

A COMPARISON OF AN A LA CARTE AND
A CONTRACT FOOD SERVICE, AT
OKLAHOMA STATE UNIVERSITY

by

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CHAPTER I

INTRODUCTION

A problem which faces all colleges and universities, regardless of their size, type, or location, concerns the feeding and housing of the students who will attend the school. Every school works out its own system for feeding its students. The attitudes and expectations of the administrators of the school are reflected in the type of food service that is available.

The ultimate purpose of the college food service is . . . "to serve high quality foods, in a pleasant and refined atmosphere, at a price that the students and faculty can afford to pay." (22, p. 82). The nutritional needs of the student should be met. Eating can and should be made a part of the student's education. To what extent these factors influence the food service is up to the school's administration.

There are three patterns which form the basis for most types of college food service. The first is the family-style food service in which the meals are served from serving dishes at the table. Meal tickets are procured in advance. This type is designed to give the student a good deal of social education along with his meal.

The cafeteria line comes into use in most other types of food service. The student may purchase a meal ticket in advance and eat whatever food is served him as he comes through the line. This is generally known as the contract plan.

The a la carte system also uses the cafeteria line. In this case the selection is wide and each item is priced individually, so that the student pays for only those items he selects. The a la carte food service is an ordinary commercial enterprise and the student is responsible for his own nutritional and financial budgeting.

A vast number of modifications for these three types of food service are being used. The commercial contractor who has an agreement with the school to provide the food service is another possibility. This, of course, relieves the school of all the problems of managing its own food service. Even under these circumstances any one of the above types of service may be used.

Statement of the Problem

On the Oklahoma State University campus two types of food service are available to the student. One is a contract operation for which the student purchases a meal ticket in advance and then selects his food from a limited number of items on the cafeteria line. The other is the a la carte cafeteria line where each item is priced separately and the student pays for only the foods which he selects. This study is concerned with a comparison of these two types of food service.

Need for the Study

The a la carte cafeteria is a fairly recent installation on college campuses. It first appeared at Oklahoma State University in 1957 in a women's dormitory. It was championed by the late Edward Morrison¹

¹Edward Morrison served as Director of Auxiliary Enterprises at Oklahoma State University from December 1, 1952 until his death in October, 1961.

who reasoned that the students would be happier with the college food service if they could be allowed to select their own meals, and pay accordingly. Since that time there has been much comment, both pro and con from the administration, as well as from the students, about the effectiveness of this type of food service. The comments are concerned with such matters as which operation is more economical for the student, which is more economical for the university, and which is most satisfactory to the students.

Since 1957, two more dormitories have been changed to the a la carte system, leaving one women's and one men's dormitory on the contract plan. It is the policy that as long as space remains in the dormitories, the student is allowed complete freedom in his choice of dormitory. Thus when he chooses the dormitory in which he will live he also chooses the type of food service in which he will participate.

The author found no research which had been done to prove or disprove the effectiveness of either or both of these types of food service. Such research could be of value to the administration, and to the student, as well as to other colleges and universities who have expressed an interest in the a la carte system as it operates at Oklahoma State University.

Purpose and Assumptions

The purpose of this study is to compare the a la carte and contract food services as they now exist on the Oklahoma State University campus.

The plan for the study is based on the following assumptions:

1. The two dormitories used in the study are normal representatives of the two types of food service as they exist on this campus.

2. The two types of food service operate under the same policies, therefore their records will be comparable.
3. There will be some variations due to efficiency of personnel but these cannot be evaluated and since they will be present in both areas, they will not seriously alter the findings.
4. The physical properties, such as layout of kitchen and dining room, are sufficiently alike so that comparisons are possible.
5. The clientele of the two areas are comparable from the standpoint of age, sex, occupation, and number.
6. Variations such as cost of food, amount of food used, and number of employees needed are due to differences in the two systems.
7. Fringe benefits are the same for employees in both areas and therefore will not alter the labor cost picture.

In this study the comparison of the contract and a la carte types of food service will include:

1. A comparison of the raw food costs.
2. A comparison of the labor costs.
3. An evaluation of the students' attitude toward the type of food service.

It is the desire of the author to compile information which will be helpful to the Director of Residence Halls Food Service, and to the administrators concerned with the dormitory food service at Oklahoma State University.

CHAPTER II

REVIEW OF LITERATURE

The review of literature related to this study will be divided into three phases. The first area to be considered will be college food service in general. This will be followed by a discussion of literature related to food and labor cost. The final consideration will deal with attitudes and preferences as they pertain to the eating habits of the college student.

The College Food Service

The earliest types of college feeding were patterned after family feeding. Many college food services are still planned for this type of feeding. In the present day version the meal is served in courses, from serving dishes at the table. The students take turns serving as hosts and hostesses. Meals served in this leisurely fashion require a certain amount of the student's time. Shaw (29), among other authorities, insists that this type of food service is a very necessary part of the student's social education. Students, however, are inclined to feel that meals served in this fashion are too time consuming.

The administrators responsible for college food service are also finding it difficult to maintain this family type of service. Increased enrollments are taxing facilities now in use. Shaw (29) noted that recent trends have been toward speed of service, speed of consumption,

automation techniques of service, and an elimination of the niceties that went with the former type of service. According to Wilson (36) some college cafeterias are presently serving 12 students per minute and meals are often eaten in ten minutes. Minah (22) expects the situation to become worse in the next ten years. There will be increased enrollments, increased costs of labor, food, and supplies. There will also be increased competition within the institution for any available funds.

In recent years the contract board cafeteria line has become the popular type of college food service. This type also presents its problems. The student receives less attention and less personalized service, and there is a lack of personal contact with the student. As these things increase the student is likely to grow more dissatisfied with the food service. His dissatisfaction may have a variety of causes. ✓
Eppright (9) gives us an idea of some of the factors which influence food acceptance. The biochemical condition of the body is one. This brings to light the difference between hunger, which is a contraction of the empty stomach, and appetite, which is more differentiating than hunger.

The response of the sense organs influences the acceptance of food. There are many individual variations in the sense of taste and in most cases there is no accounting for the difference.

The mental state of the individual is an important factor in food acceptance. Social aspects, such as group influence, and educational aspects also play a part.

These factors vary in each student and thus the problem of feeding large numbers becomes a difficult one. In an effort to keep the student

happy, many schools offer a choice in foods. This is the beginning of the a la carte cafeteria line in college food service, although increased choices are also becoming characteristic of the contract board type of service. (22)

A choice of salads and desserts takes the sting out of no choice in entrees, according to Adams (1).

There are other procedures which may be used in an effort to appeal to the student. Leistner (18) reminds us that the student is a captive customer; he must eat what is put before him whether he likes it or not. She suggests that good looking, good tasting food is the prime responsibility of the food service. Pleasant service and attractive surroundings will add to the students' satisfaction.

Warner (32) lists some requirements for planning items for student menus. These include using familiar foods, eye appeal, and food that will satisfy hunger. Wylie (37) suggests food merchandising.

The problem is summed up by Groth (13) in her list of factors which affect food acceptance in college food service. She lists (1) administrative policies, which may affect everything from quantity of food to decor; (2) direct contact between food service personnel and the students; (3) the food service manager's ability to coordinate; and (4) the students' trend in food taste.

Acceptability is one problem of the food service. Adequacy is another. Nygreen (24) did a study at the University of Washington on the acceptability, adequacy, and cost of the diets of some women students. This study brings into focus the full responsibilities of the food service toward the student. Her study revealed that the 76 per cent who were present at all meals received full value for their daily

food dollar. This leaves 24 per cent whose needs were not being met by the food service.

Food and Labor Cost

Financial records are essential in every type of food service. An analysis of financial records is the best method of obtaining indications of what is occurring in the food service. Records are tools for cost control. Radell (25, p. 773) says, "Records are not controls in themselves. It is their effect on the thinking and planning by management as their interpretation reveals what has happened, that provides the controls." Hart (15, p. 264) defines cost control thus:

Cost control is a phase of the general accounting procedure by means of which details of the costs of material, labor, and overhead, necessary to produce and sell an article are recorded, summarized, analyzed, and interpreted.

The value of records is threefold. They are a summary of what has gone before, an indication of what is happening now, and a guide for the future.

There are three types of records. According to Rappaport (26) they are the daily report, the monthly report, and the annual report. Each of these serves a definite purpose. The daily report contains the data for the day's business. Its responsibility is to provide forewarning. The monthly report is a more accurate record of what has happened. The annual report covers the operation for a year.

In addition to records, there are other tools for cost control. Hart (15) lists the following:

1. Sound menu construction.
2. Controls for purchasing, receiving, requisitioning, and storing.

3. Clear, concise, standardized recipes.
4. Complete job descriptions and work schedules.
5. Alert supervision. A training program.
6. Preventive maintenance for equipment.
7. Comparative food and labor cost reports.

Another tool for cost control is the cost figure itself. McNutly (20) considers the food cost figure an accounting control which shows the current trend of the operation.

Baker (3) discusses the financial management of a contract type food service. She explains food cost per cent as that percentage of income which is budgeted for raw food. In the contract type of food service the budget usually provides for 40 per cent food cost. The actual raw food cost per person will far exceed this number due to absenteeism. She gives as her objective for food cost control, more and better food for her customers.

Food cost control is a process that must be recognized in every phase of food production. The foundation for food cost control is based on purchasing, storing, and issuing procedures. (10) Building blocks for the foundation are specifications, purchase orders, inspection of food deliveries, receiving reports, requisitions, inventories, and payment orders.

The menu presents another phase of food cost control. Standardized recipes, cost calculations, production plans and standard portion sizes are the factors that go into this phase of cost control according to Weaver (33).

According to Sanders (27) portion control is easy. It requires only that everyone be familiar with a set of scales. Portion control does not

mean skimpy portions. It does mean that the same amount of food will yield the same number of portions each time. It means that all portions will be of uniform size. This is a very important factor in precosting recipes.

Labor costs are another area in which careful control must be exercised. Fairbrook (11) warns that in controlling labor costs one is controlling human beings and human beings have feelings, desires, and independent minds. In order to control labor costs the characteristics of the operation, the physical conditions, the efficiency and productivity of the organization and the preplanned use of labor must all receive due consideration. Strategic payroll planning involves critical analysis of the over-all payroll needs, evaluation of individual jobs and budgeting of the future payroll.

Northrop (23) stresses the importance of the physical conditions as they affect labor costs. She points out that in food service, employees are responsible for expensive equipment and the people who are hired should be able to carry out this responsibility. Her list of "thou shalt not's" is headed by "thou shalt not pay people for less than their best."

Bakken (4) performed a study of hospital dietary departments. She broke the labor down into departments and analyzed it on a basis of minutes per meal served. She felt this was a good method of comparing efficiency; but it does not take into account the scope of the work done, nor the architectural factors involved.

Burrirt (6) also analyzed labor by breaking it down into areas of work. He then calculated payroll per person served and persons served per employee. He suggests a personnel ratio of one preparation employee,

three service people, and one cleaning and administrative person.

A study to determine why the student payroll of one residence hall food service was greater than in another similar unit is described by Wilson (35). She used a random ratio-delay sampling method. The process allowed her to sample machines or workers whose activity was divided into several categories. Large numbers of instantaneous, random, and independent observations were made of the work. The theory was that the ratio of a random sampling of observations to the total would yield a reliable estimate of time expended.

Kaiser (16) discussed the use of student employees in college food service. The student can be used to help in peak or rush periods. The positions students may hold are unlimited. Remuneration depends on the school. Qualifications should be the need of the student, the suitability of his class schedule and his attitude.

Fringe benefits and labor turnover are other factors which must be recognized as contributors to labor cost.

Gould and Hart (12) found fringe benefits to be the largest factor in increasing labor costs. In order to get an accurate picture of the part fringe benefits play in the cost of labor they should be calculated in dollar value per employee as well as per person served. Fringe benefits may contribute directly to labor costs as in the case of paid vacations, or they may contribute indirectly through benefits such as health plans. Fringe benefits are estimated to contribute 18.49 per cent of the labor cost. This amounts to more than nine weeks pay at average rates.

Turnover costs are hard to detect. Canfield (7) points out some of the factors in labor turnover which increase the labor cost. They in-

clude time spent in interviewing and training as well as time lost by not having the position filled.

An analysis of payroll costs is the way to cut labor costs according to Harmon (14). The analysis begins with a look at last year's records. Setting up daily and hourly payroll charts shows what is happening now. This is the foundation needed for planning for the future. Stumpf (30) recommends a time study which analyzes or studies each job in an effort to standardize time, effort, and cost in each area. This type of study may also show up needed changes such as better equipment, and better arrangement of equipment. The results of the study are a summary of the time spent, distance traveled, and the cost of the time involved. The amount of labor used per meal served is a method of further analysis.

