at no cost to the student (USDA, 2019). The improved nutritional quality of school meals as a result of the Healthy Hunger-Free Kids Act, has resulted in dietary

improvements among students. This is reflected in a recent study on various food sources where the largest improvement in youth diet quality was in the school cafeteria (Liu, et al., 2021). Additionally, school lunches have shown to possess a higher nutritional quality than packed lunches (Farris, et al., 2014). As the school nutrition department works to improve the quality of calories offered in the cafeteria, additional time is needed to consume these whole foods versus ultra-processed foods. For example, eating a salad, full of fresh vegetables will require more time than consuming an order of fries, as more chewing is required to breakdown the fibrous whole foods. Unfortunately, despite the recommendations for a minimum 20-minute seated lunchtime, many schools, including this elementary school, do not maintain or mandate this policy.

Nutrition Education and Policy

Ensuring that students have sufficient time to consume their lunches can be a part of a comprehensive healthy school environment. The CDC Whole School, Whole Community, Whole Child model reinforces the need for addressing student health in school, including a 20-minute seated minimum for the lunch period (CDC, 2021). Nutrition education is an essential part of the equation and a necessary part of every classroom. Currently, in Lynchburg Public Schools, nutrition education is delivered across all grade levels, from kindergarten through twelfth grade, as part of the 2020 Health Education Standards of Learning as directed by the Virginia Department of Education. For example, the LCS third-grade curriculum is comprised of health topics including digestion in the body, identifying whole grains, their importance and related careers, school policy on food allergens, and healthy food and beverage choices (VDOE, 2020). These concepts are part of the curriculum; however, they are not assessed as part of the Virginia Standards of Learning tests (VDOE, 2023). Additionally,

nutrition education competencies are not assessed or evaluated regularly to determine aptitude. Students need to understand why they should choose fresh fruits and vegetables and the positive impact these have on their health through consistent messaging. It is also important that staff and administration lead by example reflecting on healthy eating behaviors and choosing healthy options. An additional concern is the rate of obesity in youth, currently at a national rate of 19.7% in youth ages two to nineteen (Stierman, et al., 2021). This rate increases to 25.8% for those youth living at 130% or less of the Federal Poverty Level (Stierman, et al., 2021). An engaging and comprehensive school wellness policy can be a valuable tool to set the tone and expectations in the cafeteria. As part of a school wellness policy, suggestions can be shared to increase healthy food consumption, provide a variety of culturally appropriate foods, and limit access to less nutritious foods (Cohen et al., 2021). Additionally, the school wellness policy can mandate minimum seated meal lunchtimes to create an environment for all students to consume their lunches.

Factors Impacting Lunchtimes

The infrastructure and function of the cafeteria also play a part in sufficient lunch times. One study found that the type of service line, the students present in each line, and the number of students in relation to the cafeteria capacity impacted school lunch participation (Prescott, et al., 2022). These factors also impact the time for students to consume their lunches. A systematic tool, the Healthy Eating Design Guidelines for School Architecture (HEDGSA), was revealed in 2013 which focused on environments to improve the time allowed for school meals. These included infrastructure support, nutrition education, and school gardens, although did not set time minimums for meal consumption (Huang, et al., 2013). Many schools are near or at maximum enrollment requiring the cafeteria to be at capacity for each lunch period.

Increasing the number of lines, offering grab-and-go items, providing menus ahead of time to speed selection, and training cafeteria staff can all contribute to expediting meal service (Action for Healthy Kids, n.d.). Healthy nudges are another strategy to improve healthy food intake, such as verbal prompts promoting healthier items have resulted in an increase in fruit selection and consumption (Schwartz, 2007). Healthy nudges may also include increasing the number of fresh fruit and vegetable offerings, which increases consumption in grades K – 8 (Hakim & Meissen, 2013). An additional strategy that has shown success is the incorporation of a salad bar in schools, resulting in students self-serving 95% more fresh fruits and vegetables (Adams, et al., 2005). Helping students tailor their choices for their health can be done in a variety of ways. As in the grocery store, product placement is valuable, making the best choice the most accessible choice. Colorful signage grabs the attention and can be effective in decision-making and promote fruit and vegetable consumption (Cohen, et al., 2015). Providing options that are prepped has been shown to increase consumption, for example, peeling an orange can be challenging and time-consuming for a small child, however, if it is cut into fourths, it is easier to eat and more likely to be consumed (Cadario & Chandon, 2017).

A review of similar studies revealed a variety of formats. Some studies incorporated a semi-structured interview methodology to obtain the data and this provided additional insights into how the students view the lunchroom and food offerings (Mason, 2021; Prescott et al., 2022). The time frame that data was collected varied among the studies with some covering a series of consecutive days (Burg et al., 2021; Hildebrand et al., 2018), while others collected data on non-consecutive days (Cohen et al., 2016), many did not specify (Bergman et al., 2004; Prescott et al., 2020; Ang et al., 2019; Au et al., 2018; Gundersen et al., 2012). Another study employed a random selection of students (Cohen, 2014). One study did not directly observe

students in the cafeteria but relied on student interviews and questions to obtain data through self-reported information (Baines & MacIntyre, 2019, Prescott, et al., 2022). The sources of this data included students and staff. While all studies focused on mealtimes, they also focused on a variety of outcomes, such as food and specific nutrient consumption and waste (Ang, et al., 2019; Au, et al., 2018; Bergman, et al., 2004; Burg, et al., 2021; Cohen et al., 2016; Hildebrand et al., 2018; Prescott et al., 2020). Other studies focused on mealtimes and health outcomes (Gundersen, et al., 2012) and social experience impacts (Baines & MacIntyre, 2019). Another study focused on the time variances between students consuming sacked lunches versus school lunches (Buergel, et al., 2002). In addition to lunchtime, one study evaluated the impact time limitation has on student food choice preferences, revealing that students will alter their original selection due to line length (Sharma, et al., 2017). All of the studies mentioned spanned youth age groups from elementary through high school-aged students.

