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A STUDY OF THE SCHOOL LUNCH PROGRAM

IN LAWRENCEVILLE, ILLINOIS

(TITLE)

BY

DAVID SAMUEL MILLS

**PLAN B PAPER**

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR  
THE DEGREE MASTER OF SCIENCE IN EDUCATION  
AND PREPARED IN COURSE

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IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY,  
CHARLESTON, ILLINOIS

1965

YEAR

I HEREBY RECOMMEND THIS PLAN B PAPER BE ACCEPTED AS  
FULFILLING THIS PART OF THE DEGREE, M.S. IN ED.

*August 6, 1965*  
DATE

ADVISER

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DEPARTMENT HEAD

TABLE OF CONTENTS

	Page
LIST OF TABLES . . . . .	iv
Chapter	
I. INTRODUCTION . . . . .	1
Definition of Terms	
History of School Lunch Programs	
History of the School Lunch Program in Lawrenceville, Illinois	
II. DESCRIPTION OF LOCAL PROGRAM . . . . .	9
Current Organization and Administration	
Personnel Working Assignments	
Satellite Kitchens	
Food	
Transporting Food	
III. THE NEED FOR THIS STUDY . . . . .	12
Statement of Problem	
Limitations of the Study	
IV. PROCEDURE IN GATHERING DATA . . . . .	14
Type of Lunch	
Serving and Waste Weights	
Menu Selection	
Personnel--Time and Cost	
V. FINDINGS . . . . .	17
Requirements for "Type A" Lunch	
Serving and Waste Weights	
Student Reaction to Menus	
Personnel Cost	
Personnel Time in Food Preparation	
Meal Cost and Purchasing Procedures	

TABLE OF CONTENTS (Continued)

	Page
Chapter VI. CONCLUSIONS, RECOMMENDATIONS, AND SUMMARY . . . . .	28
Conclusions	
Recommendations	
Summary	
APPENDIX A . . . . .	30
APPENDIX B . . . . .	34
BIBLIOGRAPHY . . . . .	40

LIST OF TABLES

Table	Page
1. Individual Tray Weights, by Pounds . . . .	18
2. Pounds of Food and Waste Weight per 100 Meals Served . . . . .	18
3. Most Popular Food Choices . . . . .	20
4. Foods Least Wanted . . . . .	20
5. Menus with Lowest Tray Waste . . . . .	21
6. Menus with Highest Tray Waste . . . . .	22
7. Expenditures of Lunch Program . . . . .	27

## CHAPTER I

### INTRODUCTION

Serving food, as a lunch, to school children has been done in many ways throughout the years. Teachers know the difference between teaching children who are hungry and those who are not hungry.

The first experience this writer had with a school lunch was typical in many schools throughout the United States for many years. About the middle of the morning during extreme cold weather, the teacher would place a kettle of soup on the stove. The soup was provided by some well meaning persons in the community unknown to most of the pupils. Each had his own bowl and spoon which was washed and rinsed out after each noon meal. To supplement the bowl of soup, the teacher suggested that each pupil bring a sandwich and some type of raw fruit or vegetable.

Many school lunch programs now provide as much as one-third of the daily nutritional requirements of a child. The need of giving growing children the nourishing noon meal has been strongly emphasized in our country because of thousands of young men who have been rejected by the armed services, due to malnutrition and bodily deformities caused by poor food habits.

In this paper, which is a study of the school lunch program in a county seat Southern Illinois town, certain terms are used as defined below.

#### Definition of Terms

A school lunch consists of recommended foods making a balanced, wholesome lunch as prescribed by the National School Lunch Act of 1946.

The school lunch program prepares and serves school lunches according to standards established by the Department of Agriculture to qualify for reimbursement.

Reimbursement for school lunches is paid cooperating schools by a formula using total student meals served times an allowance from the state and federal governments.

A lunch program director is one who supervises and trains employees; purchases foods, supplies, and equipment; and is responsible for financial records.

Commodities are surplus foods purchased by the United States Department of Agriculture, to be distributed to schools participating in a school lunch program.

Central kitchens are areas where food is prepared, not only to be served in a dining room in the same building, but to be transported to another school or schools for serving.

Satellite kitchens are receiving points for food from central kitchens to be served to students in other buildings.