Dardarian (8) gives a process whereby each area of production is analyzed. It begins with the product, the number and nature of items to be prepared. The labor costs should be able to produce the menu items, but the labor costs should never determine the menu items. The layout of the production area is important. A large scale drawing on which the production process can be traced is an aid in seeing what really happens. The equipment must be located conveniently and the whole layout must minimize handling, hauling, and carrying. Proper equipment and proper utilization of equipment will lower labor costs. Careful consideration of the raw materials to be used may lead to labor cost cuts. Prefab materials should be given due consideration as compared to labor costs and the quality desired and attainable from the available labor source. Supervision should provide for maximum usage of available labor. Attitudes and understanding of the organization

toward the employee as well as of the employee toward the organization should be evaluated in terms of labor costs. Careful consideration of processes used may eliminate those which do not pay off. Payroll costs as compared, percentagewise, to volume will give an idea of what is happening. Careful evaluation of the individual employee, in terms of the future plans of management, will aid in an understanding of labor costs.

Attitudes of College Students Toward Food

There is a wide variety of ways in which food acceptance surveys can be conducted. The two most common ones are the interview and the questionnaire. The questionnaire was used in the present study.

Trulson (31) did a comparison of dietary survey methods. She lists some of the limitations of the usual methods. In trying to compare dietary records written by the subjects themselves, there is the problem of literacy. Procedures that are used are limited by the time and effort required from the people being studied.

Questionnaires are best suited for people accustomed to desk work, according to Trulson (31). And in the case of interviews where the information is an estimate of what the subject does, she found them to be grossly inaccurate at times. She felt that an improvement of survey techniques is definitely needed.

Adelson (2) also encountered some problems in collecting dietary data from individuals. She pointed out that the quality of the data depends on the abilities of the participants as well as those of the surveyor. The data is greatly influenced by the understanding the participants have and the care they use. She compared two methods of recording information--that of recall and that of records. Her study

showed that either method would serve as well as the other. She found the recall method cheaper.

The most important factor in any study is the questions that are used to obtain the information. Medlen (21) gives some reminders to be considered when asking questions. The stage should be set for the question briefly but adequately, and the respondent should be given some time for thought. The question should be geared to the intellectual level of the respondent. Some questions are so thought provoking as to challenge the best of minds. The objective of the questioner should be to keep the discussion moving with a minimum amount of comment on his own part.

Macurda (19) maintains that questions pack power. The power of the question lies in the answer that is required. Questions may be used for a variety of purposes. They may be used to probe weaknesses and strengths. They may be used to plan, organize, or direct. In any case questions should be short and to the point. Questions can be classified, for instance, there is the closed question, usually answered by yes or no, in which the questioner controls the respondent to a certain degree. Certain words are provocative when used in questions; these include why, who, what, where, when, and how. Unanswerable questions should be avoided. When digression occurs the subject can be reopened with a question. In all cases it is wise to remember that questions that offend undermine the personal dignity of the respondent.

Although no literature could be found relating to the exact avenue of thought in this study, studies have been done involving the food habits of college students. Lamb (17) did a study on the food preferences of college women. Her study analyzed the food preferences and

eating habits of women students of Texas Technological College, to determine how regularly the students ate in the residence hall, what their reactions were to the food, and what their between-meal eating habits were. The students were participating in a contract board type food service. She took attendance for three meals a day for two weeks in an effort to determine percentage attendance. Food and between-meal eating habits were determined by a questionnaire. The questionnaire included a list of 116 common foods and the students were asked to check their reactions to them.

Results of the study showed that 54 per cent attended breakfast, 91 per cent attended lunch, and 81 per cent attended dinner. The results of the food lists showed that 37 of the 116 foods were liked by nine out of ten of the students. Lamb (17, p. 1124) said,

Any "captive group" paying for its meals should have a chance to express choices or preferences. Authorities recommend that even the infant and preschool child be allowed choices in food. Numerous techniques have been employed to give students a choice in food selection, which include such devices as suggestion boxes, student committees on menu-making, discussion groups on food problems, and the popular cafeteria-style food service in which several similar foods are offered.

Another study concerned with the food intake of college women was done by Scoular (28). In this study the students kept records of their intakes and the results were analyzed for their nutrient content. The calculated values exceeded the Recommended Daily Allowances. Eighty-one per cent ate breakfast regularly.

At Cornell University, Young (38) also did a study on the food habits of women students. This study was concerned with nutrient intake, the frequency of occurrence of certain foods in the diets and the eating habits of the subjects. Again the students kept their own dietary

records. All nutrients were represented in amounts within the minimum requirements. Dietary patterns included the following:

1. All drank some milk.
2. Two-thirds ate one or more servings of meat daily.
3. One-fifth ate no eggs, four-fifths ate one to three per week.
4. One-third had one serving of cereal per day, one-fourth had none the whole week.
5. All had three servings of fruits and vegetables per day.
6. One-half never missed breakfast. An additional one-third missed only once or twice a week.
7. Every student did some between-meal eating.

Comparing the eating habits of men and women students was the purpose of a study by Blewett and Shuck (5). It revealed that all students had an adequate intake of green and yellow vegetables. Men students consumed more milk than the women students, and twice as many men as women ate breakfast. As a whole the men had better diets than the women.

CHAPTER III

METHOD OF PROCEDURE

An effective college food service has certain characteristics. In the first place it must be economical to the students, many of whom are on limited budgets. In the second place it must be economical for the institution, which in most cases means that it must be self-sustaining. But possibly one of the most important characteristics of a college food service is reflected in the satisfaction or dissatisfaction of the students who are its captive customers. The purpose of this study is to compare the economy of contract and a la carte food services from the standpoints of food and labor costs. The most extensive part of the study, however, deals with the attitudes of the students who participate in these food services.

The methods of procedure used will be described in the following sequence:

1. Food cost analysis.
2. Labor cost analysis.
3. Evaluation of the students' attitudes toward the food service.

The study was done in two women's dormitories on the Oklahoma State University campus. One dormitory feeds 426 women students on a contract board basis. It serves three meals a day six days a week, and on Sunday it serves breakfast and the noon meal, which is served family style. The students living in this dormitory are largely freshmen, although any

upperclassman who desires to do so may live there also. Meal tickets are purchased in advance at regular intervals. The cost of the meals is \$1.30 a day which is divided so that 30 cents is allowed for breakfast, 45 cents for lunch and 55 cents for dinner. The actual cost of the meals that are served is higher than these figures, the remaining cost being absorbed by absenteeism, since the students receive no remuneration for meals missed.

The other dormitory feeds 410 women students by way of an a la carte cafeteria line. The students are required to purchase \$140.00 worth of meal coupon books per school semester. This is done to assure the cafeteria of a minimum amount of income. The students pay for their meals with the appropriate coupon value as long as the coupon books last, at which time the students may purchase another book or pay for their meals with cash. Meals are served three times a day five days a week. On Saturday, breakfast and lunch are served, and on Sunday lunch and dinner are served. Thus the cafeteria is closed from lunch on Saturday until lunch on Sunday. Needless to say, meals missed by the students affect the cafeteria as loss of income.

The study was carried on during the month of October, 1961. Financial records used were those for the whole month of October. The questionnaire used to obtain student attitudes was sent out in the middle of the month and returned by the first of November.

Baker 1

Food Cost Analysis

is indicated 1

The common method of analyzing food cost on the Oklahoma State University campus is the food cost per cent. As we have previously noted, Baker (3) defines this as that part of income which is budgeted for raw

food. The objective of the contract food service is to maintain a 42 per cent food cost; however, the actual cost of food sold should amount to approximately 50 per cent of the income. The lower figure is used to allow for absenteeism. The student pays for all meals served by the cafeteria and receives no remuneration for those meals that she misses. Attendance never reaches 100 per cent so the cafeteria actually receives money for meals not served. The income from meals not served is the basis for the 42 per cent food cost.

Since the income for the contract dormitory does not reflect the actual food sold, the income figure used in this analysis of food cost percentage was obtained by evaluating the meals actually served at 30 cents for breakfast, 45 cents for lunch, and 55 cents for dinner. Thus, in order to arrive at the income figure for any specific meal, one must know the customer count, multiply it by the appropriate evaluation, and add to it the cash meals sold. Cash meals refer to guests who may come into the cafeteria and purchase meals at the rate of 50 cents for breakfast, 75 cents for lunch, and \$1.00 for dinner.

The a la carte cafeteria strives to maintain a food cost per cent of 45. This figure is based on the income from actual meals served and thus represents the true picture.

Another item which was considered income in these analyses was that of employee meals. Although no income was received for the employee meals, this method was used to offset the fact that the value of the employee meals is reflected in the cost of food figure. Thus, their value will be reflected as waste if it is not deducted from the cost of food. The method of doing this is to show the value of the meals as income.

It must be remembered that food costs given in this discussion are objectives to guide the dietitian in evaluating her operation. The figures are set with the clientele, standards, objectives, type of service, and menu policies of the cafeteria in mind. West and Wood (34, p. 480) state that:

It is the responsibility of every food director to understand the local situation and to know within narrow limits the percentage of the income which should wisely be spent for food under existing conditions. This percentage may be determined by analyzing past expenses of the food unit and comparing these figures with those of other institutions.

West and Wood (34) list an example of how the type of food service may affect the amount that is budgeted for raw food. Their example concerns an institution where fixed menus are served. In such an institution a stable relationship will exist between daily cost of each item and the total. This relationship does not exist in institutions where the guest chooses his food item by item. Thus it can be seen that setting the food cost figure for either of these types of food service involves all the factors listed above as well as an analysis of the records of past performance.

The contract cafeteria used in this study aims for a 42 per cent food cost. This falls within the 40 to 46 per cent suggested by West and Wood (34) in their list of percentages for different types of food service. The a la carte service with its 45 per cent food cost is lower than the suggested 50 to 55 per cent.

Two figures are needed to calculate the food cost for any particular period of time. The first is the income figure which was discussed above. The second figure is the cost of the food used. The cost of food used will be an accumulation of the values of items charged directly

to the kitchen and those checked out of the storeroom. This is based on the customary procedure of charging fresh produce and all similar items to the food cost on the day they are received. Canned products are generally held in a storeroom and their value does not appear in the food cost until they are used.

When both the cost of food and income figures are available the food cost percentage can be obtained by dividing the income figure by the food cost figure and multiplying by 100 to convert it to per cent.

$$\frac{\text{Cost of food}}{\text{Income}} \times 100 = \text{Food cost per cent}$$

In comparing the two types of food service, the food cost per cent will show what part of the income of each is spent for raw food. Further information can be gained by breaking the food cost per cent down into the amount that was spent for the different types of food such as dairy products, fruits and vegetables, and others. This requires the same simple division that was used above.

$$\frac{\text{Cost of dairy products}}{\text{Income}} \times 100 = \text{Food cost per cent spent for dairy products}$$

When each group has been divided in this fashion the sum of the percentages obtained should equal the over all food cost per cent.

Another method of breaking down the food cost into classifications is the commonly used per cent of the total cost of food. If this method is used the total of the percentages found will be 100.

$$\frac{\text{Cost of dairy products}}{\text{Total cost of food}} \times 100 = \text{Per cent of total food cost spent for dairy products}$$

The figures obtained by the use of the formulas presented here will be used to gain an insight into the food expenditures of the two types of food service.

Labor Cost Analysis

Since the food cost per cent is that part of income which is budgeted for food, then it follows that labor cost per cent is that part of income which is budgeted for labor.

$$\frac{\text{Cost of Labor}}{\text{Income}} \times 100 = \text{labor cost per cent}$$

Labor cost of course does not vary as much from day to day as does the food cost. Labor costs are determined by the type of operation, its size, the arrangement of units, the amount and kind of labor saving equipment, the efficiency of the employees and the wage rate. The contract food service strives for a labor cost of 25 per cent and the a la carte for 33 per cent. As was noted before, the income figure for the contract food service is most accurate when it is based on the meals actually eaten. Therefore this is the figure that will be used in this study.

Labor cost may be broken down into areas such as range, bakery, and others, for further analysis. The cost may then be attributed to money spent per meal served for the particular area. From this it is easy to obtain the total amount of money spent for each meal.

The time spent per meal served is perhaps a more accurate method of comparing the amount of labor used in the two types of food service, for in this way one can by pass the wage scale which is based on variables such as tenure and capabilities of the employees.

The employees of the two food services in question are paid a monthly wage. They work 48 hours a week and are scheduled into two rotations, one of which works on Saturday, the other on Sunday. The rotations alternate so that the employee works on Sunday one week end and on Saturday the next week end. The employees are only paid for days worked, but over the period of a school year this averages out to be the number of days in the month minus the number of Sundays in the month. In October the employees were paid for 26 days, consequently their daily wage consisted of their monthly wage divided by 26.

Employees on supervisory levels work only 44 hours per week. Thus, their daily wage was obtained by dividing their monthly wage by twenty-three and one-half.

In order to determine the cost per meal served for each area of the food service, the daily wage of the employees in the area was totaled and divided by the number of meals served on that day. When an employee was not present his wage was left out of the computations. In the same manner, hours worked by the employees in a particular area were totaled and divided by the meals served on that day so as to give the time spent per meal served. Since the records were kept for a whole month it seemed advisable to determine the average day's labor. The figures for the average day were obtained by totaling the figures for all 31 days and dividing by 31.