Summary

Several studies have been done on the cafeteria environment and the impacts of the environment on student behaviors and food consumption, however, there is limited data on the actual seated lunchtimes of elementary students and the impacts of insufficient seated lunchtimes. While several national health organizations recommend minimum seated times for students to consume their lunches, this policy has had limited adoption across the country for varied reasons (SNA, 2020; AAP, 2005; CDC, 2019). This study focuses on the adult stakeholders engaged in various capacities in the cafeteria to understand the barriers preventing sufficient lunchtimes and the opportunities to develop and encourage the recommended 20-minute minimum seated lunchtime.

METHODOLOGY

Conceptual Framework

Needs assessments are a fundamental component of public health program planning and can play a role in informing the public school environment. They are used to evaluate a multitude of issues, including the academic progress of students, placement in educational programs, and participation in the school lunch program. The purpose of a needs assessment is to identify and understand the strengths and weaknesses of an organization and how to close the gap between the current status and the desired outcomes (Weisberg, 2017). Needs assessments are a systematic approach for improvement generally consisting of three main components: exploration and identification, data collection and analysis, and summary and action. The initial exploration phase includes identifying concerns, determining data sources, and preparing the overall plan of work. The second phase includes establishing the target group for analysis, gathering and analyzing the data, and summarizing the findings. Finally, the last phase includes identifying possible solutions, selecting solution strategies, and presenting the final report and action plan (Witkin & Altschuld, 1995). This comprehensive approach to identifying gaps and substantiating solutions is essential to process improvement.

The importance of assessment work in both the academic and professional realms is tantamount to process improvement. In education, assessments are valuable tools for educators to evaluate and measure the academic success of students including readiness, progress in learning, and individual educational needs. These measures are garnered through standardized tests, formative or in-process evaluations, and summative or end-process evaluations. Additionally, the education system uses needs assessments to evaluate the effectiveness of evidence-based interventions (Cuiccio & Husby-Slater, 2018). In the professional world,

assessments are utilized to determine if the organization is on target to reach its goals and may include process goals, performance goals, and outcome goals. Virginia Cooperative Extension (VCE) conducts regular needs assessments or situational analyses across the state to determine the profile and priority needs of each area (Vines & Kuri, 2023). Once identified, each locality pivots programming to address the specific issues. The VCE Family Nutrition Program also conducts needs assessments for program determination and evaluation. These include justification for programming and assessing current programming efforts in addressing the mission to educate limited-resource individuals of all ages on how to make healthier food choices (VCE/VSU, 2023).

Research Design

This project utilizes the Strengths, Opportunities, Aspirations, and Results (SOAR) framework model. This whole-system, asset-based approach to process improvement emanates from strategic inquiry (Stavros, et, al., 2014). The SOAR approach integrates Appreciative Inquiry with a strategic planning framework. Appreciative Inquiry is a positive approach to change that highlights the best in people and the organization (Cooperrider & Whitney, 2007). This asset-based approach to system change values the skills, knowledge, and connections within a system. It focuses on what is working well and leverages that capital to initiate positive change. Asset-based change engages stakeholders in all steps of the process, thus empowering those tasked with change and increasing sustainability. The SOAR model is a whole-system, strengths-based approach including all stakeholders invested in the success of the organization; in this case, all staff members involved in the cafeteria (Stavros, et al., 2014). This method of process improvement focuses first on the core assets of each member of the group. Concentrating on the strengths and opportunities to achieve the desired aspirations and

attaining measurable results is obtained in four phases. The first is an inquiry to gather data on the strengths and opportunities of each stakeholder. The second is to imagine the most desired collective course of action. The third is to innovate, building on past successes to strategize and create improved systems. The fourth is to inspire these improvements to achieve the desired results (Holman, et al., 2007).

Research began with an inquiry into the assets of the organization, via stakeholder interviews, to determine the current strengths or what is working well that is producing the desired outcomes. Stakeholders included all school staff engaged in the cafeteria environment. These assets are the building blocks and foundation for the remaining steps in the process. Next, interviewees identified the opportunities for improvement, which included past, present, and potential strategies, as well as, what skills are needed to accomplish these strategies. This step also included the co-creation of values, vision, mission, and desired outcomes of the stakeholders (Stavros, et al., 2014). Next, the aspiration step explores the passions of the stakeholders. This phase defines the future by setting collective goals and requires innovation by creating structure, systems, and initiatives to reach those goals. These values will be used to determine measurable goals. Understanding the strengths, opportunities, and aspirations of each stakeholder provided a comprehensive view of the cafeteria environment. The last step is results or how to measure improvement and determine success. This includes how to evaluate progress and achieve sustainability.

Case Study Design

In this research, the case study design was selected. A case study approach was utilized to obtain an in-depth understanding of an issue in its real-life setting (Crowe, et al., 2011). The case study design allows research to be conducted by collecting input from a multitude of data

sources (Yin, 2009). In this case, both quantitative data and qualitative data were collected from stakeholders performing varied tasks in the cafeteria. This approach provided initial quantitative data or actual seated lunchtimes of students. These data findings prompted further, qualitative research, to garner a comprehensive view of the cafeteria environment and organization.

Data Collection: **Observations of Length of Seated Lunchtimes**

Quantitative data collection revealed that students at the school do not receive the recommended 20-minute seated lunchtime (Appendix B). Seated lunchtime data collection required no gathering of personal information and therefore IRB approval was not required for this component of the case study. Data on seated lunchtimes was collected in the school cafeteria on five non-consecutive dates. On all data collection days, students were observed during lunch from each of the six grade levels, kindergarten through the fifth grade. Each student was assessed based on the time they sat down until they finished eating their lunch for every lunch period. The initial group evaluated focused on the first student seated with a packed lunch, the second group focused on the first student through the lunch line, and the third focused on the last student through the lunch line. The timer function on a cell phone was used to time each student and each time was entered on a chart. Three evaluators were present at each lunch period to focus on one student per timer. A total of 90 students were observed. There was no indication that a student was observed more than one time. Upon completion of each data collection day, the times were entered into a spreadsheet and saved on the researcher's computer. The five results for each group were then averaged, dividing the total sum by five. Data revealed that most students do not have the recommended 20-minute seated

lunchtime (Appendix B). These results reinforced the desire to investigate and understand the barriers to the recommended 20-minute seated lunchtime through qualitative analysis.

