**Does free student meals mean an increase in Ala Cart sales?**

Developing Analytics Applications in R

RESEARCH PROPOSAL

By

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M-00327918

**CIS 663**

Fall 2021

Master of Science in Information Systems (MSIS) Program

# **Problem and its Significance**

With the changes brought on by the Covid-19 pandemic the United States Department of Agriculture (USDA, 2021) enacted several changes to help struggling school districts recover from the loss of meal reimbursement due to lower than usual participation. One of the measures taken by the USDA was to allow for all students to eat free and for those districts to receive higher than normal reimbursement, as students that were normally paid were being treated as students that were normally free. I propose that this has actually lead to a situation where these districts are now seeing a much higher revenue than before. That the students that were accustomed to paying for their meals are now taking these funds and using them for extra items or Ala Carts as is the terminology used in the industry.

With meals being free, have students taken the fund that would have normally been used for those meals and are now using them to buy Ala Cart items? With the increase in reimbursement as well as students spending money otherwise used for meals, the school district is attempting to be more profitable now than when the pandemic started. With the possibility of meals becoming permanently free districts are looking to capitalize on this emerging trend.

# **Literature Review**

The loss of revenue from the reimbursement the schools received from the USDA has generated Food Service Directors looking to new places to try and compensate from the loss of meals served. It has been estimated that between March and November of 2020 schools nationwide served 1.7 billion fewer meals compared to the same timeframe in 2019, equating to a 2.1 billion loss in federal funding for the school meal programs (Pratt-Heavner, 2021).

With the loss of revenue from the meal program itself many schools begin to look elsewhere for the funding. “We must help schools offset these meal program losses, which will impact education budgets at the local level, cutting in to necessary funds for teachers, textbooks and technology,” (Pratt-Heavner, 2021). Many schools from my professional experience have had to downsize their staff due to not having the funding to pay their wages. As well as deal with the Covid guidelines and scheduling for meal sessions for the students. Federal regulations state that “schools must offer lunches between 10:00 am and 2:00 pm. Schools may request an exemption from these times from the state agency.” SNA’s State of School Nutrition 2018 survey, which included responses from 1,550 SNA member school districts nationwide, revealed that the typical lunch period length is about half an hour, with a median of 25 minutes reported for elementary schools and 30 minutes for middle and high schools. (SNA, 2021)

# **Research Question(s)**

* Has the school district seen an increase in Ala Cart spending compared to a pre-covid year?

# **Theory**

H1: (X) Money spent on extra meal item is < (Y) Money spent on a complete meal pre-covid analysis

H2: (X) Money spent on extra meal items has increased by (Z) percentage due to (Y) now being 0

# **Data**

The data that I will be using will come from a current school district that I will call School District so as to keep their information confidential. This information will come from my current line of work as technical support representative, this will be a sample of actual sales information between a designated time period of August 01 – October 31 of the school year 18/19 and 21/22. I will not use data from 19/20 school year as most school districts had 0 in person attendance during this time and the variables for the different meal services would go well beyond the scope of the project.

# **Methodology**

Once the sales data is imported into R I will perform the necessary clean-up of the data. Namely combing the different meal sales information and ala cart information into a summary for each class for the given time period. This will be done so that I have the combination of sales data to better be able perform my testing on.

After the information has been consolidated I will perform a t-test analysis to see how the changing of meal pricing has impacted the overall sales within the district.

# **References**

USDA (2021) USDA Issues Pandemic Flexibilities for Schools and Day Care Facilities through June 2022 to Support Safe Reopening and Healthy, Nutritious Meals, Press Release No. 0075.21

<https://www.usda.gov/media/press-releases/2021/04/20/usda-issues-pandemic-flexibilities-schools-and-day-care-facilities>

Pratt-Heavner (2021) New USDA Data: Fewer Meals Served, $2B Loss for School Meal Programs

<https://schoolnutrition.org/news-publications/press-releases/2021/new-usda-data-fewer-meals-served-2b-loss-for-school-meal-programs/>

SNA (2021) School Meal Trends & Stats

<https://schoolnutrition.org/aboutschoolmeals/schoolmealtrendsstats/>

**Assignment Overview**

This assignment involves creating a rough draft of a proposal for a research project in R. Your project needs to provide an answer to an important question or a solution to an important problem. There is no need to provide details. What matters is a rough understanding of what the project will be about and what kind of data, packages, and analysis techniques you will use for the project. It’s OK if you don’t have a specific idea for a particular aspect of the project. If this is the case, then just provide some ideas on what can be a possible way to go.