## History of School Lunch Programs

## European and American History

Following the American Revolutionary War, a loyalist, Count Runford (Benjamin Thompson), returned to England and later traveled to the Continent and made his home in Germany. In connection with a campaign against vagrancy in 1790, he started a school feeding program using municipal soup kitchens staffed by unemployed adults.

France was the first country to recognize the need for school lunches on a national scale. The national interest was aroused by activity of various societies composed of interested parents, teachers, and civil employees offering meals free or at cost to encourage school attendance. The societies' programs had been assumed by several schools as early as 1849. When the programs were operated by the schools, a wider participation of students was encouraged. In 1871, the city of Auger started "peoples kitchens" and charged an equivalent of 2 cents in our money.<sup>1</sup> A citizen who was unable to pay was given the meal without cost. National legislation by the French government in 1882 provided for use of local funds to support lunch programs in local schools.<sup>2</sup>

The first organized municipal school feeding in the

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<sup>1</sup>Marion Croman, The School Lunch (Peoria, Illinois: Chrs. A. Bennett Company, Inc., 1962), p. 8.

<sup>2</sup>U.S. Department of Agriculture, Food-The Yearbook of Agriculture (Washington: Government Printing Office, 1959), p. 691.



United States was undertaken by the Star Center Association of Philadelphia in 1894. The Association was organized for purposes of feeding elementary school pupils.

During the early 1900's, France appropriated about \$200,000 annually for school lunches. The English Parliament, until 1904, had recommended that school lunches be supported whenever possible from private funds. The Provision of Meals Act, passed in 1906, gave the educational agents the authorization to equip rooms for preparation and serving of meals to children at cost and free to those unable to pay.

Other countries of Europe patterned a school lunch service, using England and France as their guide. By the early part of the twentieth century, almost every European country was supporting some type of lunch service.<sup>3</sup>

Throughout England the schools developed various methods of implementing the Provision of Meals Act:

In 1909 such cities as Bradford, England, were preparing food in one central kitchen, placing it in "great heat retaining vessels, and carrying it by motor cars to the schools." Attempts were made to make lunch time a pleasant experience; dining halls were bright and colorful, teachers generally supervised the children, and the food was served by waitresses.<sup>4</sup>

Widespread acceptance of school lunches was slower to materialize in the United States. The appearance of two books in the first decade of the twentieth century,

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<sup>3</sup>Ibid., p. 692.

<sup>4</sup>Cronan, op. cit., p. 9.

Poverty by Robert Hunter and Underfed School Children, the Problem and the Remedy by John Sparge, focused attention on the millions of school children in the United States who were not receiving adequate meals. Sparge attacked the problem and advocated a program, taking points from the various countries of Europe, for the United States to combat the problem of malnutrition.<sup>5</sup>

In 1910, New York aimed to provide one-fourth of the child's daily nutritional requirements in its program. The Boston program, which had been in operation under the direction of janitors and other commercially minded personnel, was taken over about this same time by the Women's Educational and Industrial Union which started emphasizing nutritional quality.

Many cities in the early 1900's were operating penny-lunch programs for elementary students. Most of these programs permitted the student to buy one nourishing food to supplement a sack lunch from home.

The United States Department of Agriculture, in 1916, in their Farmer's Bulletin No. 712 listed what a school lunch should include:

1. Protein rich foods including milk.
2. Vegetables and fruits.
3. Cereals or starchy foods.
4. Fatty foods.
5. Simple sweets.<sup>6</sup>

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<sup>5</sup>United States Department of Agriculture, op. cit., p. 692.

<sup>6</sup>State of Illinois. School Lunch Handbook for School Lunch Programs. Office of the Superintendent of Public Instruction, Circular Series "A" No. 136, p. 1.

The Boston program employed a school lunch director who supervised preparation and packaging of the food for distribution to schools. This person also visited the schools and discussed the local problems with the schoolmaster.

Food for use in school lunches was donated by parents or charitable groups and purchased with receipts from the program until 1932. Surplus foods, controlled by the Department of Agriculture, were distributed in 1932 on a limited basis for use in free lunches. The Reconstruction Finance Corporation made loans to some communities in Missouri in 1932 and 1933 to pay labor costs of preparing and serving school lunches. In 1934, the State of New York appropriated \$100,000 for free lunches and milk in the schools. The federal government started making annual appropriations in 1935 for distribution of surplus foods.<sup>7</sup>

By the end of 1934, the Civil Works Administration and the Federal Emergency Relief Administration was providing assistance similar to the Missouri program in 39 states. With the creation of the Works Progress Administration and the enactment of Public Law 320, 74th Congress, in August 1935, authorization for donation of surplus foods and establishment of school kitchens was made.<sup>8</sup>

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<sup>7</sup>U.S. Department of Agriculture, op. cit., p. 693.