Data Collection: Interviews with Stakeholders

Qualitative data collection was achieved for this case study through a series of stakeholder interviews. Interviews of school staff who are engaged in the cafeteria were determined to be the most effective method to understand individual and role experiences, opinions, aspirations, and ultimately, goals. A pragmatic approach was considered to ensure that a sufficient number of individuals were interviewed encompassing a range of experience and engagement, and the length of the interviews (Rowley, 2012). Several versions of the questions were created and a pilot interview was conducted prior to establishing the final question set. The pilot interview was conducted with a cafeteria staff member representing another local elementary school. Questions were designed to extrapolate information based on the experience of each individual and group. Upon IRB approval through Virginia Tech and permission from Lynchburg City Schools administration, emails requesting interviews were sent to the principal, teachers, cafeteria staff, and cafeteria monitors. Responders participated in one-on-one, semi-structured interviews. Participants included the principal, three teachers, two cafeteria staff, and six cafeteria monitors. All interviewees participated voluntarily and responses were confidential. A code was created indicating the role of each interviewee with their identity stored on the researcher's computer and only known to her. The semi-structured interview format was selected including open-ended questions to allow each interviewee sufficient opportunity for additional conversation and opportunity to share all pertinent information. Interviews ranged from nine to twenty-two minutes in length. The interviewee bank included members of each group of stakeholders or all school staff who participate

regularly in the cafeteria in some capacity. While the level of engagement varied among interviewees, capturing these nuances provided essential input to create a comprehensive view of the cafeteria environment. The administrator is not involved in the daily lunchroom routine; however, she is active in the cafeteria a few times a month at a minimum, often filling in for cafeteria monitors when needed. The cafeteria staff provides a consistent presence and while limited to the kitchen and serving area, contributes a unique perspective and function, as they control the flow of food distribution. The teachers, with varying degrees of cafeteria engagement, shared information and opinions of their cafeteria experience, their personal thoughts on the cafeteria, as well as, how that is conveyed to the students provided additional information. Lastly, the cafeteria monitors spend the most time in the lunchroom, as part of their daily routine, providing invaluable input to their thoughts and perceptions and the overall cafeteria environment. Most of the interviews were administered in the school cafeteria for both ease of scheduling for the staff, and relevance, as the cafeteria is the focus of the study. Two exceptions were noted, one interview was conducted over the phone and another in a room other than the cafeteria at the school. Interviewees were posed questions based on their individual perceptions of the current cafeteria environment, what was going well, and thoughts on improvement (Appendix E). Establishing the strengths of each school staff member and the strengths of the cafeteria environment created the building blocks for strategic growth. Each interview was digitally recorded, audio only, transcribed, and coded to protect the identity of participants. Recording the interviews allowed the ability to be fully present, listen attentively, and observe non-verbal communication. TranscribeMe!, an online transcription service approved for use by Virginia Tech for research, was the service used to obtain written conversation details. The interviews were uploaded to the site and once completed, the coded transcriptions were downloaded to the researcher's computer and saved using coded

identifications. The written transcriptions were used to code the interview data to discover patterns and determine themes. These interviews provided data on the cafeteria process, as well as, insight into the attitudes, behaviors, and experiences of each interviewee.

Reliability and Validity

To ensure the reliability of the quantitative data collected in the cafeteria, each student was assigned an individual timer and a timing device allowing the collector to focus on one student per lunch period. This effort provided individual attention to the time span for each student to consume their lunch. In an effort to ensure the validity of the timing data, each time was immediately noted, the charts collected, taken to the office and immediately entered into the spreadsheet on the researcher's computer. These handwritten times were also scanned and saved on the computer. Additionally, the averages for each group and each lunch period were triple-checked for accuracy. To ensure the reliability of the qualitative data collected several factors were considered. The semi-structured interview format was selected to provide time and space for interviewees to answer the questions and provide any additional pertinent information they wished to share. Additionally, the number of participants and the breadth of roles interviewed intentionally included representatives of all stakeholder groups with a presence in the cafeteria. Interviews were conducted with the administration, all cafeteria staff, three teachers, and six of the seven cafeteria monitors, as one chose to opt out. All questions were the result of several drafts and were posed to the participants in the same sequence. Additionally, a pilot interview was conducted to evaluate the content and delivery of the interview questions prior to the interviews. The collection of data from multiple sources increases the validity (Yin, 2009).

Limitations of the Project

This project has several limiting factors. The first is the focus on one small elementary school. Data from larger schools and middle and high schools may reveal strengths and opportunities that vary from a smaller elementary school. Additionally, this school is located in an urban setting and data from a rural school environment may reveal dissimilar results. The school in this study may follow policies and procedures that may vary from other schools, school districts, and states. While focusing research on one small school is limiting, it was also a strength, as it provided the opportunity for an in-depth study. This study was strengthened by assessing the quantitative data over five non-consecutive dates, however, this may also be perceived as a limitation, if additional data collection is perceived as beneficial. The number of packed lunches is low at the school where CEP is offered. This resulted in no data for the third-grade packed lunch group. This void may be less likely in a school not participating in CEP. Interviews were conducted in the cafeteria for convenience and relevance, however, the interviewees may have been less candid due to the ease of observation by others passing through the cafeteria and the occasional interruption during the interview process.

PROJECT OUTCOMES AND RESULTS

This elementary school is a fully accredited public school in Lynchburg, Virginia, educating children from kindergarten through the fifth grade (VDOE, 2022). The Census Tract (CT) of the school, reported an overall poverty rate of 26.8% and 55% for children under 18 in 2020 (U.S. Census, 2021). Additionally, 1328 of the 1462 families in this tract report living at 150 – 185% of the Federal Poverty limit (U.S. Census, 2021). Nationally, in 2021, those families with household income-to-poverty ratios of 100 - 185% poverty had a food insecurity

prevalence of 30% (Coleman-Jensen, et al., 2022). According to 2022 data, 98.77% of students at this school were eligible for free and reduced school meals (VDOE, 2023). Determination of eligibility during the current period of July 2023 through July 2024 for a family of four reflected an annual income of $39,000 or less for free school meals and $55,500 or less for reduced-priced school meals (Child Nutrition Programs: Income Eligibility Guidelines, 2023). The current enrollment is 186 students and many of the students rely on the school breakfasts and lunches provided daily at no charge through the CEP program.