Since fringe benefits are the same for both the contract and the a la carte food service, they were not included in the computations of labor cost for the two places. There is, however, some value in knowing just what the fringe benefits are.

The employees are furnished uniforms and the laundry of these uni-

forms. This includes the male employees who are furnished bus jackets, aprons, and caps. The meals eaten while on duty are given to the employee at no charge. However, the employee is not paid for the time spent eating the meals. Twenty minutes are allowed for each meal so the employee is actually scheduled to be at the cafeteria for eight hours and 40 minutes each day.

The employees are hired on a nine month basis. This is due to the fact that the food services are closed during the summer months. Since this is the case they accumulate annual leave rather than vacation time. Annual leave is accumulated at the rate of two days for every 26 days worked. The annual leave is broken down to represent one day of sick leave or one day of annual leave for each 13 days worked. The annual leave time is generally given to the employee during the school vacations and any time that has accumulated in excess of these vacations is paid for when the school session ends in the spring. Employees who quit without giving due notice forfeit their annual leave time. It might be well to note here that during the period in question only one day of annual leave was taken by any of the employees involved. In this case the employee's salary was added into the computations but there were no corresponding hours worked.

Another fringe benefit is the health plan available to the employee. At the time of employment the person is allowed to decide if he or she wishes to participate in the Blue Cross Health Insurance Plan. If the employee chooses to do so the cafeteria is billed for a part of the premiums.

Another factor which affects the study is that of overtime. Employees, regardless of who they are or why they worked overtime, are

not paid for extra time. The lay employees put in very little overtime. The dietitians and supervisors, however, frequently put in extra time. Since they receive no remuneration, their time spent was added into the computations but their wages were not. This shows up in the form of increased time spent per meal but decreased wages per meal on the supervisory level.

The analysis of labor cost in this study was based on the factors discussed above.

Evaluation of the Students' Attitudes

Toward the Food Service

The student's attitude toward the food service is a difficult thing to analyze. It is affected by all the many factors that are a part of the individual student's personality, habits, and, in fact, his whole way of life. Even so it can not be ignored. Possibly the food service comes in for more than its just share of criticism, for it is the one factor that all students living in a housing unit have in common. Knowing how these students actually feel can be of great assistance to the dietitian in charge of the food service.

In this study a questionnaire was used to gain an insight into the attitudes of the students toward the food service. The questionnaire was given to 406 women in the contract dormitory and 372 women in the a la carte dormitory. A preliminary questionnaire was given to six women students in each dormitory to determine the effectiveness of the questions. Only a few minor changes were made after the preliminary study. These consisted of changes in the wording of the questions to gain increased clarity. In the majority of cases the questions were

worded so that the student needed only to check a particular answer.

Topics covered in the questionnaire included such things as classification of the student, length of time the student had lived in the particular dormitory and thus participated in its food service, frequency of missing meals, between-meal eating habits, satisfaction with the food service, and preference as to type of food service.

In tabulating the results of the questionnaire, the author found it convenient to divide the questionnaires into groups according to the dormitory they represented. They were then further divided into groups according to classification of students. Then as each question was analyzed they were further divided into groups according to the answer that was checked. In this way the author could count each group and by quick addition check to see that no error had been made in the tabulation.

When questions were improperly answered, those particular questions were discarded. No questionnaire was completely discarded.

Two of the questions required the student to rank her answers one, two, or three in the order of importance. This type of question presents difficulty in tabulating. The method that was used involved weighting the answers. Answers ranked one by the student were given a weight of three; answers ranked two by the student were given a weight of two, and answers ranked three were given a weight of one. Thus a total of all the weights for one answer was the final result. The answer having the largest weighted total was accepted as the most important.

CHAPTER IV

RESULTS AND DISCUSSION

Chapter four contains (1) the comparison of the food cost, (2) the comparison of the labor cost, and (3) the results of the analysis of the questionnaire which was administered to women students who participated in contract and a la carte feeding on the Oklahoma State University campus.

Comparison of Food Cost

In setting the food cost per cent for any food operation, all the characteristics of the operation must be given due consideration. The figure which is set reflects the clientele that is expected as well as the quantity and quality of food that will be served. Unless the characteristics of the operation change, the food cost figure must be maintained. A food cost per cent figure that is too low indicates the customers are not receiving adequate food value. A figure that is higher than the budgeted figure indicates that too much money is being spent on food and there will be a shortage of funds to cover the other expenses of the operation. The excess, of course, may be due to the quality of food used, the amount of food given per serving, the amount of waste, or a vast number of other factors which are a part of the food production process.

As has been previously noted, a 42 per cent food cost is the aim of

the contract food service which includes an allowance for absenteeism. Since this comparison is based on actual meals served, a 50 per cent figure, which does not include the allowance for absenteeism, is the one which will be of value to the study. The a la carte food service, it will be remembered, strives for a 45 per cent food cost.

The first figure needed to determine food cost is that of income received. Table I contains this information.

TABLE I
MEALS SERVED AND INCOME RECEIVED FOR OCTOBER, 1961

	A LA CARTE		CONTRACT	
	TOTAL	AVERAGE	TOTAL	AVERAGE
Customer count	No. 24,474	No. 789	No. 24,675	No. 796
Income	\$	\$	\$	\$
Cash customers	16,042.47	517.50	291.25	9.39
Contract customers	• • • • •	• • •	10,750.55	346.79
Employee meals	746.53	24.08	519.35	1.67
Total cash received	16,789.00	541.58	11,561.15	357.85
Meal cost ¹				
Breakfast	• • •	.33	• • •	.30
Lunch	• • •	.77	• • •	.45
Dinner	• • •	.74	• • •	.55

¹The fixed price of contract meals is given while the check average is given for a la carte meals.

The other figure which is needed to calculate the food cost per cent is the cost of the raw food for the period in question, in this case the month of October, 1961. This figure was \$6,684.99 for the a la carte food service and \$7,963.27 for the contract food service. See Appendix A. Thus, the food cost per cent for the two food services

is calculated as follows:

CONTRACT	\$7,963.27 / \$11,561.15 x 100 = 68.9%
A LA CARTE	\$6,684.99 / \$16,689.00 x 100 = 39.8%

The budget for the two food services allowed for a difference of three per cent in the food costs. The above analysis shows that a difference of 29.1 per cent actually existed in October, 1961. The contract food service operated 18.9 per cent above the 50 per cent food cost allowed when absenteeism is not considered. The a la carte food cost was 5.2 per cent below the allowed 45 per cent.

The most apparent factor which comes to light through this analysis is the fact that neither food service maintained its budget during the period in question. This suggests that a careful analysis of the whole production process is needed. Also a look at past records may be helpful to determine whether this represents an unusual month or whether it is consistent with past performance.

The average cost of meals presented in Table I would lead to the conclusion that the meals served in the contract food service are far more economical to the student than are those served in the a la carte food service. It must be remembered, however, that the students in the contract dormitory pay the rates listed whether they are present to eat the meal or not. Some of the students are of the opinion that this is not unreasonable, for when they do eat they receive more good quality food at a very economical rate. For students who seldom miss a meal this is truly an economical rate.

The check average listed for the a la carte food service is affected by the customer count. In this food service this includes everyone

who goes through the line regardless of whether they choose a full meal or merely have coffee and a roll, as might be the case at breakfast time. Thus, it is quite possible that students eating a full meal pay more than the listed check average. However, in the case of the a la carte service the student pays only for the meals she actually eats.

Further analysis of the food cost can be achieved by breaking the food cost down into the types of food. Percentages of the total food cost spent on the different types of food are shown in Table II. The percentages revealed that the expenditures on the different types of food were only approximately two per cent different in the two food services. The greatest percentage was spent for meat, eggs, and cheese. Fruits and vegetables were responsible for the second greatest percentage. The contract food service spent larger percentages for fruits and vegetables, and meats than the a la carte service. The a la carte food service, on the other hand, spent larger percentages on dairy products, cereals, and miscellaneous foods.

TABLE II
CLASSIFICATION OF RAW FOOD COST
FOR OCTOBER, 1961

	A LA CARTE		CONTRACT	
	\$	%	\$	%
Dairy products	870.09	13.0	988.43	12.4
Fruits and vegetables	1413.00	21.1	1864.87	23.4
Meat, eggs, and cheese	3158.61	47.2	3886.47	48.8
Cereals	373.55	5.6	352.79	4.5
Other foods	875.74	13.1	870.71	10.9
Total	6684.99	100.0	7963.27	100.0

Since the breakdown of the total food cost of the two food services is so nearly alike there is an indication that the differences in meal pattern in these two places does not greatly affect the expenditure for food. The likeness in percentages was not expected. It would seem that the a la carte service with its numerous items of meat, vegetables, and dessert would have greater percentages in these areas. On the other hand, the contract service, which does not charge extra for milk, was expected to have spent a larger percentage for dairy products.

This study reveals how vital the procedures and controls used in the production process are to the food service.

Comparison of Labor Cost

Possibly the hardest expenditure to control in a food service is the labor cost, for in doing so one is controlling human beings. The employees involved in this study are not exactly typical of employees in the food field as a whole. These employees are hired on a nine month basic which puts the food service at a disadvantage, for people are not inclined to remain on a job that will support them for only a part of the year. Since Oklahoma State University is not in a metropolitan area, the field of prospects becomes even smaller. Many of the people involved in this study drive as many as 30 or 40 miles each day to work in the food service. Frequently car pools are formed and days off must be coordinated so that employees can catch a ride. The wage scale is low. Monthly salaries range from \$110.00 to \$185.00, but only four employees out of 35 were paid more than \$160.00 per month. Employees for the contract food service have more tenure than those for the a la carte food service, therefore they have a higher wage scale.

When an employee is hired, his starting wage is dependent upon several factors. The first consideration is concerned with any special training the employee may have had. As a rule they have had none. Other considerations involve the difficulty or responsibility of the position the person will fill.

In the total wage comparison study it is wise to place no great amount of emphasis on the figures for the weekends. This is because the week end serving patterns differ in the two food services.

It is expected that the labor costs for the a la carte food service will be greater than that for the contract food service. This is due to the fact that the a la carte food service must prepare more items, and must put forth greater effort to sell these items. This generally requires that more time be spent in preparation. It will be remembered that a 25 per cent labor cost is budgeted for the contract food service and 33 per cent for the a la carte food service.

In order to determine the overall labor cost two figures are needed. The first is the total expenditures for wages, the second is the income figure. The income figure will again be taken from Table I. The total wage figure includes the wages of the full-time employees, student employees, plus \$10.00 per full-time employee which is an evaluation of fringe benefits for tax purposes. The labor cost of the two food services is as follows:

CONTRACT	$\$3,935.73 / \$11,552.72 \times 100 = 34.0\%$
A LA CARTE	$\$4,931.91 / \$16,789.00 \times 100 = 29.3\%$

It will be noted that the contract figure again exceeds that of the budget; the a la carte figure is again below the budget.

Table III is a compilation of the daily labor expenditures of the two food services. Total hours worked and total wages paid are listed. The quickest comparison involves the average-day figure given at the bottom of the table. This indicates that there is a daily difference of approximately 29 hours of labor in the two types of food service. This is as expected. The wages paid for the average day, however, differ only by approximately \$17.00. As has been noted, this is due to the higher wage scale in the contract food service rather than to greater number of hours worked.

Minutes spent per meal served vary by approximately four minutes with more time being spent in the a la carte food service. Wages per meal vary by three cents with the higher cost again being attributed to the a la carte food service. The a la carte food service employs 23 full-time people while the contract food service employs only 18.