<sup>8</sup>Ibid.

At the termination of the Works Progress Administration in 1943, local schools were given the responsibility of the lunch program; and in 1944, Congress authorized a specific amount of funds under section 32 of Public Law 320 for continuation of the program.

Following legislation in 1945 outlining conditions under which Federal assistance would be provided, the National School Lunch Act 1946 was enacted. School lunch programs are now operated under the basic authority of this Act. The Secretary of Agriculture is responsible for establishing and maintaining supervision over schools receiving commodities and reimbursement for lunches.

Under the National School Lunch Program Act of 1946, schools must agree to three basic regulations; namely

1. The lunch program must be operated on a non-profit basis.
2. Children unable to pay the full price of the lunch must be served free or at a reduced price.
3. Lunches must meet nutritional standards established by the United States Department of Agriculture. These standards are embodied in the lunch pattern known as the "Type A" lunch.<sup>9</sup>

#### History of the Lunch Program in Lawrenceville, Illinois

The Lawrenceville, Illinois elementary schools first started participating in the National School Lunch Act of 1946 when the new Junior High School was built in 1956. The plans for the new building included a kitchen and

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<sup>9</sup>U.S. Department of Agriculture, Agricultural Marketing Service, The National School Lunch Program, (Washington: U.S. Government Printing Office, 1961), p. 4.

dining room. A student from any of the other elementary buildings could eat at this kitchen by providing his own means of transportation. The one kitchen and dining room continued for seven years.

Approximately seventy students were attending Arlington School who lived one mile or farther from the building. These students rode the bus to school. Either they brought their lunch or went to an ice cream shop that served sandwiches and drinks.

Many other families served by Arlington School sent their children with a lunch or let them go to the ice cream shop for a day or more. Since many parents considered this situation to be an unsatisfactory solution to the noon feeding of children, they were asking the school board to make some kind of provision for a lunch program in the other buildings similar to the advantages existent in the Junior High. As a result, the superintendent recommended satellite kitchens with essential equipment be set up in two outlying buildings with operation to start in 1963.

## CHAPTER II

### DESCRIPTION OF LOCAL PROGRAM

#### Current Organization and Administration

The building first serving school lunches was located on an outer edge of town at some distance from the other school buildings. The kitchen and dining room were built to serve students in that building. The announcement inviting all students in the other buildings to eat there, was made in order that the district would qualify for more government commodities, since the allotment of goods to a school is based upon possible participants.

Because of the distance between the Junior High and Arlington School, approximately seventy students riding the bus either brought their lunch or went to an ice cream shop that served sandwiches and drinks for lunch. The satellite system would bring food to Arlington from the central kitchen and give these students, as well as all others in the building, an opportunity to have a "Type A" school lunch.

#### Personnel Working Assignments

One of the cooks in the central kitchen was given the dual responsibility of head cook in charge of menu planning and advisor to the superintendent in matters of

purchasing. The other persons were assigned the duties of either full time cooks in the central kitchen or part time cook in the central kitchen with added responsibility of serving head in a satellite kitchen.

A part-time worker reports to the satellite kitchen in Arlington and does preparatory tasks for serving. After the meal is served, the work of cleaning up is done by the part-time worker.

If a student is unable to pay for his lunch, in exchange for his meal he is permitted to assist in handing out milk, scraping trays, washing tables, and keeping dining room furniture in order.

#### Satellite Kitchen

The satellite kitchen has a refrigerator, garbage disposal, dish washing sinks, and work table.

Bread and milk are delivered directly to the satellite kitchen. The order is left by the part-time worker, with knowledge of the planned menu for the next day and of what is left on hand.

#### Food

Delivery of food is made in heat packs approximately twenty minutes before the serving starts for the primary grades. Serving is completed, for both the primary grades and the intermediate grades, in approximately forty minutes.

The part-time worker butters the bread, places silverware on the tables, and makes the sandwiches if they are on the menu. A supply of canned fruit is stored in the

refrigerator. The part-time worker opens and dips the fruit into serving cups prior to arrival of the hot food.