Quantitative Results

Quantitative results of actual seated lunchtimes for students with a packed lunch spanned from 12 to 25 minutes with an overall average of 18:21. Only 10 of the 29 students with packed lunches had the 20-minute recommended seated lunchtime, revealing that most students who bypass the lunch line do not receive 20 minutes to consume their lunches. The actual seated lunchtimes for students who were first in line ranged from seven to 22 minutes with an overall average time of 16:12. Of the 36 students who were first in line, only six had 20 minutes in the seat. The actual seated lunchtimes for students last in line spanned from eight to 19 minutes with an overall average time of 14:22. None of the 36 students who were last in line had 20 minutes in the seat to consume their lunches (Appendix B). While it is expected that seated lunchtimes were not equitable for the first and last students in line, neither group received the 20-minute recommended seated lunchtime. Additionally, the variance was not as large as expected, due to the inconsistency of cafeteria procedures, further limiting seated times. These results reinforced the desire to investigate further to understand the barriers to the recommended 20-minute seated lunchtime through qualitative analysis, utilizing interviews with cafeteria stakeholders.

Qualitative Results

Qualitative results based on one-on-one interviews with twelve stakeholders engaged in the cafeteria environment revealed numerous strengths. Utilizing the SOAR strengths-based model, these strengths serve as the foundational assets and reflect current successful practices. While each interview participant brought their unique perspectives to the interview, many responses were shared across all staff. Initial comments from all participants revealed the deep level of dedication of all stakeholders. Unanimously, they acknowledge the importance of their role in ensuring students are able to eat a healthy lunch in a safe environment.

Research Question #1 "What are the current strengths of the cafeteria environment?"

Two major strength themes emerged from the stakeholder interview data. The current strengths stem from effective cafeteria procedures prior to and upon entering the lunch line. The second theme arose from student expectations set by the staff. These two asset groups provide structure to the cafeteria and set the tone for student behavior in the cafeteria.

Theme 1: Cafeteria Procedures

The first strength shared was the process of students pre-ordering their entrees in the morning. Students are offered four entrees daily which include two hot options that change each day and two cold options, which are usually a peanut butter and jelly sandwich and a garden entrée salad. The cafeteria staff emails these daily entrée options, which are designated from A to D, to the teachers who then take the orders and email the counts to the cafeteria manager. This process provides the appropriate par levels for the cafeteria staff to prepare. When each class enters the cafeteria, students line up by their chosen entrée, for example, all of the students who chose the A entrée will be first in line. The next strength noted is the use of

scanned ID cards by students when they check out of the lunch line. Previously, students were required to remember a seven-digit code and enter it into the keypad before exiting the lunch line. This process was slow at the beginning of each school year, as children worked to remember and then enter their codes daily. This task was especially challenging and "very frustrating" for the younger students, remarked one monitor. Due to the delays this process caused in the flow of the lunch line, the codes were replaced with scanned ID cards which decreased the time students spend in the check-out. The third strength focused on the method of individualizing procedures based on age and ability. The use of throwaway trays versus "tap tap" trays, as expressed by one cafeteria monitor, is more efficient for kindergartners. These young students struggle to empty leftover food from their "tap tap" trays into the trash cans, due to the height of the cans. They can dispose of the throwaway trays more efficiently, thus reducing the clean-up time and increasing the time to eat.

Theme 2: Cafeteria Expectations

The second strength theme shared by stakeholders was setting the expectations for student behavior in the cafeteria. This begins at the start of the school year and includes appropriate voice level, process to and through the lunch line and clean-up procedure. This established daily routine of expectations results in developing positive cafeteria experiences for the students. The first of these effective expectations includes the use of assigned seating or seating charts for students in the cafeteria. This policy is fluid, as it may be evident that some students are unable to sit beside another student as dictated by the original seating chart. One cafeteria monitor referred to this process as "Seating for Success", further explaining that there are days and times when certain students are ill-matched to each other, but may be successful at another point in time. This policy allows students a positive setting to consume their lunches.

Another cafeteria monitor takes this process one step further and implements “Friend Fridays”, which after a successful week of lunch periods, students may select seats and sit with a friend of their choosing. The next strength is the use of quiet time in the cafeteria. Cafeteria monitors require students to be silent for the first five minutes once they are all seated. This rule allows the students to focus on eating first. In addition to this, some monitors require students to be silent for the last five minutes of lunch and others utilize this tool only if a majority of students have not eaten their lunches. An additional strength is a tool used by several cafeteria monitors to provide verbal cues, or timestamps, throughout the lunch period to remind students of the minutes left in the lunch period. The last strength was the use of “thumbs up” by cafeteria monitors for students to alert the monitors that they are finished eating and ready to clean up. This expectation reduces the noise level, by silently sharing their wishes and provides the opportunity for the students to clean up as they finish, thus avoiding all students needing to clean up at one time. These policies and expectations reflect the strengths of the cafeteria, next is to build on these strengths by exploring the opportunities for improvement in the cafeteria.

Research Question #2: “What are the opportunities for improvement?”

Stakeholder interviews revealed varied opportunities for improvement across three areas. These areas of opportunity are designated by the group which would initiate and deliver these improvements. These three groups are the cafeteria staff, the cafeteria monitors, and the administration. Each of these groups plays a specific role that impacts the student cafeteria experience and the flow of the cafeteria.