The overall labor cost was broken down into areas of work for further analysis. See Appendix B. For purposes of analysis the average-day figures shown in Table IV are most meaningful. These indicate that the greatest expenditure in the contract food service was for range labor. In the a la carte food service the expenditure for range labor was exceeded only by that for the dietitian and supervisory employees. The high staff level wages are caused by the fact that the dietitian in the a la carte food service has considerably more tenure than the one in the contract food service. Also the a la carte food service employs two supervisors while the contract food service employs only one. The a la carte food service employs one more range cook and one more baker than the contract food service. These employees are needed to take care of the extra items that must be prepared, and they are the cause

TABLE III
DAILY WAGE COMPARISON

	TOTAL HOURS WORKED		TOTAL WAGE PAID		MINUTES PER MEAL		WAGE PER MEAL		
	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.	
Date									
Sun.	1	126	60	97.20	111.47	20.00	15.00	.257	.184
	2	178	114	129.29	111.96	10.98	8.30	.130	.107
	3	178	112	132.90	94.51	10.34	8.82	.132	.097
	4	178	114	132.90	111.96	10.24	8.59	.128	.111
	5	176	114	132.90	111.96	10.48	8.77	.133	.114
	6	165	139	127.32	106.74	11.96	9.21	.155	.117
Sat.	7	101	75	78.89	55.82	17.59	8.24	.227	.100
Sun.	8	112	68	86.19	55.08	15.11	14.87	.193	.200
	9	174	113	129.29	111.96	10.52	9.29	.130	.122
	10	177	114	133.37	111.96	10.70	8.64	.135	.112
	11	175	114	132.90	111.96	10.54	8.33	.134	.108
	12	176	114	133.37	111.96	10.80	8.26	.135	.108
	13	164	110	110.17	101.51	11.90	9.23	.134	.111
Sat.	14	96	80	80.14	66.89	21.49	10.72	.300	.149
Sun.	15	116	52	82.64	37.56	15.93	11.18	.189	.168
	16	169	111	129.29	94.51	10.48	9.34	.133	.104
	17	174	114	132.90	111.96	10.36	8.69	.134	.113
	18	177	114	133.37	111.96	10.91	8.69	.136	.114
	19	179	115	132.90	111.96	10.63	7.98	.132	.102
	20	168	110	127.32	101.51	11.86	9.10	.149	.110
Sat.	21	106	89	81.73	68.98	11.00	8.09	.142	.104
Sun.	22	108	56	79.23	49.58	12.51	10.64	.153	.157
	23	161	113	114.00	111.96	10.26	9.24	.119	.119
	24	168	111	117.61	111.96	10.92	8.82	.126	.114
	25	170	114	107.65	111.96	10.44	8.28	.109	.108
	26	168	114	96.76	111.96	10.18	8.64	.098	.112
	27	159	135	97.27	83.00	11.05	11.12	.117	.123
Sat.	28	95	80	59.48	64.97	25.65	10.61	.269	.146
Sun.	29	105	64	69.48	46.99	17.54	17.05	.193	.208
	30	152	114	95.11	111.96	9.59	9.67	.099	.123
	31	160	115	98.25	111.96	10.08	8.05	.102	.110
Total		4711	3765	3391.82	2863.48	392.04	301.46	4.723	3.875
Average Day		152.0	121.5	109.41	92.37	12.65	9.72	.152	.125

TABLE IV
LABOR FOR WORK AREAS FOR AVERAGE DAY

AREA	HOURS		WAGE		MINUTES PER MEAL		WAGE PER MEAL	
	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.
Range	24.5	19.9	14.83	14.52	2.01	1.53	.020	.019
Bakery	17.3	13.9	11.45	10.89	1.49	1.20	.016	.016
Salad, Vegetable	17.8	20.4	9.84	12.27	1.47	1.67	.013	.017
Counter	13.7	7.0	7.57	4.02	1.10	.61	.010	.006
Dining Room	7.2	6.7	3.83	3.87	.57	.53	.005	.005
Dishmachine	13.7	13.4	8.38	9.35	1.10	1.07	.011	.012
Cashier, Bookkeeper	13.9	. . .	10.22	. . .	1.14	. . .	.014	. . .
Storeroom	. . .	6.7	. . .	5.96	. . .	.47	. . .	.007
Supervisors	16.1	13.0	15.64	9.54	1.33	.98	.022	.014
Pot and Pans	13.7	7.0	9.05	4.50	1.10	.63	.012	.006
Janitor	6.7	6.7	4.03	4.35	.64	.51	.006	.005
Dietitian	9.6	6.5	20.84	13.23	.93	.52	.030	.017
Student Labor	66.7	43.0	42.74	28.78	. . .	. . .	. . .	. . .
Total	220.9	164.2	158.42	121.28	12.88	9.27	.159	.124

of the increased time spent in this area. The contract food service has less hours of work in all areas except that of salad and vegetable preparation. Although the same number of employees are used in this area in both food services, one of the employees in the a la carte food service works only 28 hours a week. Some of the areas in the contract food service showed greater expenditures for wages than those in the a la carte food service. This has been explained as due to tenure which raises the wage scale.

Another part of the labor cost comes from student employees. Student salaries make up approximately 25 per cent of the labor cost of these two food services. The students are paid from 60 to 85 cents an hour, depending on the positions they fill and the length of time they have worked for the food service. The student payroll for the contract food service includes 23 students, 15 of whom are working for the second year and thus have received a five cent an hour raise. In the a la carte food service 30 students are employed and only nine are receiving more than 60 cents an hour. Table V gives an analysis of the student labor in the two food services.

When food and labor costs are both available, it is possible to determine the total cost per meal served. This is shown in Table VI. The cost of meals per person served is two cents greater in the contract food service than in the a la carte service. It must be remembered that the contract food service exceeded its budget for both food and labor. The total excess for the contract food service represents 27.9 per cent of its income as based on actual meals served. The a la carte food service operated at 8.9 per cent below the budget for food and labor. When the excess is subtracted from the contract food and labor cost,

TABLE V
COST AND HOURS OF STUDENT LABOR
FOR OCTOBER, 1961

	A LA CARTE	CONTRACT
	\$	\$
Cost of student labor		
Range of rates of pay	.60 to .85	.60 to .80
Student labor cost for average day	42.74	28.78
Total student wages	1325.09	892.25
Total spent for labor	4716.91	3755.73
	%	%
Per cent of labor cost attributable to students	28	24
	Hours	Hours
Hours of student labor		
Hours of student labor for average day	66.7	43.0
Total hours of student labor	2067	1335
Total hours of labor	6778	5100
	%	%
Per cent of hours of labor attributable to students	30	26

TABLE VI
FOOD AND LABOR COST PER MEAL SERVED

	TOTAL FOR MONTH		AVERAGE DAY	
	A LA CARTE	CONTRACT	A LA CARTE	CONTRACT
	No.	No.	No.	No.
Number of meals served	24,474	24,675	789	796
	\$	\$	\$	\$
Income	16,789.00	11,561.15	541.58	357.85
Cost of raw food	6,684.99	7,963.27	215.64	256.88
Cost of labor	3,391.82	2,863.48	109.41	92.37
Total cost of meals served	10,076.81	10,826.75	325.05	349.25
Cost of meals per person served	.418	.438	.412	.439
	%	%	%	%
Per cent of income spent for food and labor	60.0	93.6	60.0	97.6

and the shortage is added to the a la carte food and labor cost, the figures differ by 12 cents with the a la carte meals being higher. This then would have been the result of the study if the budgets had been maintained in the two food services.

In determining the economy of these food services as they relate to the student, it will be noted that the habits of the students are of prime importance. The student who misses many meals is likely to find the a la carte service most economical. For the student who rarely misses a meal the contract service is most economical.

From the standpoint of the institution, the contract food service will, of course, bring in more money since meals paid for are not always eaten. The a la carte food service can be operated economically but it will take greater controls and salesmanship for it to be successful. The fact that students are given a choice is its most favorable characteristic. Results of the questionnaire will show how students regard this choice.

Attitudes Toward the Food Service

The a la carte food service was originally established in the hope that students would be more satisfied if they were given a choice of foods. In this study a questionnaire was given to women students in both types of food service to determine whether the a la carte food service actually does result in greater satisfaction than the contract food service.

Results from the questionnaire represent the attitudes of 47 per cent of the students living in the a la carte dormitory and 53 per cent of the students living in the contract dormitory.

Students were asked to give their classification (freshman, sophomore, etc.) and the length of time they had lived in their present dormitory. The greatest percentage of students who replied to the questionnaire were freshmen. See Table VII. The percentage of freshmen in the contract dormitory who responded to the questionnaire was greater than that of all the other three classifications who responded.

The length of time each student had lived in her present dormitory was of interest because students are given a choice of dormitories; thus, if dissatisfied with the food service, they can move as soon as space becomes available elsewhere. It is apparent that sophomores who have lived in their present dormitory less than one year, juniors who have lived in their present dormitory one year or less, and seniors who have lived in their present dormitory two years or less have all moved from somewhere else.

The a la carte food service is in its second year of operation in the dormitory represented in this study. This being the case, the sophomores, juniors, and seniors who have lived in this dormitory for two full years have seen it operate on both the contract and a la carte plan. Fifty-six of these students responded to the questionnaire.

Since students are free to choose their dormitory as long as space is available, it was assumed that the type of food service might influence their decision. However, Table VII indicates that this is true only in a relatively small percentage of cases. Only 36 per cent of the students in the a la carte dormitory and only 33 per cent in the contract dormitory said they were influenced by the type of food service.

The choice of food service is affected by two opposing schools of thought. Some students apparently choose the contract type of service

TABLE VII

CHOICE OF DORMITORY AND RELATIONSHIP TO TYPE OF FOOD SERVICE

	FRESHMEN		SOPHOMORES		JUNIORS		SENIORS		TOTAL	PER CENT		
	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	A.L.C.	CONT.	CONT.
Students who replied to questionnaire												
Number	85	145	46	44	29	30	33	9	193	228	..	..
Per cent	43.6	63.5	23.6	19.2	14.8	13.1	17.0	3.9	..	..	99.0	99.7
Years lived in present dormitory												
Less than one	84	144	10	10	4	4	0	0	98	158	50.7	69.6
One	1	1	29	22	2	1	7	0	39	24	20.2	10.6
Two	0	0	7	11	18	23	4	1	29	35	15.0	15.4
Three or more	0	0	0	0	5	2	22	8	27	10	13.9	4.4
Did the type of food service influence desire to live in this dormitory?												
Yes	43	48	14	16	6	8	5	3	68	75	36.1	33.9
No	39	92	30	27	23	21	28	6	120	146	63.8	66.0

because they feel that the lower cost of contract meals offsets the payment for meals they miss. On the other hand, some students choose the more expensive a la carte meals because they feel that since they must pay only for meals they eat they are saving in the long run.

The frequency with which students missed meals is shown in Table VIII. The results do not indicate that attendance for meals of one type of service was consistently greater than for the other type. In some instances the percentages of missed meals are greater for the contract service while in other cases they are greater for the a la carte service. The economy of the food service as related to missed meals apparently has little effect on the students' choice of food services or on how frequently they miss meals.

TABLE VIII
PARTICIPANTS INDICATION OF FREQUENCY
OF MEALS MISSED

	BREAKFAST		LUNCH		DINNER	
	A LA CARTE	CONTRACT	A LA CARTE	CONTRACT	A LA CARTE	CONTRACT
Never	15.9	18.1	40.2	49.1	23.1	31.0
Occasionally	20.2	42.2	42.6	36.8	59.7	50.8
Often	20.2	20.3	11.5	5.3	9.1	7.4
Always	29.3	5.8	.6	1.6	1.8	2.1
On week ends	13.5	13.3	4.8	6.9	6.0	8.5

Student estimates of the number of meals they missed per week ranged from none to 16 for students in the a la carte food service and from none to 18 in the contract food service. See Table IX. However,

an average of the meals missed indicates that the students in the contract food service missed four meals per week while those in the a la carte food service missed slightly more than five.

TABLE IX
PARTICIPANTS INDICATION OF MEALS MISSED PER WEEK

CLASSIFICATION	A LA CARTE	CONTRACT
Freshmen		
Average	5.2	4.4
Range	0 to 16	0 to 14
Sophomores		
Average	6.9	4.2
Range	1 to 16	0 to 18
Juniors		
Average	6.0	3.9
Range	1 to 11	0 to 10
Seniors		
Average	5.9	4.0
Range	0 to 15	0 to 10
Total		
Average	5.9	4.3
Range	0 to 16	0 to 18

The students were asked to indicate reasons for missing meals. Seven answers were available for marking and space was provided to write in other responses. The students were asked to mark three reasons in the order of their importance. "Trips off campus" were ranked as the most important reason for missing meals in the contract food service. See Table X. The students in the a la carte food service listed "too little time" as their most important reason for missing meals. When

the answers were weighted, "too little time" was the most important reason why students miss meals in both types of food service.

TABLE X
PARTICIPANTS' REASONS FOR MISSING MEALS

REASONS	ORDER OF IMPORTANCE						WEIGHTED	
	ONES		TWO'S		THREES		TOTAL ¹	
	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.
Go off campus	22	35	19	25	27	21	131	176
Work away from dorm	2	1	6	2	1	0	19	7
Inconvenient serving hours	15	17	19	25	16	19	99	120
Too little time	52	34	33	21	13	34	235	178
Like to eat out	6	9	12	15	31	21	73	78
Not hungry	19	12	19	24	27	14	122	98
Dislike food	7	15	18	12	12	25	69	94

¹Reasons ranked first in importance were given a weighted value of three. Reasons ranked second in importance were given a weighted value of two. Reasons ranked third were given a weighted value of one. Largest figure is of greatest importance.