During the first year of the satellite operation, the head cook and superintendent ordered all food. The head cook used shelf inventory or anticipated menus to make an order, until the salesman called again. During the second year of the satellite operation, the director was responsible for the purchasing. The running inventory, prices currently in effect, and the student preference in foods served to influence the director in placing orders.

#### Transporting the Food

One of the maintenance men had the responsibility of transporting food and containers during the first year. The cook accompanied him to and from the central kitchen in the truck which belonged to the school district. An enclosed top with an open back was placed on the truck. After the satellite kitchen had operated one year, a government surplus van-type truck was purchased. Racks were placed along the sides and tracks were installed on the floor for the heat packs. The truck was used exclusively for transportation of food. The cost of the truck and operating expenses were charged to the lunch program.



## CHAPTER III

### THE NEED FOR THIS STUDY

After the program had been in operation for several months, cost analyses revealed the money expended in the lunch program was more than anticipated, and money was being used that had been budgeted for educational purposes. The superintendent was seeking ways whereby improvements in the program could be made in order that more students would avail themselves of the program.

Personnel problems were arising between the cooks, working in both the central and satellite kitchens, and the administrative personnel in the outlying buildings. A system of communications needed to be established between the educational staff and service personnel having responsibility in the lunch program.

Many students in Arlington School were throwing away full servings of food and the rate of waste appeared extremely high.

#### Statement of Problem

The increased cost that resulted from the satellite kitchens gave rise to a study of purchasing procedures, menu planning, and utilization of personnel, with the purpose in mind of making recommendations for the

improvement of the Lawrenceville elementary schools' lunch program and with particular concern for the problems relating to Arlington School.

#### Limitations of the Study

The study was limited to serving and waste measurement at Arlington School for the month of February in 1964 and 1965. The only food that could be served was brought to the satellite kitchen and it had to serve the full number of students eating.

All menus were prepared and size of servings determined by the head cook located in the central kitchen.

## CHAPTER IV

### PROCEDURE IN GATHERING DATA

#### Type of Lunch

The School Lunch Application-Agreement signed by the school district listed these requirements for a "Type A" lunch.

1. One-half pint of fluid whole milk as a beverage.
2. Two ounces (edible portion as served) of lean meat, poultry, or fish; or two ounces of cheese; or one egg; or one-half cup of cooked dry beans or peas; or four tablespoons of peanut butter; or an equivalent quantity of any combination of the above listed foods. To be counted in meeting this requirement, these foods must be served in a main dish or in a main dish and one other menu item.
3. A three-fourth cup serving consisting of two or more vegetables or fruits or both. Full-strength vegetables or fruit juice may be counted to meet not more than one-fourth cup of this requirement.
4. One slice of whole grain or enriched bread; or a serving of cornbread, biscuits, rolls, muffins, etc., made of whole-grain or enriched meal or flour.
5. Two teaspoons of butter or fortified margarine.<sup>10</sup>

The lunch menus were checked against these requirements to see that they contained the specified foods. Servings were weighed or liquid measures were used to see that all requirements were being met.

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<sup>10</sup>Office of the Superintendent of Public Instruction, State of Illinois. School Lunch Handbook, Circular Series A, (Springfield; State of Illinois), p. 16.

### Serving and Waste Weights

To collect serving weights, every seventh tray was weighed. The weights were averaged to arrive at the tray weight for the day. Waste food was weighed after the trays of primary students were scraped and again after the intermediate students had finished the meal.

### Menu Selection

The students of the fourth and fifth grades were given a list of foods which had been served or could be served on lunch trays. A copy of this sheet is included in Appendix A. The foods were divided into four groups: (1) meats or meat dish, (2) vegetables, (3) salads or fruits, and (4) desserts. The students were instructed to pick a food from each list and build five menus they would like to have served. After picking their menus, the students were instructed to draw a line through three foods on each list they would least want served on the tray.

### Personnel--Time and Cost

The Labor Cost chart found in Appendix A was used to find the actual labor cost for the lunch program. Any person working for the school district and having a specific function to perform was included on the chart.

The measurement of meals per cook-hour was figured on the yearly average number of meals served. With the cooperation of the Administrative Assistant of the Lawrenceville schools, a survey sheet was prepared to send to school

districts in the area with similar size school lunch programs. The Administration was interested in cooks' salaries. A portion of the survey, as found in Appendix A, was used to determine meals per cook-hour in the reporting schools.