Group One: Cafeteria Staff

While the cafeteria staff currently provides some additional information on a few entrée options before the student selection process, stakeholders noted the desire to have additional

information to share with the students. The teachers and cafeteria monitors expressed the need for quality photos and accurate, detailed descriptions of each entrée and menu item. Additionally, they shared that occasionally the students can taste a new item, but this has not spanned the entire student body. Teachers and cafeteria monitors shared their beliefs that these practices of improved images, added descriptions, and taste tests for all students will increase student exposure to new foods and encourage students to try these new offerings. Stakeholders affirm that the use of scanned ID cards is the most efficient method to date of identifying students in the lunch line, although there is no understanding of why this step is necessary. An additional example is the offer versus serve models delivered to students of different grades. Many teachers and cafeteria monitors would like all students, regardless of grade, to fall under the serve model and receive all items for lunch. They believe that with increased awareness of the items served, and then being served those items, the students would eat more of a variety of lunch offerings. Three cafeteria monitors shared that many students eat their lunches and then select items from the shared table for later consumption due to a lack of time in the cafeteria. They are concerned that these students are not eating enough and believe that if they had a full tray with all menu items, they would consume more food during the lunch period.

Group Two: Cafeteria Monitors

Cafeteria monitors at the school must complete an online training from Vector Solutions, formerly known as Safe Schools training, which includes topics from bullying to various types of safety training (Vector Solutions, n.d.). The training through Vector Solutions does not include training on cafeteria management. Initially, the new cafeteria monitors shadow more seasoned monitors, but this delivery system can vary according to the style and personalities of the trainer. The monitors do not receive formal training from any other source

on how to monitor students during lunchtime and this group reported that more uniform guidelines, structure, and expectations are desired. Cafeteria monitors also report that students often forget to pick up all of the items needed for their lunch, these may include utensils, condiments, and water. This results in students having less time in their seats to consume their lunches.

Group Three: Administration

Stakeholders agreed, unanimously, that an average of 10 minutes of the 25 minutes allotted for each lunch period is "wasted" in line and travel time. This time is increased when classes do not arrive on time at the cafeteria for their scheduled lunchtime. Stakeholders also expressed that upon arrival to the cafeteria, occasionally, the cafeteria staff was not ready to receive the next class, which resulted in a delay for students getting through the line and seated. Monitors report that the lack of time the students are afforded to spend in their seats inhibits their ability to socially engage with one another as much of the limited time is spent eating. Several cafeteria monitors expressed their personal lack of knowledge of nutrition and the benefits of a healthy diet and are interested in learning more both for themselves and to model good eating habits for the students. Stakeholders in all areas commented on the lunch practices during COVID, specifically on the practice of students remaining in the classes for lunch. They reported that this approach did provide students with more time to eat, as travel time and time in line were nonexistent. However, the increase in work for the cafeteria staff, which included preparation and delivery of the meals to each class, was done without any additional staffing and proved challenging. Additionally, the increased workload on the custodial staff, without additional staffing, was also challenging. The classroom clean-up was especially heightened in the classrooms of the younger students and referred to as a "nightmare" by teachers and

monitors. Lastly, stakeholders shared the lack of opportunity for "social engagement" in the classrooms while eating was undesirable and a drawback to this approach. Many stakeholders also commented that multiple classrooms in the cafeteria at once are extremely distracting for students. While they may not all be seated simultaneously, their arrival, departure, or passing through causes students to disengage in eating. The infrastructure and aesthetics of the cafeteria were also mentioned by several stakeholders providing an understanding of how the physical environment and infrastructure of the lunchroom impact insufficient lunchtimes. The glass block wall, separating the lunch line from the cafeteria, was referred to as "confining" and "unwelcoming" by stakeholders and does not reflect the "inviting and welcoming feel" of the rest of the school, commented one stakeholder. Additionally, stakeholders commented on the lack of color and opportunities for education in the cafeteria. One mural has been added in the cafeteria, but stakeholders, at all levels, are interested in expanding the art displays and improving the aesthetics in the cafeteria.

Research Question #3: "What are the values and ambitions of the stakeholders?"

The central theme that arose from the stakeholder interviews was the shared vision and desire of all stakeholders to create a safe environment where students have sufficient time to consume their lunches while developing social skills in the cafeteria. All stakeholders share an affinity and affection for the school and the students. Additionally, they shared a willingness to engage and co-create this ideal cafeteria setting or vision. Stakeholders are motivated to improve the cafeteria experience of the students and are amenable to and interested in additional training and professional development.

All members of the cafeteria staff enjoy their work and are invested in delivering nutritious meals to the students, delight in the interactions with students and staff, and strive to

deliver the best cafeteria experience possible. “We want them to try new foods and like them” commented one staffer. Cafeteria monitors view time in the cafeteria as “precious” as it affords the “opportunity for conversation” not available during the rest of the day due to instructional time. Many monitors use time in the cafeteria to “do little fun things”, like flashcards for learning sight words or “asking them open-ended questions” to engage in conversation and tap into their imagination. These times, however, are limited due to the time constraints in the cafeteria. Other monitors enjoy engaging in “different conversations with the students” and “private conversations” in the more casual environment, and “joke around and goof off” allowing students to “talk about what they want to talk about”. All share the desire to increase these opportunities to further a “peaceful, harmonious and fun” lunch period and less of a “rush, rush, rush” lunchtime. The teachers and the administration share these goals and also add the importance of students the opportunity to “develop good eating habits and social skills”.

Research Question #4: “How will success be determined?”

The consensus of success reflected by stakeholders is when students have sufficient time to consume their lunches and engage with one another to develop social skills. Stakeholders have shared their dislike of rushing the students through one of their two breaks in the structured day. Success will also be reflected when students, staff, administration, and policy align in valuing and prioritizing healthy foods and eating habits.

PROJECT RESULTS ANALYSIS

In the previous chapter, the results of the research questions were presented. The perceptions and statements of the stakeholders were shared concerning the strengths,

opportunities, aspirations, and results. This chapter will address how the results of the interviews inform the SOAR conceptual framework and provide recommendations for increasing the actual seated lunchtimes of students. All stakeholders agree that students need more time to consume their lunches. This is further supported in a nationwide study; a recent article based on a national educator survey revealed that over 60% of educators stated that students need at least 30 minutes to consume their lunches (Sparks & Prothero, 2023).

Revisiting the SOAR Framework

The SOAR model focuses first on an inquiry into the current strengths of the organization, next, on imagining the opportunities for improvement followed by innovating to meet the aspirations of the stakeholders, and lastly, inspiring all to achieve the collective desired results (Holman et al., 2007).