Two questions on the questionnaire referred to between-meal eating habits of the students. The results are listed in Table XI. Although the results of the two questions were not particularly important, the reason for their inclusion was important. Meal coupons purchased by the students in the a la carte food service may also be redeemed in the dormitory canteen. Table XI indicates that students in the a la carte dormitory purchase more snacks in their dormitory canteen than are purchased by students in the contract dormitory canteen. The coupons may

TABLE XI
SNACK HABITS OF PARTICIPANTS

	FRESHMEN		SOPHOMORES		JUNIORS		SENIORS		TOTAL NUMBER		PER CENT	
	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.
How often do you eat between meals?												
Never	2	7	3	4	1	2	1	0	7	13	3.6	5.7
Once a day	12	15	10	9	5	7	10	2	37	33	19.2	14.5
Twice a day	17	18	6	6	5	1	6	0	34	25	17.7	11.0
Three or more times a day	6	11	4	2	2	1	2	0	14	14	7.2	6.0
Occasionally	48	93	22	23	16	19	14	7	100	142	52.0	62.5
Do you buy between-meal snacks in your dormitory canteen?												
Never	0	5	1	5	0	3	1	1	2	14	1.0	6.2
Occasionally	40	74	16	27	11	11	14	5	81	117	42.1	52.0
Often	38	33	24	6	12	7	14	0	88	46	45.8	20.4
Seldom	7	30	4	6	6	9	4	3	21	48	10.9	21.3

also be used to purchase cosmetics, paper, pencils, soaps, and other items available in the canteen. Extensive use of the coupons for canteen purchases is of concern because it may deprive the student of well-balanced meals.

Satisfaction with food service is influenced by physical conditions and the atmosphere at meal times. Several factors which affect the meal-time atmosphere were listed on the questionnaire and the students were asked to rank them as satisfactory, unsatisfactory, or unimportant. Table XII indicates that all of the factors listed were ranked as satisfactory by the greatest percentage of students in both types of food service. Serving hours and temperature of food received the greatest amount of criticism. Noise was ranked unimportant in both food services. Attitude of personnel and appearance of food received the highest ranking in both places.

TABLE XII
PARTICIPANTS' SATISFACTION WITH CAFETERIA

	MAKES NO DIFFERENCE		SATISFACTORY		UNSATISFACTORY	
	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.
Noise	46.1	47.6	33.9	44.3	19.8	8.0
Music	24.5	9.9	54.9	80.6	20.4	9.4
Odors	15.7	15.5	67.8	63.2	16.3	21.2
Appearance of food	2.3	1.4	83.6	84.4	14.0	14.1
Serving hours	5.2	1.8	73.0	66.9	21.6	31.1
Attitude of personnel	7.6	2.3	87.7	85.3	4.6	12.2
Temperature of food	1.7	0	66.6	61.3	31.5	38.6

Finally, students were asked which type of food service they preferred. Ninety-seven per cent of the students in the a la carte food service listed it as their preference. See Table XIII. Sixty-eight per cent of the students participating in the contract food service preferred this type of service. Students in the a la carte service listed choice of food as the most important reason for preferring that type of service. Ease of obtaining a well-balanced meal and the cost of food were listed as most important by contract food service students.

The questionnaire of the 56 girls who have participated in both the contract and the a la carte food service in their dormitory were analyzed to see if they differed from the overall results of the questionnaire. Forty-three out of the 56 stated the type of food service had no effect on their choice of dormitory. This group ranked the factors noise, music, and serving hours as satisfactory. Only "temperature of food" received the unsatisfactory rank. Fifty-four of the 56 girls preferred the a la carte food service. "Choice of food" was the reason for their preference.

This study seems to indicate that there is some validity in the use of the a la carte food service as a means of increasing student satisfaction. The contract food service, however, also serves a definite need in that it provides well-balanced meals at a rate that is very economical, especially for the students who eat regularly.

TABLE XIII

PARTICIPANTS' PREFERENCE AND REASONS
FOR CHOICE OF FOOD SERVICE

	A LA CARTE		CONTRACT	
	STUDENTS IN A LA CARTE DORM	STUDENTS IN CONTRACT DORM	STUDENTS IN A LA CARTE DORM	STUDENTS IN CONTRACT DORM
Which type of food service do you prefer?				
Number	184	70	5	155
Per cent	97.3	31.1	2.6	68.8
Reasons for preference ¹				
Choice of food	415	105	3	94
Ease of obtaining a well-balanced meal	139	22	7	250
Cost of food	100	70	10	195
Easily accessible	86	17	1	103
Speed of service	51	23	6	74
Manner of dress	17	27	0	29
Freedom to choose associates	90	8	0	19

¹These figures are weighted totals obtained by giving reasons ranked first in importance a value of three, reasons ranked second a value of two, and reasons ranked third a value of one.

CHAPTER V

SUMMARY AND CONCLUSIONS

HC 2

An analysis was made of the food and labor expenditures of a contract and an a la carte food service. Budgets for both types of service were discussed and compared with actual expenditures. The food and labor cost of the contract food service in this study exceeded the budget while those of the a la carte food service were less than the budget.

Food expenditures were broken down for each type of food. The percentages spent for the different types of food were approximately two per cent different in the two food services. This indicates that differences in meal patterns in the two food services do not affect the expenditure for particular types of food to any great extent.

Labor costs were broken down into areas of work. The a la carte food service required more hours of work than did the contract food service. This was expected since the a la carte food service must prepare more food items. The labor cost for the a la carte food service was not proportionately higher, however. This was because the pay scale for a la carte employees was lower than that for contract employees. In this study the latter had greater tenure, thus were paid more.

Labor and food costs made little difference in the final costs of the two types of meals. The total difference amounted to only two cents per meal. It must be remembered, however, that budgets were not maintain-

ed. The contract service spent 27.9 per cent more for food and labor than their budget allowed. Had the budget been maintained, the cost of the contract meals would have been much lower and thus they would have been the cheaper of the two types of meals. It should also be remembered that the contract food service was paid for many meals which were not eaten. Thus, this type of service is much more secure financially than the a la carte operation.

The a la carte service operates on a minimum of guaranteed income and for that reason food production controls are of vital importance. The fact that the a la carte service operated below its budget shows that this type of service can be operated economically. However, if it consistently operates below the budget an analysis should be made to determine why. An operation which spends less than is set up in its budget is frequently guilty of giving the customers less food value than they deserve.

Results of the questionnaire used in this study indicate that both types of food service are acceptable to students. However, students using the a la carte service were much stronger in their support of the a la carte service than contract students were in support of the contract service. Thus, the establishment of the a la carte service appears sound since its purpose was to provide greater satisfaction by offering a choice of food.

H Results of the questionnaire also indicate that the type of food service does not influence the students' choice of dormitories.

Students in both types of food service listed "lack of time" as the most important reason for missing meals. "Trips off campus" was the second most important reason for missing meals.

Students participating in the contract food service listed "low cost of food" as the most important reason for preferring the contract service. This is questionable reasoning when the number of meals missed is considered. Figures I, II, and III present the customer count for the contract food service for each meal for a month. Figure I indicates that at least 16 per cent of the students missed breakfast every morning. Attendance was highest at lunch, but dropped somewhat for dinner. Highest attendance for any meal during the month was 89 per cent.

To select the type of food service that will be the most economical, students must carefully consider their eating habits. Students who expect to be away from the dormitory a great deal during meal times will find the a la carte service more economical. Students who miss a minimum number of meals will find the contract service more economical.

Establishment of the a la carte service is favored by two factors: (1) its labor and food costs are only slightly greater than those of the contract service, and (2) students greatly prefer it to the contract service. However, as to whether one type of service is more economical for a student than the other type, still depends upon the student's eating habits.

Suggestions For Further Study

The results of the analysis of food and labor costs in this study were affected by the fact that the budgets were not maintained. Duplicating the study at another time in the school year would be of value. Also the study could be developed further by observing the employee efficiency or by analyzing the needed equipment and determining its most efficient use.