The writer made personal visits to two schools, other than the Lawrenceville schools, using satellite kitchens. The visits were made for the purpose of observing the operation and talking with the person administering the lunch program.

## CHAPTER V

### FINDINGS

#### Requirements for "Type A" Lunch

All trays were served with individual pack milk that met the one-half pint whole milk requirement of the School Lunch Application-Agreement. Bread spread with commodity butter fulfilled items 4 and 5 of the agreement listed on page 14 of this paper. Menus served with commercially prepared meat helpings, such as fish, pork tenderloin, and hamburger, exactly met the two ounce requirement in item 2; but meat prepared in bulk quantities, such as coney, chili, stew, or roast meat, frequently exceeded the requirement. The vegetable and fruit requirement was met by using serving dippers of specified sizes. Many times the cooks would enlarge the serving if the student requested it or they knew the student was a heavy eater. The lunch trays served met "Type A" requirements unless a student presented a medical slip as an excuse for not being served some food.

#### Serving and Waste Weights

Although the meals met the nutritive requirements, actual food weight varied. The primary pupils were served the minimum, but the trays of the intermediate pupils frequently had oversized servings the first year. The

tray weights were determined by weighing every seventh tray as served each school day of February.

TABLE 1  
INDIVIDUAL TRAY WEIGHTS  
BY POUNDS

	Low		High	
	1964	1965	1964	1965
Primary Grades	.875	1.125	1.441	1.5
Intermediate Grades	1.315	1.125	1.5	1.5

The second year of study the lunch program director exercised strong control over menu planning and serving.

TABLE 2  
POUNDS OF FOOD AND WASTE WEIGHT  
PER 100 MEALS SERVED

	Food Weight		Waste Weight	
	1964	1965	1964	1965
Primary Grades	115	131	24	26
Intermediate Grades	124	131	20	19
Entire School	122	131	21	21

The trays had a more daily uniform weight in 1965 and both groups had the same weight of food served, which was more than 1964, but the waste was the same weight.

The United States Department of Agriculture conducted a study from 1946 to 1948 using 33 schools, in which

they reported waste from trays to run from .315 pounds to 20 pounds per 100 lunches served, with the average being 6 pounds. The programs studied were "Type A" lunches meeting the same requirements listed in 'Type of Lunch' page 14 of this paper.<sup>11</sup>

In 1963 the lowest tray waste for Arlington School was the day the tray weight was the lowest; but in 1964 the lowest tray waste was on a day of mean tray weight of 1.25 pounds. The highest tray wastes for both years were on the days the tray weights were of mean weight.

#### Student Reaction to Menus

As several students read the list of foods they could use in picking menus, questions about milk and bread and butter were asked. They were told that all meals would be considered to be served with milk and bread and butter.

Foods chosen by the students as most desired to be served on lunch trays are listed in Table 3 and those least desired are reported in Table 4. The menus for days having the lowest and highest tray waste are listed in Tables 5 and 6.

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<sup>11</sup>Margaret B. Dreisbach and Elizabeth Hardy. School Lunch Management, in Relation to Nutritive Value, Cost, and Acceptance of Foods Served. U.S. Department of Agriculture PA-114. Washington: U.S. Government Printing Office, 1951.



TABLE 3

## MOST POPULAR FOOD CHOICES

Meats	Vegetables	Salad or Fruit	Dessert
Hamburgers	Whole Kernel Corn	Cole Slaw	Brownies
Fried Chicken	Green Beans	Celery and Carrots	Jello
Chili	Mashed Potatoes	Apple Sauce	Ice Cream
Weiner on Bun	Baked Beans	Pear and Cottage Cheese	Chocolate Cake
Coney	Harvard Beets	Tossed Salad	Cookies

TABLE 4

## FOODS LEAST WANTED

Meats	Vegetables	Salad or Fruit	Dessert
Grilled Cheese	Candied Yams	Cold Tomatoes	Fruit Cup
Spanish Rice	Wax Beans	Cranberry Sauce	Cobbler
Turkey Pot Pie	Buttered Peas	Ripe Olive and Cabbage Wedge	Butterscotch Pudding

In making a comparison of the foods popular with the students and the five menus for each year which had the lowest tray waste, it was seen that some of each food group was not served. The three meats--hamburger, coney, and chili--appeared in the menus for both years. Two vegetables, mashed potatoes and Harvard beets, were on the menus once. Corn, served as whole kernel or buttered, was in two menus each year. The salads chosen as most wanted, celery and carrots, pear and cottage cheese, and apple sauce, were served on the low waste trays.