The strengths of the cafeteria staff and environment provide a strong foundation on which to build. The two major strength themes that arose from the date were the current cafeteria procedures and the cafeteria expectations. Research has shown that when students consume nutrient-dense foods, academic performance will improve (Anderson, et al., 2018), behavior will improve (Sorhaindo & Feinstein, 2006), positive health outcomes will improve (Au, et al., 2018) and healthy eating habits will develop (Cohen, et al., 2014). The importance and value of consuming healthy, well-balanced meals are foundational and valued by all stakeholders at the school. What is lacking is time. Building on the current strengths and further developing the cafeteria procedures and expectations will provide an asset-based path forward to sufficient lunchtimes.

The opportunities for improvement include the alignment of strategies to achieve the aspirations or shared values, vision, and mission of the stakeholders (Holman, et al., 2007). All

stakeholders agree on the value and importance of sufficient time for students to consume their lunches. They also agree that they want students to be successful in the classroom and the impact that healthy food has on academic performance. Evidence shows that when all stakeholders in the school are invested in improving the cafeteria environment, positive results occur. In six weeks, the Comfortable Cafeteria program has been shown to improve the enjoyment of lunchtime and increase positive social engagement and mealtime conversations (Bazyk, et al., 2018). While opinions vary on how to achieve the goals, the stakeholders are unequivocally dedicated to working together toward the common goals.

Implications and Impacts

The results of this study reveal the lack of sufficient time for students to consume their lunches. The practical implications include decreased opportunities for students to engage with one another to forge relationships and to develop healthy eating behaviors (Cohen, et al., 2014). These findings are significant, as healthy relationships with food and others begin in childhood. It is likely that the findings of this study are not unique to this elementary school, but exist in other schools in the area, and beyond the city limits.

School food programs have the opportunity to feed the students nutrient-dense foods which has the potential to impact the community. School lunch impacts academic performance, public health, local economics, social justice, and the environment (Center for Ecoliteracy, 2010). Schools are also well-poised to address and educate staff, students, and parents on the importance of nutrition and the consumption of nutrient-dense foods. This practice not only impacts staff and students within the school walls but can impact the families and community beyond the school grounds. While CEP is offered to all schools in Lynchburg, not all schools across the state or nation are currently participating. In September 2023, the USDA issued a

final rule amending the CEP regulations by lowering the identified student percentage from 40% to 25%, this action will allow increased participation for students across the country (USDA, 2023). As participation increases, the cafeteria lines will expand thus potentially reducing the time students have in their seats to consume their lunches.

RECOMMENDATIONS

Changing the cafeteria environment requires many key steps and investment from all stakeholders. To facilitate these changes, I recommend a tiered approach, starting with building on the current assets. The first two recommendations require the least investment, yet may provide immediate impact. The first is to address the challenges of the younger students during cleanup. The purchase of shorter trash cans will decrease the potential for trash outside of the can when dumping or throwing away their trays. The second is to supply cafeteria monitors with caddies for condiments, utensils, and cups, as well as, a water pitcher to have at the lunch tables and reduce student visits back to the lunch line. This simple change can preserve precious time in the seat to eat. Next, building on the recent mural addition in the cafeteria, further expand and improve the aesthetics and infrastructure of the cafeteria. Options may include the creation of additional murals, potentially incorporating student art, and the removal of the limiting glass block wall. Next, further developing the menu images, and information and providing tastings to all students and staff will improve communication of menu options and encourage expanding choices. This step may require outside expertise to photograph and develop age-appropriate menu descriptions. The next recommendations involve additional investment and time. The first is to develop a comprehensive plan to guide cafeteria monitoring. These steps may include: compiling requirements from the administration, creating

a focus group of cafeteria monitors to share best practices, and collaborating to create an overall cafeteria policy based on the strengths of the stakeholders and cafeteria. This policy will increase the dialogue between all staff and administration to emphasize the importance of consistency in messaging to the students. Several programs may provide additional information, structure, and support to further these efforts. These programs include the Rethinking School Lunch Guide, the Whole School, Whole Community, Whole Child Model, the Comfortable Cafeteria Program, Our Cafeteria is a Classroom Toolkit, and the Healthy Schools Program (Center for Ecoliteracy, 2010; CDC, 2019; Every Moment Counts, n.d.; Bowman, 2019; Alliance for a Healthier Generation, n.d.). Aligning the needs and goals of the stakeholders with proven strategies will increase the likelihood of success. The next recommendation is to further the existing Family Nutrition Program (FNP) partnership currently delivering nutrition education to the students, to reach, engage, and educate the parents on the benefits of a healthy diet. Additionally, FNP may also provide nutrition education and classes for the staff to increase their knowledge on healthy eating and behavior. The final recommendation is to extend the lunch period to 30 minutes to provide the 20-minute recommended seated lunchtime. Due to the rigorous mandates for instructional time, there is no time in the current schedule to expand cafeteria time for students, leaving the only option of extending the day. This will require buy-in from all stakeholders, parents, school administration, and the school board. It will be beneficial to share the importance of sufficient lunchtime and further build on the nutrition education of students, staff, and parents to support this change. If the recommendation is to expand the overall school day is not an option, an alternate recommendation is to offer an in-class lunch period to the older, fifth-graders, provided the opportunity remains for social engagement in the classroom. This will reduce an in-person lunch period in the cafeteria and the option to extend the remaining lunch periods.

Post-implementation of recommendations, further research at the school may include follow-up data collection on seated lunchtimes to assess whether time improvements were achieved. Additionally, follow-up interviews with stakeholders to assess changes in the cafeteria environment. Further research encompassing additional schools in the area may be beneficial to strengthen the case for increasing lunchtimes. This may expand beyond elementary schools into middle and high schools as well.