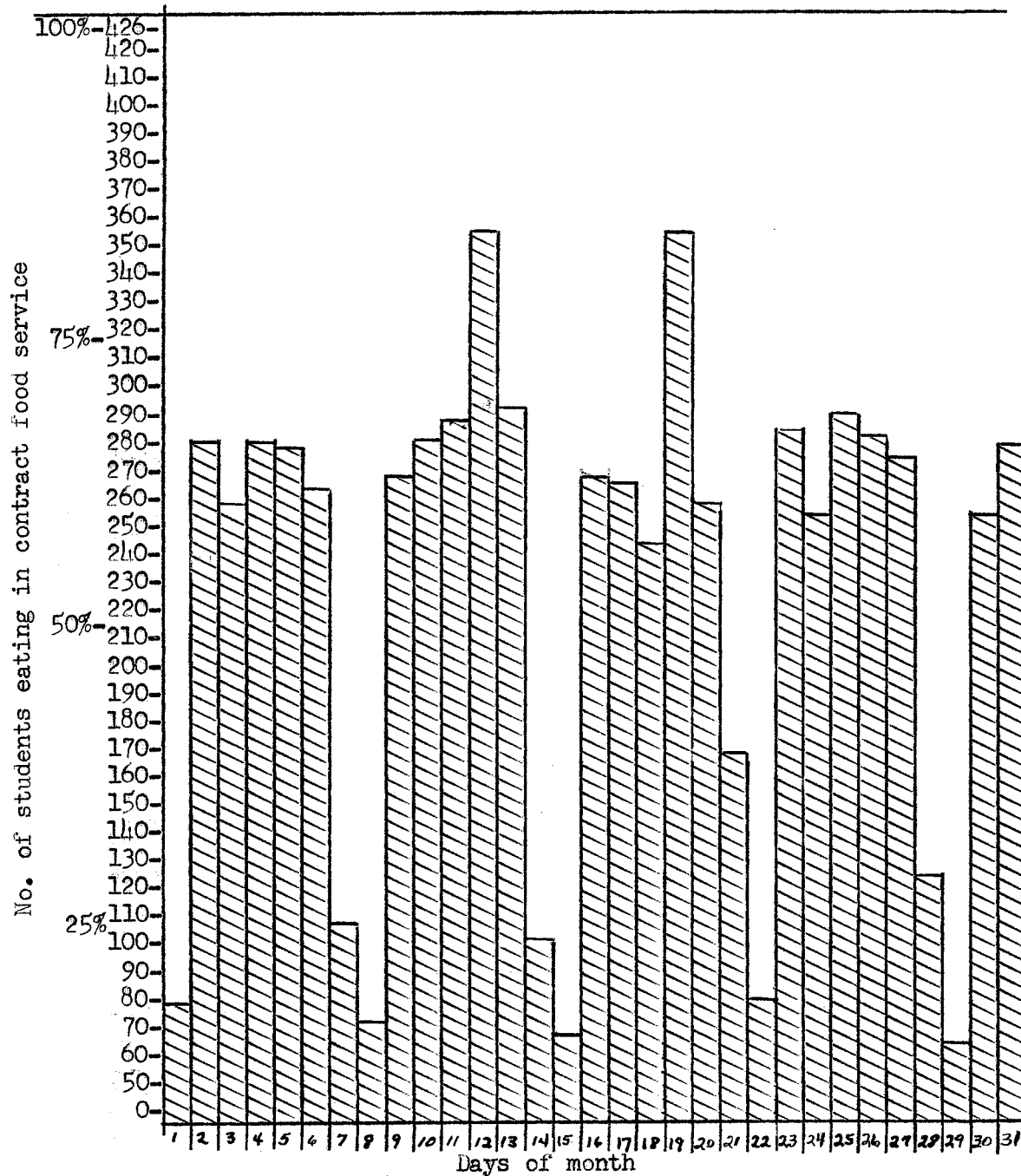


Fig. 1--Breakfast attendance in contract food service

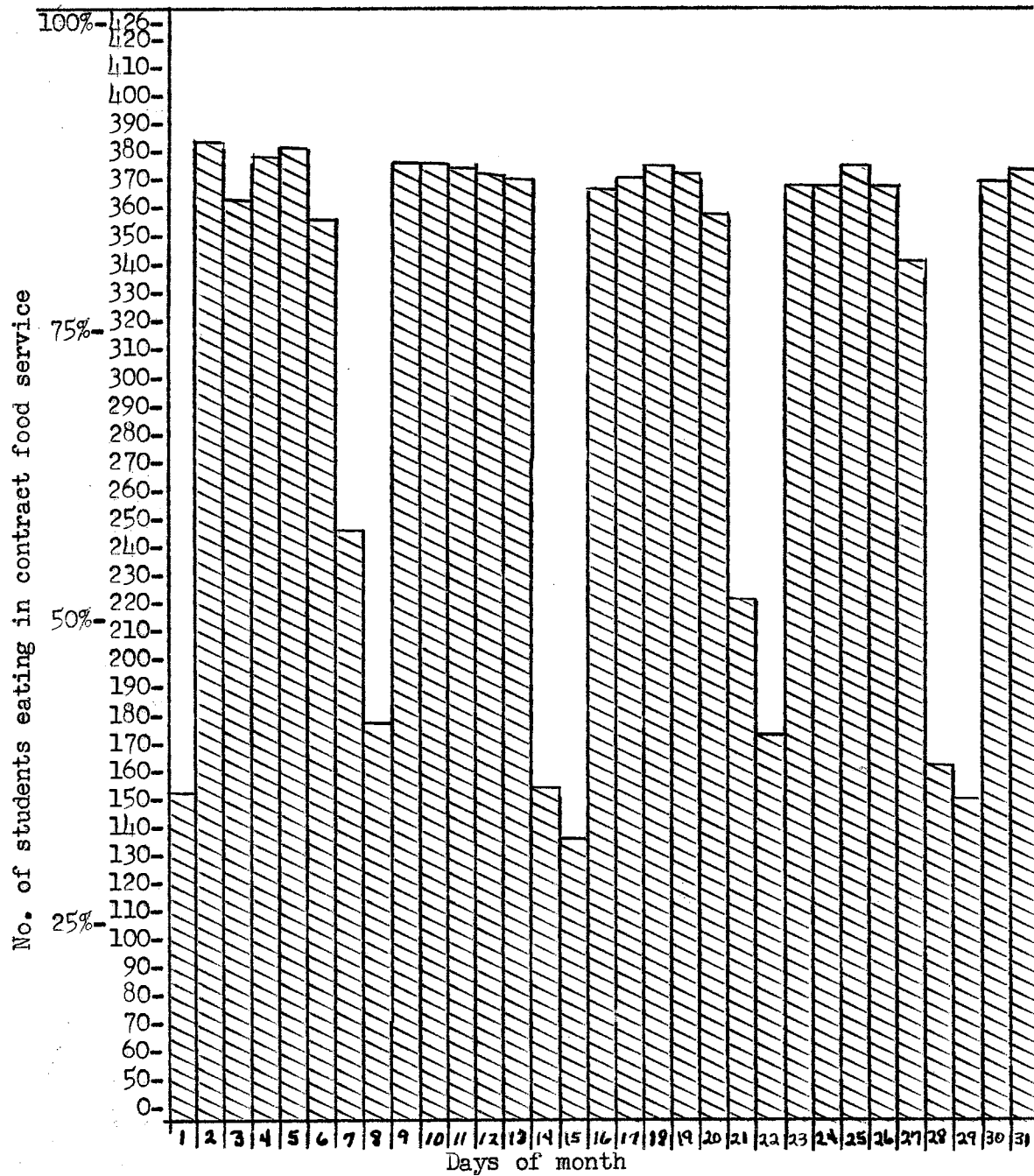


Fig. 2--Lunch attendance in contract food service

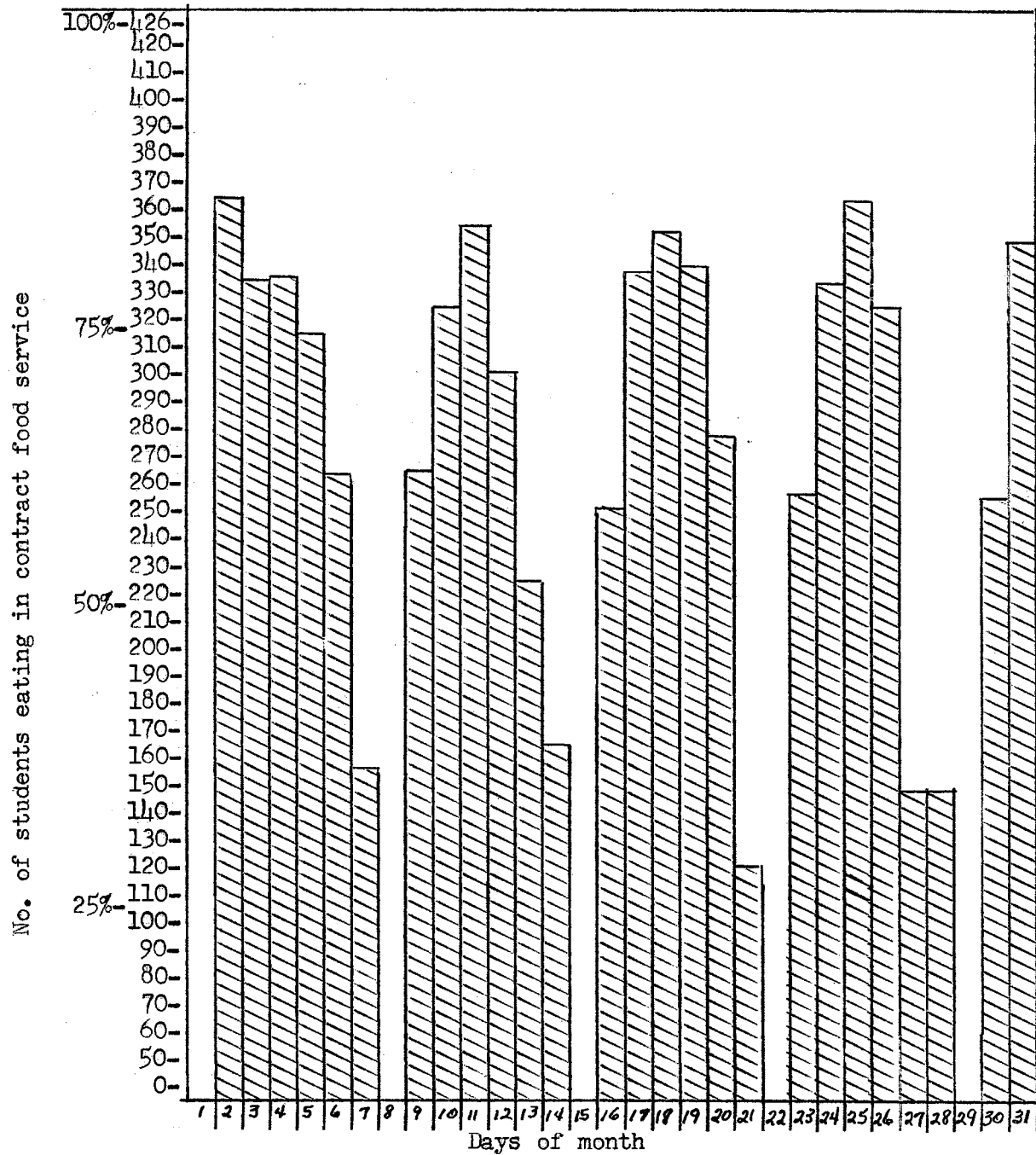


Fig. 3--Dinner attendance in contract food service

In the author's opinion, the reactions of the students to the food service were the most interesting phase of the study. There are many areas related to this part of the study which could be explored further. Knowing how factors such as classification, grade point average, or major field of study affect the eating habits of the students would help the dietitian understand her clientele. Nutritional adequacy of diets as they are selected from the a la carte line is another area where further study is needed.

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A P P E N D I C E S

APPENDIX A

TABLE A
CASH RECEIVED AND CUSTOMER COUNT FOR A LA CARTE FOOD SERVICE
OCTOBER, 1961

DATE	CASH RECEIVED			CUSTOMER COUNT				CHECK AVERAGE			EMPLOYEE MEALS			TOTAL SALES		
	Bk.	Lunch	Dinner	Total	Bk.	L.	D.	Total	Bk.	L.	D.	Bk.	Lunch		Dinner	Total
1	...	251.96	83.72	335.68	...	251	127	378	...	1.38	.66	...	11.25	5.78	17.03	352.71
2	79.40	276.12	225.95	581.47	249	387	337	973	.32	.71	.67	4.69	16.24	6.85	27.78	609.25
3	79.64	272.50	273.26	625.40	253	398	374	1025	.31	.68	.73	3.78	17.45	6.95	28.18	653.58
4	88.61	314.81	270.50	673.92	268	411	361	1040	.33	.77	.75	3.31	16.76	6.27	26.34	700.26
5	84.83	286.50	296.64	667.99	266	402	339	1007	.32	.71	.88	3.92	16.94	5.87	26.73	694.72
6	84.42	274.78	136.93	496.13	253	383	191	827	.33	.72	.72	3.41	16.27	6.67	26.35	522.48
7	24.69	192.36	...	217.05	80	266	...	346	.30	.72	...	5.27	8.84	...	14.11	231.16
8	...	277.68	103.09	380.77	...	295	150	445	...	.94	.69	...	13.07	5.85	18.92	399.69
9	88.43	259.06	248.81	596.30	262	366	366	994	.34	.71	.68	3.96	16.34	6.74	27.04	623.34
10	80.44	289.94	253.70	624.08	243	414	336	993	.33	.70	.76	4.04	14.93	7.19	26.16	650.24
11	87.23	283.94	231.55	602.72	262	387	346	995	.33	.73	.67	4.58	15.79	6.42	26.79	629.51
12	91.57	282.10	317.08	690.75	269	384	325	978	.34	.73	.98	3.71	16.69	6.60	27.00	717.75
13	85.13	279.75	138.61	503.49	260	380	186	826	.33	.74	.75	3.60	17.88	7.17	28.65	532.14
14	17.52	171.67	...	189.19	50	218	...	268	.35	.79	...	4.42	11.52	...	15.94	205.13
15	...	265.45	103.05	368.50	...	286	151	437	...	.93	.68	...	11.98	5.12	17.10	385.60
16	88.76	264.96	233.69	587.41	268	361	336	965	.33	.73	.69	3.89	15.55	5.65	25.09	612.50
17	83.86	287.84	281.70	653.40	252	406	347	1005	.33	.71	.81	3.72	16.33	5.75	25.80	679.20
18	86.08	269.09	256.89	612.06	259	382	331	972	.33	.70	.78	4.01	16.08	7.66	27.75	639.81
19	87.91	286.18	258.15	632.24	261	404	344	1009	.34	.71	.75	3.82	16.35	7.35	27.52	659.76
20	73.73	276.09	184.17	533.99	226	379	245	850	.33	.73	.75	4.04	17.62	8.31	29.97	563.96
21	58.39	368.97	...	427.36	154	425	...	579	.38	.87	...	4.98	10.30	...	15.28	442.64
22	...	312.03	113.84	425.87	...	351	167	518	...	.89	.68	...	12.06	5.75	17.81	443.68
23	87.63	233.17	242.60	563.40	254	354	333	941	.34	.66	.73	3.51	14.39	4.95	22.85	586.25
24	82.45	279.38	230.54	592.37	234	375	314	923	.35	.74	.73	3.00	17.15	7.79	27.94	620.31
25	94.52	272.90	296.26	663.68	267	364	344	975	.35	.75	.86	3.88	19.62	5.89	29.39	693.07
26	87.80	296.59	340.80	725.19	243	405	341	989	.36	.73	1.00	4.27	16.82	7.12	28.21	753.40
27	77.08	283.00	94.17	454.25	226	357	147	730	.34	.79	.64	5.02	16.86	5.28	27.16	481.41
28	24.52	115.42	...	139.94	65	157	...	222	.38	.73	...	6.37	13.04	...	19.41	159.35
29	...	196.65	89.53	286.18	...	222	137	359	...	.88	.65	...	11.87	6.64	18.51	304.69
30	86.41	277.48	229.65	593.54	249	381	321	951	.35	.73	.71	4.23	15.32	5.13	24.68	618.22
31	88.29	281.88	227.98	598.15	249	389	316	954	.35	.72	.72	3.83	15.27	5.94	25.04	623.19
Total				16,042.47				24,474							746.53	16,789.00

TABLE B

CASH RECEIVED AND CUSTOMER COUNT FOR CONTRACT FOOD SERVICE

OCTOBER, 1961

DATE	CONTRACT BREAKFAST .30			CONTRACT LUNCH ¹ .45			CONTRACT DINNER ² .55			TOTAL CONTRACT ³		TOTAL	TOTAL
	STUD.	HOST	VALUE	STUDENT	HOSTESS	VALUE	STUDENT	HOST	VALUE	CUSTOMERS	SALES	CUSTOMERS ³	SALES ³
1	79	2	24.30	152	1	84.15	...	.	...	234	108.45	240	123.75
2	280	2	84.60	383	3	173.70	363	3	201.30	1034	459.60	1038	486.95
3	259	3	78.60	363	3	164.70	332	3	184.25	963	427.55	965	447.20
4	280	3	84.90	379	4	172.35	334	3	185.35	1003	442.60	1005	461.55
5	279	3	84.60	382	3	173.25	314	3	174.35	984	432.20	987	453.70
6	264	3	80.10	357	3	162.00	263	3	146.30	893	388.40	904	419.15
7	109	3	33.60	246	3	136.95	157	4	72.45	522	243.00	547	280.30
8	72	3	22.50	179	3	100.10	...	.	...	257	122.60	274	142.20
9	270	3	81.90	380	3	172.35	264	3	146.85	923	401.10	924	415.95
10	282	3	85.50	380	3	172.35	325	3	180.40	996	438.25	1000	461.75
11	290	3	87.90	379	3	171.90	356	3	197.45	1034	457.25	1036	476.75
12	357	3	108.00	376	3	170.55	303	3	168.30	1045	446.85	1048	468.50
13	294	3	89.10	375	3	170.10	228	3	127.05	906	386.25	910	409.80
14	103	3	31.80	156	3	87.45	167	3	76.50	435	195.75	447	215.27
15	69	3	21.60	136	4	77.00	...	.	...	212	98.60	221	111.55
16	270	3	81.90	371	3	178.30	254	4	141.90	905	402.10	906	422.80
17	269	3	81.60	374	4	170.10	339	3	188.10	992	439.80	994	459.05
18	245	3	74.40	380	3	172.35	354	3	196.35	988	443.10	992	464.80
19	358	3	108.30	375	5	171.00	341	3	189.20	1085	468.50	1087	489.70
20	261	3	79.20	360	3	163.35	280	3	155.65	910	398.20	922	427.50
21	171	3	52.20	223	4	124.85	121	3	54.80	525	231.85	660	367.65
22	84	3	26.10	174	3	97.35	...	.	...	264	123.45	315	175.75
23	287	3	87.00	372	3	168.75	258	3	143.55	926	399.30	927	422.95
24	258	3	78.30	372	4	169.20	337	2	186.45	976	433.95	978	455.60
25	294	3	89.10	379	3	171.90	361	3	200.20	1043	461.20	1045	481.55
26	287	3	87.00	372	3	168.75	328	3	182.05	996	437.80	999	458.85
27	277	3	84.00	344	3	156.15	147	3	82.50	727	322.65	729	343.30
28	125	2	38.10	164	2	91.30	147	2	67.05	442	196.45	451	215.55
29	68	2	21.00	151	2	84.15	...	.	...	223	105.15	225	113.15
30	256	3	77.70	374	3	169.65	255	2	141.35	893	388.70	894	410.00
31	282	2	85.20	376	3	170.55	350	3	194.15	1016	449.90	1017	471.35
Total										10,750.55	24,675	11,561.15	

¹Saturday and Sunday lunches are charged out at .55.