All three vegetables chosen as being least wanted were in the menus of low tray waste.

TABLE 5

## MENUS WITH LOWEST TRAY WASTE

1964	1965
Hamburger Catsup, Mustard, Dill Slices Buttered Corn Pineapple Milk	Coney Whole Kernel Corn Potato Chips Cherry Pudding Milk
Fish Sandwich Buttered Corn Cookies and Jello Milk	Hamburger Catsup, Mustard, Dill Slices Whole Kernel Corn Cinnamon Pear Salad with Cottage Cheese Jello Milk
Chili Crackers Pineapple Salad Chocolate Pudding Bread and Butter Milk	Chili Crackers Cheese Sticks Celery and Carrots Pears Bread and Butter Milk
Coney Potato Chips Wax Beans Carrot Strips Peaches Milk	Barbeque on Bun Peas and Carrots Macaroni and Cheese Whipped Jello with Fruit Milk
Pork Tenderloin on Bun Mashed Potatoes Harvard Beets Pineapple Milk	Baked Ham Candied Yams Peas and Carrots Peaches or Apple Sauce Bread and Butter Milk

In observing lunch trays as they were returned to the scraping table, it was not uncommon to see a full serving of vegetable uneaten.

Menus may be planned with childrens' needs and wants in mind; for instance, food which is easily cut or served in bite size pieces, raw vegetables that may be eaten with

the fingers, and bland food with seasoning containers on the table. The menus for schools should reflect some of the food habits of the community as well as offering a variety of foods throughout the school year.<sup>12</sup>

TABLE 6

## MENUS WITH HIGHEST TRAY WASTE

1964

Egg Salad, Ham Salad, Peanut Butter Sandwich	Spanish Rice
Corn	Green Beans
Spinach	Apple Sauce
Apple Sauce	Cheese Strip
Milk	Bread and Butter
	Milk
Egg Salad, Ham Salad Peanut Butter Sandwiches	Roast Beef and Gravy
Green Beans	Mashed Potatoes
Cold Tomatoes	English Peas
Pears	Bread and Butter
Milk	Peaches
	Milk
Vienna Sausage	Ham and Beans
Baked Beans	Cornbread and Butter
Spinach	Ripe Olives, Cabbage
Raw Apple	Wedges, Carrot Strips
Bread and Butter	Fruit Cup
Milk	Milk

## Personnel Cost

The first year of operation, the cooks were the only personnel being paid from the School Lunch Fund. A daily cost for the cooks was \$59.18, but the actual labor cost including the cooks was \$91.96. The additional cost was for the time the teachers spent in collecting money, office

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<sup>12</sup>Mary de Garmo Bryan, The School Cafeteria (2nd. ed.; New York: F. S. Crafts and Co., 1940), p. 128-129.

girls and bookkeepers, janitor service, and truck expense for operating the lunch program.

During the first two years of operation, none of the personnel received raises in pay. During this time the truck for transporting food was purchased and a part time director was added.

The truck traveled a total of 7.4 miles daily transporting food from the central kitchen to the satellite kitchens and returning containers to the central kitchen. Principally the same route was traveled by the truck both years. During the serving period of the first year of operation, the driver, also a maintenance man, would drive the truck to wherever he had duties to perform. The second year of operation a janitor drove the truck and returned to his building during serving time.

Truck operating expense of \$1.11 per day for transporting food was paid by the Educational and Building Funds the first year of satellite operation. Before the start of the second year the lunch program purchased a truck and all operating expense was paid by the lunch program.

An Administrative Assistant was assigned as part-time lunch program director the second year. The lunch program was charged \$1,000 annually for the director's services.

The amount of time the director spent on the school lunch program was more than the proportionate share of his full salary.

The actual daily cost of the school lunch program was \$97.44 during the second year of satellite operation.

The school district was subsidizing the school lunch program for personnel services at the rate of \$32.78 and \$31.87 respectively the first and second years of satellite operation.