CONCLUSIONS

Lunch is more than a break in the day, it provides essential time to consume nutritious foods and interact with others. It serves as an opportunity for a mental break from academic work and can also offer "nourishment" beyond just nutrients. Nourishment can include “the capacity to: fill (quell hunger and fill the stomach), invigorate (provide nutrients), and gratify (satisfy social, emotional, and/or psychological preferences and needs)” (Trapp, 2018). This elementary school is a unique environment and the overall cafeteria environment provides a multitude of foundational strengths. Each stakeholder maintains individual needs and expectations; however, they are unified in working together to achieve the collective goals of sufficient time for students to consume their lunches and improvement of the cafeteria environment to promote health and wellness. Increases in communication between all stakeholders will further expand an understanding of how individual past and present experiences formed perceptions of the lunchroom environment, as well as, how the expectations of themselves and others in this arena influence their behavior. Further communication will also be essential in the development of uniform training, policies, and procedures and the importance of these additions. Expanded training can assist with a more uniform delivery of expectations concerning student behavior and utilizing the time provided

more efficiently. An additional opportunity to educate all stakeholders on the current status of H.R. 6526: Healthy Meal Time Act of 2022, the sponsor, Kim Schrier of the 8th Congressional District in Washington, and how that may impact students and communities. While all recommendations may not be implemented, the willingness of the stakeholders to work together to achieve common goals will be key to moving forward.

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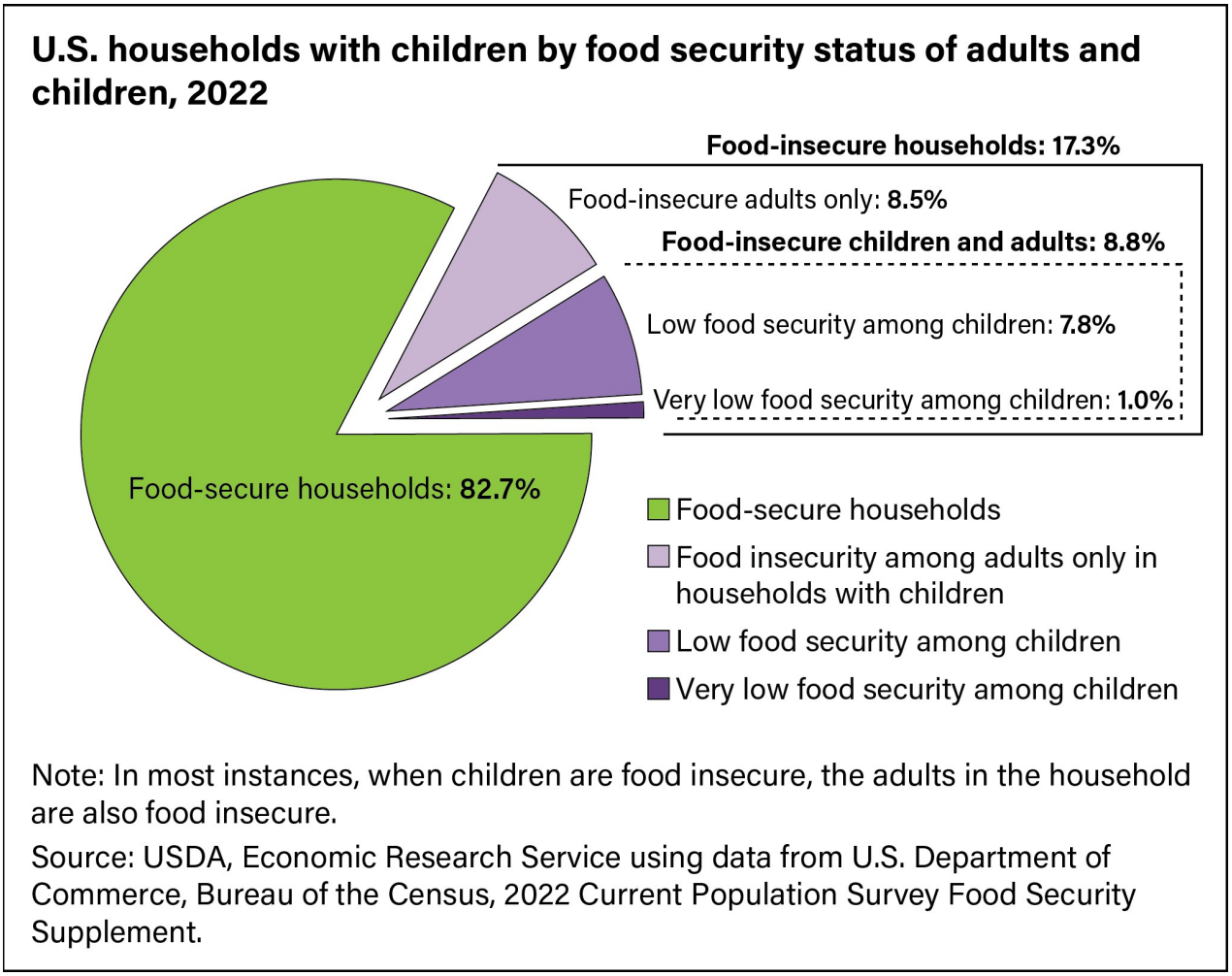
Appendix A

Figure 1

U.S. Households with Children by Food Security Status of Adults and Children, 2022



Appendix B

Seated Times for Students with Packed Lunches

Grade	4/25/22	4/29/22	05/02/22	5/9/22	5/13/22	Average
Kindergarten	0:21:00	0:25:00	0:24:00	0:19:00	0:19:00	0:21:36
1	0:16:00	0:20:00	0:17:00	0:15:00	0:21:00	0:17:48
2	0:19:00	0:20:00	0:17:00	0:15:00	0:13:00	0:16:48
3	none	none	none	none	none	none
4	0:14:00	0:16:00	0:18:00	none	0:12:00	0:15:00
5	0:17:00	0:19:00	0:25:00	0:21:00	0:21:00	0:20:36

Seated Times for Students First in Line

Grade	4/25/22	4/29/22	05/02/22	5/9/22	5/13/22	Average
Kindergarten	0:15:00	0:18:00	0:22:00	0:16:00	0:14:00	0:17:00
1	0:19:00	0:17:00	0:16:00	0:21:00	0:16:00	0:17:48
2	0:19:00	0:15:00	0:14:00	0:17:00	0:11:00	0:15:12
3	0:18:00	0:13:00	0:17:00	0:20:00	0:18:00	0:17:12
4	0:21:00	0:12:00	0:17:00	0:16:00	0:10:00	0:15:12
5	0:21:00	0:18:00	0:07:00	0:16:00	0:12:00	0:14:48