²Saturday dinners are charged out at .45.

³Includes employee meals and cash customers from following page.

TABLE B
CASH RECEIVED AND CUSTOMER COUNT FOR CONTRACT FOOD SERVICE (Cont.)
OCTOBER, 1961

DATE	EMPLOYEE MEALS			TOTAL VALUE	CASH CUSTOMERS ¹			TOTAL VALUE						
	BREAKFAST NO. VALUE	LUNCH NO. VALUE	DINNER NO. VALUE		BREAKFAST NO. VALUE	LUNCH NO. VALUE	DINNER NO. VALUE							
1	9	2.70	12	6.60	..	....	9.30	6	6.00			6.00		
2	16	4.80	19	8.55	20	11.00	24.35	1	.50	2	1.50	1	1.00	3.00
3	14	4.20	20	9.00	9	4.95	18.15			2	1.50			1.50
4	12	3.60	21	9.45	8	4.40	17.45			2	1.50			1.50
5	10	3.00	19	8.55	14	7.70	19.25			3	2.25			2.25
6	10	3.00	20	9.00	15	8.25	20.25			2	1.50	9	9.00	10.50
7	10	3.00	11	6.05	10	4.50	13.55	1	.50	21	21.00	3	2.25	23.75
8	7	2.10	10	5.50	..	....	7.60	8	4.00	9	9.00			13.00
9	11	3.30	20	9.00	9	4.95	14.10			1	.75			.75
10	11	3.30	20	9.00	14	7.70	20.00			2	1.50	2	2.00	3.50
11	11	3.30	18	8.10	12	6.60	18.00			2	1.50			1.50
12	12	3.60	18	8.10	14	7.70	19.40			3	2.25			2.25
13	14	4.20	18	8.10	15	8.25	20.55			4	3.00			3.00
14	7	2.10	17	9.35	8	3.60	15.05	1	.50	5	5.00	6	4.50	10.00
15	6	1.80	7	3.85	..	....	5.65	2	1.00	7	7.00			8.00
16	12	3.60	18	8.10	15	8.25	19.95			1	.75			.75
17	12	3.60	18	8.10	11	6.05	17.75			2	1.50			1.50
18	10	3.00	19	8.55	13	7.15	18.70			4	3.00			3.00
19	11	3.30	20	9.00	13	7.15	19.45			1	.75	1	1.00	1.75
20	11	3.30	18	8.10	13	7.15	18.55			5	3.75	7	7.00	10.75
21	12	3.60	17	9.35	8	3.60	16.55	19	9.50	100	100.00	13	9.75	119.25
22	8	2.40	8	4.40	..	....	6.80	11	5.50	40	40.00			45.50
23	14	4.20	22	9.90	16	8.80	22.90			1	.75			.75
24	13	3.90	19	8.55	14	7.70	20.15			2	1.50			1.50
25	12	3.60	18	8.10	13	7.15	18.85			2	1.50			1.50
26	11	3.30	18	8.10	13	7.15	18.55			2	1.50	1	1.00	2.50
27	13	3.90	18	8.10	13	7.15	19.15			2	1.50			1.50
28	7	2.10	12	6.60	7	3.15	11.85	1	.50	5	5.00	3	2.25	7.25
29	7	2.10	8	4.40	..	....	6.50	1	.50	1	1.00			1.50
30	14	4.20	18	8.10	15	8.25	20.55			1	.75			.75
31	10	3.00	18	8.10	17	9.35	20.45					1	1.00	1.00
Total							519.35							291.25

¹The charge for lunch and dinner is reversed on week ends so that lunch costs \$1.00 and dinner \$.75.

TABLE C
DAILY FOOD EXPENDITURES FOR OCTOBER, 1961

DATE	DAIRY PRODUCTS		FRUITS AND VEGETABLES		MEAT, EGGS, AND CHEESE		CEREALS		FATS AND CONDIMENT'S		TOTAL	
	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.	A.L.C.	CONT.
1	2.70	2.91	13.02	15.52	. . .	. . .	6.36	4.30	12.12	8.50	34.20	31.23
2	16.25	9.11	104.07	87.28	146.33	177.33	14.26	22.25	16.52	142.07	297.43	438.04
3	26.12	40.50	43.94	36.27	127.29	117.64	20.30	8.15	25.45	71.96	243.10	274.52
4	40.11	54.03	59.03	24.41	143.22	207.81	2.28	16.30	16.30	20.66	260.94	323.21
5	30.31	33.72	56.53	42.33	80.84	136.07	14.16	11.20	36.58	30.67	218.42	253.99
6	62.57	31.26	41.11	89.55	77.10	152.91	9.17	17.56	48.15	19.64	238.10	310.92
7	32.60	61.95	37.33	65.53	221.38	247.25	9.76	8.78	3.76	19.25	304.83	402.76
8	.28	34.33	34.42	. . .	8.10	13.86	. . .	. . .	10.67	. . .	53.47	48.19
9	18.82	28.66	49.96	98.08	116.82	185.20	24.27	25.79	51.82	33.80	261.69	371.53
10	46.22	. . .	37.37	94.85	50.85	153.75	15.46	9.48	36.77	36.45	186.67	294.53
11	28.68	39.09	57.90	85.50	121.62	. . .	1.62	6.47	35.91	6.38	245.73	137.44
12	38.75	. . .	24.39	40.73	88.34	. . .	19.92	12.00	13.84	27.90	185.24	80.63
13	26.16	79.93	17.45	70.38	128.61	196.93	11.61	24.57	21.28	29.40	176.38	401.21
14	31.18	49.28	50.81	52.21	50.49	214.99	4.16	9.45	. . .	10.08	165.37	336.01
15	. . .	25.85	21.14	. . .	. . .	. . .	8.61	. . .	4.43	. . .	34.18	25.85
16	35.95	2.46	69.83	76.23	136.74	152.93	4.31	13.16	15.88	36.55	262.71	281.33
17	29.62	38.95	17.62	92.19	107.72	117.93	10.76	13.61	33.49	37.02	199.21	299.70
18	48.16	34.52	66.00	42.61	109.99	. . .	4.79	18.50	129.59	13.58	358.53	109.21
19	30.59	41.39	26.20	53.22	86.57	78.16	9.81	19.07	29.32	68.30	182.49	260.14
20	89.60	112.89	58.14	107.81	116.53	160.34	5.01	6.56	25.99	19.95	295.27	407.55
21	. . .	. . .	45.31	35.25	98.14	326.67	2.04	10.72	26.38	10.51	171.87	383.15
22	. . .	. . .	23.54	. . .	. . .	. . .	16.56	. . .	10.13	. . .	50.23	. . .
23	25.40	17.01	53.33	119.96	181.10	120.30	5.62	1.87	4.26	8.23	269.71	267.37
24	26.00	33.99	45.43	64.83	198.88	186.40	20.20	24.29	60.09	71.78	350.60	381.29
25	26.98	40.98	37.38	204.20	155.30	125.93	21.02	11.76	23.08	7.49	263.76	390.36
26	28.53	81.64	93.60	47.74	. . .	45.15	8.54	9.69	10.99	32.33	141.66	216.55
27	28.20	. . .	24.12	37.79	139.99	184.85	10.32	13.64	50.60	51.03	253.23	287.31
28	39.81	32.55	12.13	32.73	189.50	247.84	12.78	11.04	1.55	2.26	255.77	326.42
29	. . .	. . .	15.29	. . .	. . .	. . .	.66	. . .	4.24	. . .	20.19	. . .
30	19.70	26.66	106.95	105.40	157.59	262.93	16.95	11.78	7.20	24.44	308.39	431.21
31	40.80	34.77	69.66	42.27	119.57	73.30	56.24	10.80	109.35	30.48	395.62	191.62
Total	870.09	988.43	1413.00	1864.87	3158.61	3886.47	373.55	352.79	875.74	870.71	6684.99	7963.27

APPENDIX B

TABLE D
HOURS AND COST OF LABOR PER AREA PER DAY

OCTOBER, 1961

DATE	A LA CARTE RANGE				CONTRACT RANGE				A LA CARTE BAKERY				CONTRACT BAKERY			
	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.
1	16	8.94	.024	2.54	..	..	..	..	16	9.52	.025	2.54	16	12.50	.052	4.00
2	28	17.07	.017	1.73	24	17.31	.017	1.39	20	13.23	.013	1.23	16	12.50	.012	.92
3	28	17.07	.017	1.64	24	17.31	.018	1.49	20	13.23	.013	1.17	16	12.50	.013	.99
4	28	17.07	.016	1.61	24	17.31	.017	1.43	20	13.23	.013	1.15	16	12.50	.012	.95
5	28	17.07	.017	1.67	24	17.31	.017	1.46	20	13.23	.013	1.19	16	12.50	.013	.97
6	28	17.07	.021	2.03	24	17.31	.019	1.59	12	7.65	.009	.87	16	12.50	.014	1.06
7	13	7.54	.022	2.25	16	11.73	.021	1.75	12	7.46	.021	2.08	8	6.15	.011	.88
8	16	10.00	.022	2.16	8	5.58	.020	1.75	16	11.35	.025	2.16	8	6.35	.023	1.75
9	28	17.07	.017	1.69	24	17.31	.019	1.56	20	13.23	.013	1.21	16	12.50	.013	1.04
10	29	17.54	.018	1.75	24	17.31	.017	1.44	20	13.23	.013	1.21	16	12.50	.013	.96
11	28	17.07	.017	1.69	24	17.31	.017	1.39	20	13.23	.013	1.21	16	12.50	.012	.93
12	29	17.54	.018	1.78	24	17.31	.017	1.37	20	13.23	.013	1.23	16	12.50	.012	.92
13	28	17.07	.021	2.03	24	17.31	.019	1.58	16	11.35	.014	1.16	16	12.50	.014	1.05
14	16	10.00	.037	3.58	16	11.35	.025	2.15	12	7.46	.028	2.69	8	6.35	.014	1.07
15	16	8.94	.020	2.20	8	5.96	.027	2.17	12	7.65	.017	1.65	8	6.15	.028	2.17
16	28	17.07	.018	1.74	24	17.31	.019	1.59	20	13.23	.014	1.24	16	12.50	.014	1.06
17	28	17.07	.017	1.67	24	17.31	.017	1.45	20	13.23	.013	1.19	16	12.50	.013	.97
18	29	17.54	.018	1.79	24	17.31	.017	1.45	20	13.23	.014	1.23	16	12.50	.013	.97
19	28	17.07	.017	1.67	24	17.31	.016	1.32	20	13.23	.013	1.19	16	12.50	.011	.88
20	28	17.07	.020	1.98	24	17.31	.019	1.56	12	7.65	.009	.85	16	12.50	.013	1.04
21	13	7.54	.013	1.35	16	11.54	.017	1.45	16	11.35	.020	1.66	8	6.15	.009	.73
22	16	10.00	.019	1.85	8	5.77	.018	1.52	15	8.87	.017	1.74	8	6.35	.020	1.52
23	28	17.07	.018	1.79	24	17.31	.019	1.55	20	13.23	.014	1.27	16	12.50	.013	1.03
24	28	17.07	.018	1.82	24	17.31	.018	1.47	20	13.23	.014	1.30	16	12.50	.013	.98
25	29	17.54	.018	1.78	24	17.31	.017	1.38	20	13.23	.013	1.23	16	12.50	.012	.92
26	28	17.07	.017	1.70	24	17.31	.017	1.44	20	13.23	.013	1.21	16	12.50	.013	.96
27	28	17.07	.023	2.30	24	17.31	.024	1.97	12	7.46	.010	.99	16	12.50	.017	1.32
28	16	10.00	.045	4.32	16	11.73	.026	2.13	12	7.65	.034	3.24	8	6.35	.014	1.06
29	16	8.94	.025	2.67	8	5.58	.025	2.13	16	11.35	.032	2.67	8	6.15	.027	2.13
30	29	17.54	.018	1.83	24	17.31	.019	1.61	20	13.23	.014	1.26	16	12.50	.014	1.07
31	28	17.07	.018	1.76	16	17.31	.017	.94	20	13.23	.014	1.26	16	12.50	.012	.94
Total	759	459.79	.626	62.37	616	450.06	.575	47.48	539	354.91	.501	46.28	432	337.50	.484	37.24
Avg.	24.5	14.83	.020	2.01	19.9	14.52	.019	1.53	17.3	11.45	.016	1.49	13.9	10.89	.016	1.20

TABLE D
HOURS AND COST OF LABOR PER AREA PER DAY (Cont.)