#### Personnel Time in Food Preparation

The central kitchen had been preparing a yearly average of 242 meals per day, but satellite operation increased preparation to 637 meals per day. Two people working in school lunch programs, Thelma G. Flanagan, Supervisor, School Lunch Program, Department of Education of Florida,<sup>13</sup> and Ruth Millikin, Director of Food Service, California Union School District, Costa Mesa, California,<sup>14</sup> agree that preparation of food from a central kitchen will result in a more uniform quality than when prepared in kitchens of individual schools.

The increased number of meals served through the satellite system makes it possible to have a variety of foods from day to day and use up the prepared food, rather than having a large variety in each day's menus by using left over food.<sup>15</sup>

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<sup>13</sup>Thelma G. Flanagan, "Satellite and Base Kitchens in Space Age," American School Board Journal, The, vol. 149, no. 4, (October, 1964) p. 52.

<sup>14</sup>Ruth Millikin, "The Contemporary Centralized Kitchen," School Executive, The, LXXIX, (November, 1959), p. 105.

<sup>15</sup>Norvil Lester George and Ruth D. Heckler, School Food Centers, (New York: The Ronald Press Company, 1960), p. 241.

The satellite kitchen operation resulted in optimum use of labor and equipment. Cook-hours increased 70.4 per cent with the satellite kitchen and the meal increase was 163.2 per cent. Recipes, tested and furnished by the Department of Agriculture, were easily used with the larger feeding capacity.

The number of meals prepared per cook-hour increased from 9.5 to 13 with use of the satellite kitchens. In the U.S. Department of Agriculture study previously referred to, the number of lunches per man-hour were calculated. According to the table in the study, volunteer help was included in the man-hour figure. The highest number of lunches served per man-hour was 16 and the lowest was 6.<sup>16</sup>

In a survey made in 1965 of school districts other than Lawrenceville, a high of 14 meals and a low of 5 meals per cook-hour was reported. These schools were all using a central kitchen. One school transported students by bus from one building to the central kitchen.

#### Meal Cost and Purchasing Procedures

It was found that the head cook was purchasing canned goods, paper supplies, cleaning aids, and other miscellaneous items from three wholesalers. The sales representatives called on the head cook and took the order with delivery to be made one day later by one, five to seven days by another, and the third shipped by a freight line. The one

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<sup>16</sup>U.S. Department of Agriculture, op. cit., p. 10.

shipping by freight line could assure delivery of items ordered, but date of delivery could not be certain.

The running shelf inventory and anticipated menus encouraged the weekly ordering. Purchasing food and other supplies in quantity by price quotation is more desirable. The director should maintain a card system complemented by an inventory card file for keeping a record of all goods purchased. By making a review of menus a month to six weeks in advance the inventory may be built to the expected use.

Fresh meat was furnished by a local slaughterhouse. Meat was ordered by telephone the day before or the morning of use, or when it was necessary to prepare for serving. Prepared meats, such as weiners or lunch meat, were not usually delivered before the morning they were to be used.

The produce company called on the morning of delivery to ask for an order for the following week. If a special item was wanted, it could be ordered on the day of delivery to be brought a week later.

Milk and bread was delivered daily to the center of use, and the drivers left what was ordered or enough to bring the supply to the expected use.

During the first year of study, food and milk costs amounted to 72.3 per cent of the money expended by the lunch program. Labor costs, which was limited to the cooks' salaries, was 25.3 per cent of the program cost; Services, which included freight and laundry service, was 2.4 per cent of amount expended by the lunch program.

The following table shows the amount of money expended for the first two years of operation and the percentage spent in four general categories of the Lunch Fund Account.

TABLE 7  
EXPENDITURES OF LUNCH PROGRAM

	1964	1965
Money Expended	\$42,476	\$40,704
Food and Milk	72.3%	66.3%
Labor	25.3%	26.4%
Service	2.4%	4.9%
Administration	.....	2.4%

During the second year, truck expense and payment and service calls were charged against the Lunch Fund as a service.

According to George and Heckler, a school lunch program serving over 600 meals daily should be expending from 50 to 52 per cent of their money for food and milk, 28 to 30 per cent for labor, 6 per cent for services, 4 per cent on administration, and 9 per cent for replacing equipment and acquiring new equipment.<sup>17</sup>

In the school year 1963-64, a total of 113,865 meals were served at a cost of \$.3728 per meal. The second year of satellite operation, 1964-65, the lunch program served 110,652 meals at a cost of \$.3687 per meal.