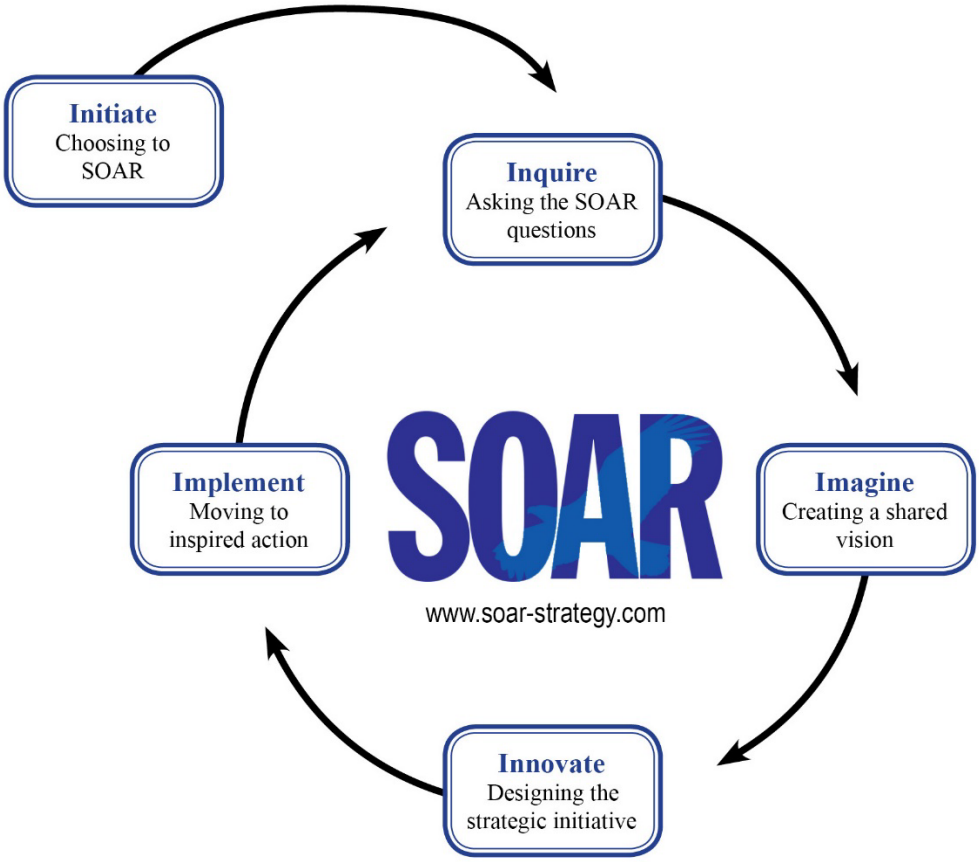
Seated Times for Students Last in Line

Grade	4/25/22	4/29/22	05/02/22	5/9/22	5/13/22	Average
Kindergarten	0:19:00	0:16:00	0:18:00	0:17:00	0:15:00	0:17:00
1	0:16:00	0:13:00	0:15:00	0:13:00	0:15:00	0:14:24
2	0:13:00	0:12:00	0:13:00	0:16:00	0:12:00	0:13:12
3	0:18:00	0:15:00	0:13:00	0:13:00	0:19:00	0:15:36
4	0:14:00	0:11:00	0:14:00	0:17:00	0:12:00	0:13:36
5	0:11:00	0:15:00	0:12:00	0:16:00	0:08:00	0:12:24

Appendix C

Figure 1

SOAR Model



Stavros, J & Hinrichs, G. (n.d.) https://www.soar-strategy.com/what-is-soar

Appendix D

Dear Jeanell,
12/11/23

Thank you for using SOAR in your master's project.

Two things:

#1: You might want to use this figure of SOAR – I've found it really in more circular and iterative in nature:

https://www.soar-strategy.com/what-is-soar

#2: I am attaching two featured articles on SOAR and the second one SOAR 2020 and beyond gives the origin story of how SOAR emerged from my dissertation.

If approved, I'd love to read your paper.

Thank you for the attribution – which can either be the website as you noted or *Learning to SOAR* book.

Best wishes - Jackie

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Appendix E

Interview Questions

Data collection questions for cafeteria staff:

1. What are your thoughts about the current environment in the cafeteria during lunch?
2. What are the obstacles preventing all students from having enough time to eat their lunch?
3. What ideas do you have to decrease the time students spend in line?
4. Have there been any efforts in the past to change the cafeteria routine?
5. If yes, what went well?
6. Also, if yes, what did not go well?

Data collection questions for cafeteria monitors:

1. How would you describe your job as a cafeteria monitor?
2. Do you enjoy cafeteria monitoring?
    a. If yes, what do you enjoy?
    b. If no, what do you not enjoy?
3. Did you receive training to perform cafeteria monitoring?
4. Are you compensated for performing cafeteria monitoring?
5. What are your thoughts about the current environment in the cafeteria during lunch?
6. What are the obstacles preventing all students from having enough time to eat their lunch?
7. Have there been any efforts in the past to change the cafeteria routine?
8. If yes, what went well?
9. Also, if yes, what did not go well?

Data collection questions for the teachers:

1. How often do you spend time in the cafeteria with students during lunch?
2. What are your thoughts about the current environment in the cafeteria during lunch?
3. What are the obstacles preventing all students from having enough time to eat their lunch?

4. Have there been any efforts in the past to change the cafeteria routine?
5. If yes, what went well?
6. Also, if yes, what did not go well?

Data collection questions for the administration:

1. How are the cafeteria monitors chosen?
2. How often do you spend time in the cafeteria with students during lunch?
3. What are your thoughts about the current environment in the cafeteria during lunch?
4. What are the obstacles preventing all students from having enough time to eat their lunch?
5. Have there been any efforts in the past to change the cafeteria routine?
6. If yes, what went well?
7. Also, if yes, what did not go well?