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<sup>17</sup>George and Heckler, op. cit., p. 195.



## CHAPTER VI

### CONCLUSIONS, RECOMMENDATIONS, AND SUMMARY

#### Conclusions

This study was made to determine how the increased cost of the satellite kitchens of the Lawrenceville schools could be lowered through purchasing procedures, menu planning and utilization of personnel, with particular concern for the problems relating to Arlington School.

Appointment of a lunch program director had a direct influence on reducing the cost of food purchases. A lunch tray, served according to student preference of foods and with a more uniform weight, showed the same rate of waste as the year of operation without the director. The purchasing procedures, preparing and serving controls, and inventory control reduced the cost per meal served.

Actual cost of the lunch program is hidden because of services performed by personnel and use of equipment maintained from the Educational or Building Funds.

#### Recommendations

The satellite kitchens should continue in operation for the Lawrenceville schools. The increased number of workers associated with the operation makes an in-service

training program more workable.

In the future, the lunch program director of the Lawrenceville schools should devote more time to the lunch program. He should give more attention to the training of personnel.

#### Summary

As the school lunch program continues from decade to decade it grows stronger. More and more school children around the world are permitted to eat a school lunch as more schools establish lunch programs.

The effect of a nourishing meal at school on students has caused countries to approve their educational agents to sponsor school lunch programs.

The Lawrenceville, Illinois elementary schools serve school lunches meeting "Type A" requirements as prescribed by the U.S. Department of Agriculture. Supporting personnel in the school system is an added cost not reflected in lunch program financial reports.

APPENDIX A

February 18, 1964

  
Lawrenceville, Illinois

Mr. Fred Homann  
Superintendent of Schools  
Altamont, Illinois

Dear Mr. Homann:

In connection with my graduate study at Eastern Illinois University I am making a study of our transporting food to outlying buildings.

I have learned you have a similar program.

May I come to your school and visit to make observations and have a short conversation with the cooks and anyone else connected with your lunch program?

I would like to make the visit to your school on February 26, 1964 if this meets with your approval.

Sincerely yours,

David Mills

BOARD OF EDUCATION  
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CLYDE C. JENKINS, SUPERINTENDENT

*Altamont Community Unit School*

DISTRICT 10

*Altamont, Illinois*

February 20, 1964

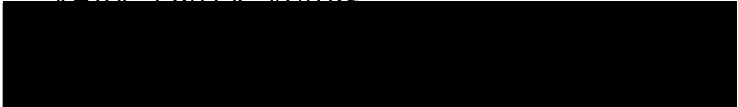
Mr. David Mills  
1705 Porter Avenue  
Lawrenceville, Illinois

Dear Mr. Mills:

Mr. Jenkins, our Unit Superintendent, is in Atlantic City this week and will not be back until Monday, February 24. I feel sure that Mr. Jenkins will give his approval for your visitation on February 26 to observe our lunch program and interview our personnel connected with the lunch program if an appropriate time during the day can be arranged so as not to interfere with their work.

Come unless notified to the contrary.

Very truly yours,

  
Fred W. Homann, Principal  
Altamont Grade School

FWH/bvb

February 18, 1964

  
Lawrenceville, Illinois

Superintendent of Schools  
Bedford  
Indiana

Dear Sir:

In connection with my graduate study at Eastern Illinois University I am making a study of our transporting food to outlying buildings.

I have learned you have a similar program.

May I come to your school and visit to make observations and have a short conversation with the cooks and anyone else connected with your lunch program?

I would like to make the visit to your school on March 4, 1964 if this meets with your approval.

Sincerely yours,

David Mills

# Bedford School City

ADMINISTRATION BUILDING

1415 15TH STREET

Bedford, Indiana

Dan A. Schafer, Superintendent

February 20, 1964

Mr. David Mills  
1705 Porter Avenue  
Lawrenceville, Illinois

Dear Mr. Mills:

In reply to your letter of February 18th, we will be glad to have you visit our school system on March 4, 1964.

Mr. I. M. McFadden is our School Lunch Director. I suggest that you come to the Administration Building where his office is located and he will be glad to talk with you. He is usually in his office from 9:00 to 11:00 A.M.

Sincerely,

BEDFORD SCHOOL CITY



Dan A. Schafer  
Superintendent

DAS:gp

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