DATE	A LA CARTE SALAD-VEGETABLE CONTRACT				SALAD-VEGETABLE				A LA CARTE COUNTER				CONTRACT COUNTER			
	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.
1	16	9.42	.025	2.54	8	5.19	.022	2.00	8	4.62	.012	1.27	8	4.62	.019	2.00
2	20	11.11	.011	1.23	24	14.43	.014	1.39	16	8.85	.009	.99	8	4.62	.004	.46
3	20	11.11	.011	1.17	24	14.43	.015	1.49	16	8.85	.009	.94	8	4.62	.005	.50
4	20	11.11	.011	1.15	24	14.43	.014	1.43	16	8.85	.009	.92	8	4.62	.005	.48
5	20	11.11	.011	1.19	24	14.43	.015	1.46	16	8.85	.009	.95	8	4.62	.005	.49
6	20	11.11	.013	1.45	24	14.43	.016	1.59	16	8.85	.012	1.16	8	4.62	.005	.53
7	8	4.42	.013	1.39	8	5.19	.009	.88	8	4.62	.013	1.39	8	4.62	.008	.88
8	16	8.37	.019	2.16	16	9.24	.034	3.50	8	4.23	.010	1.08	.	.....	.....	...
9	20	11.11	.011	1.21	24	14.43	.016	1.56	16	8.85	.009	.97	8	4.62	.005	.52
10	20	11.11	.011	1.21	24	14.43	.014	1.44	16	8.85	.009	.97	8	4.62	.005	.48
11	20	11.11	.011	1.21	24	14.43	.014	1.39	16	8.85	.009	.96	8	4.62	.004	.46
12	20	11.11	.011	1.23	24	14.43	.014	1.37	16	8.85	.009	.98	8	4.62	.004	.46
13	20	11.11	.013	1.45	24	14.43	.016	1.58	16	8.85	.011	1.16	8	4.62	.005	.53
14	8	5.00	.019	1.79	16	9.24	.021	2.15	8	4.23	.016	1.79	.	.....	.....	...
15	16	7.79	.018	2.20	8	5.19	.023	2.17	8	4.62	.011	1.10	8	4.62	.020	2.17
16	20	11.11	.011	1.24	24	14.43	.016	1.59	16	8.85	.009	.99	8	4.62	.005	.53
17	20	11.11	.011	1.19	24	14.43	.015	1.45	16	8.85	.009	.95	8	4.62	.005	.48
18	20	11.11	.011	1.23	24	14.43	.016	1.45	16	8.85	.009	.99	8	4.62	.005	.48
19	20	11.11	.011	1.19	24	14.43	.013	1.32	16	8.85	.009	.95	8	4.62	.004	.44
20	20	11.11	.013	1.41	24	14.43	.016	1.56	16	8.85	.010	1.13	8	4.62	.005	.52
21	8	3.37	.006	.83	16	9.81	.015	1.45	8	4.62	.008	.83	8	4.62	.007	.73
22	16	9.42	.018	1.85	8	4.62	.015	1.52	8	4.23	.008	.93	.	.....	.....	...
23	20	11.11	.012	1.27	24	14.43	.015	1.55	16	8.85	.009	1.02	8	4.62	.005	.52
24	20	11.11	.012	1.30	24	14.43	.015	1.47	16	8.85	.009	1.04	8	4.62	.005	.49
25	20	11.11	.011	1.23	24	14.43	.014	1.38	16	8.85	.009	.98	8	4.62	.004	.46
26	20	11.11	.011	1.21	24	14.43	.014	1.44	16	8.85	.009	.97	8	4.62	.005	.48
27	20	11.11	.015	1.64	24	14.43	.020	1.97	16	8.85	.012	1.31	8	4.62	.006	.66
28	8	5.00	.023	2.16	8	4.62	.012	1.06	8	4.23	.019	2.16	.	.....	.....	...
29	16	7.79	.022	2.67	16	9.81	.014	4.27	8	4.62	.013	1.34	8	4.62	.020	2.13
30	20	11.11	.012	1.26	24	14.43	.016	1.61	16	8.85	.009	1.01	8	4.62	.005	.54
31	20	11.11	.012	1.26	24	14.43	.014	1.41	16	8.85	.009	1.01	8	4.62	.005	.47
Total	552	305.00	.419	45.52	632	380.37	.527	51.90	424	234.72	.317	34.24	216	124.74	.180	18.89
Avg.	17.8	9.84	.013	1.47	20.4	12.27	.017	1.67	13.7	7.57	.010	1.10	7.0	4.02	.006	.61

TABLE D
HOURS AND COST OF LABOR PER AREA PER DAY (Cont.)

DATE	A LA CARTE DINING ROOM				CONTRACT DINING ROOM				A LA CARTE DISHMACHINE				CONTRACT DISHMACHINE			
	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.
1	8	4.23	.011	1.27	.	....	....	....	8	4.81	.013	1.27	8	5.38	.022	2.00
2	8	4.23	.004	.49	8	4.62	.004	.46	16	9.81	.010	.99	16	11.15	.011	.92
3	8	4.23	.004	.47	8	4.62	.005	.50	16	9.81	.009	.94	16	11.15	.011	.99
4	8	4.23	.004	.46	8	4.62	.005	.48	16	9.81	.009	.92	16	11.15	.011	.95
5	8	4.23	.004	.48	8	4.62	.005	.49	16	9.81	.010	.95	16	11.15	.011	.97
6	8	4.23	.005	.58	8	4.62	.005	.53	16	9.81	.012	1.16	16	11.15	.012	1.06
7	8	4.23	.012	1.39	.	....	....	....	8	4.81	.014	1.39	8	5.38	.010	.88
8	.	....	....	....	8	4.62	.017	1.75	8	5.00	.011	1.08	8	5.77	.021	1.75
9	8	4.23	.004	.48	8	4.62	.005	.52	16	9.81	.010	.97	16	11.15	.012	1.04
10	8	4.23	.004	.48	8	4.62	.005	.48	16	9.81	.010	.97	16	11.15	.011	.96
11	8	4.23	.004	.48	8	4.62	.004	.46	16	9.81	.010	.96	16	11.15	.011	.93
12	8	4.23	.004	.49	8	4.62	.004	.46	16	9.81	.010	.98	16	11.15	.011	.92
13	8	4.23	.005	.58	8	4.62	.005	.53	16	9.81	.012	1.16	16	11.15	.012	1.05
14	..	....	....	....	8	4.62	.010	1.07	8	5.00	.019	1.79	8	5.77	.013	1.07
15	8	4.23	.010	1.10	..	....	....	....	8	4.81	.011	1.10	.	....	....	....
16	8	4.23	.004	.50	8	4.62	.005	.53	16	9.81	.010	.99	16	11.15	.012	1.06
17	8	4.23	.004	.48	8	4.62	.005	.48	16	9.81	.010	.95	16	11.15	.011	.97
18	8	4.23	.004	.49	8	4.62	.005	.48	16	9.81	.010	.99	16	11.15	.011	.97
19	8	4.23	.004	.47	8	4.62	.004	.44	16	9.81	.010	.95	16	11.15	.010	.88
20	8	4.23	.005	.56	8	4.62	.005	.52	16	9.81	.011	1.13	16	11.15	.012	1.04
21	8	4.23	.007	.83	..	....	....	....	8	4.81	.008	.83	8	5.38	.008	.73
22	.	....	....	....	8	4.62	.015	1.52	8	5.00	.010	.93	8	5.77	.018	1.52
23	.	....	....	....	8	4.62	.005	.52	16	9.81	.010	1.02	16	11.15	.012	1.03
24	.	....	....	....	8	4.62	.005	.49	16	9.81	.011	1.04	16	11.15	.011	.98
25	.	....	....	....	8	4.62	.004	.46	16	9.81	.010	.98	16	11.15	.011	.92
26	.	....	....	....	8	4.62	.005	.48	16	9.81	.010	.97	16	11.15	.011	.96
27	.	....	....	....	8	4.62	.006	.66	16	9.81	.013	1.31	16	11.15	.015	1.32
28	.	....	....	....	8	4.62	.010	1.06	8	5.00	.023	2.16	8	5.77	.013	1.06
29	.	....	....	....	..	....	....	....	8	4.81	.013	1.34	8	5.38	.024	2.13
30	.	....	....	....	8	4.62	.005	.54	16	9.81	.010	1.01	16	11.15	.012	1.07
31	.	....	....	....	8	4.62	.005	.47	16	9.81	.010	1.01	16	11.15	.011	.94
Total	152	80.37	.103	12.08	208	120.12	.158	16.38	424	259.87	.349	34.24	416	289.90	.381	33.07
Avg.	4.9	2.59	.003	.39	6.7	3.87	.005	.53	13.7	8.38	.011	1.10	13.4	9.35	.012	1.07

TABLE D

HOURS AND COST OF LABOR PER AREA PER DAY (Cont.)

DATE	A LA CARTE POT WASHER				CONTRACT POT WASHER				A LA CARTE JANITOR				CONTRACT JANITOR			
	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.	HR.	TOTAL WAGE	PER MEAL WAGE	MIN.
1	8	5.58	.015	1.27	8	5.00	.021	2.00	6	3.60	.009	.95	.	.....	.....	...
2	16	10.58	.011	.99	8	5.00	.004	.46	2	1.20	.001	.12	8	5.19	.005	.46
3	16	10.58	.010	.94	8	5.00	.005	.50	8	4.81	.005	.47	8	5.19	.005	.50
4	16	10.58	.010	.92	8	5.00	.005	.48	8	4.81	.005	.46	8	5.19	.005	.48
5	16	10.58	.011	.95	8	5.00	.005	.49	8	4.81	.005	.48	8	5.19	.005	.49
6	16	10.58	.013	1.16	8	5.00	.005	.53	8	4.81	.006	.58	8	5.19	.006	.53
7	8	5.58	.016	1.39	.	.....	.....	.....	8	4.81	.014	1.39	8	5.19	.009	.88
8	8	5.00	.011	1.08	8	5.00	.018	1.75	6	3.60	.008	.81	.	.....	.....	...
9	16	10.58	.011	.97	8	5.00	.005	.52	2	1.20	.001	.12	8	5.19	.006	.52
10	16	10.58	.011	.97	8	5.00	.005	.48	8	4.81	.005	.48	8	5.19	.005	.48
11	16	10.58	.011	.96	8	5.00	.005	.46	8	4.81	.005	.48	8	5.19	.005	.46
12	16	10.58	.011	.98	8	5.00	.005	.46	8	4.81	.005	.49	8	5.19	.005	.46
13	16	10.58	.013	1.16	8	5.00	.005	.53	8	4.81	.006	.58	8	5.19	.006	.53
14	8	5.00	.019	1.79	8	5.00	.011	1.07	8	4.81	.018	1.79	.	.....	.....	...
15	8	5.58	.013	1.10	.	.....	.....	.....	6	3.60	.008	.82	8	5.19	.023	2.17
16	16	10.58	.011	.99	8	5.00	.005	.53	2	1.20	.001	.12	8	5.19	.006	.53
17	16	10.58	.011	.95	8	5.00	.005	.48	8	4.81	.005	.48	8	5.19	.005	.48
18	16	10.58	.011	.99	8	5.00	.005	.48	8	4.81	.005	.49	8	5.19	.005	.48
19	16	10.58	.010	.95	8	5.00	.005	.44	8	4.81	.005	.47	8	5.19	.005	.44
20	16	10.58	.012	1.13	8	5.00	.005	.52	8	4.81	.006	.56	8	5.19	.006	.52
21	8	5.58	.010	.83	.	.....	.....	.....	8	4.81	.008	.83	8	5.19	.008	.73
22	8	5.00	.010	.93	8	5.00	.016	1.52	6	3.60	.007	.69	.	.....	.....	...
23	16	10.58	.011	1.02	8	5.00	.005	.52	2	1.20	.001	.13	8	5.19	.005	.52
24	16	10.58	.011	1.04	8	5.00	.005	.49	8	4.81	.005	.52	8	5.19	.005	.49
25	16	10.58	.011	.98	8	5.00	.005	.46	8	4.81	.005	.49	8	5.19	.005	.46
26	16	10.58	.011	.97	8	5.00	.005	.48	8	4.81	.005	.49	8	5.19	.005	.48
27	16	10.58	.014	1.31	8	5.00	.007	.66	8	4.81	.007	.66	8	5.19	.007	.66
28	8	5.00	.023	2.16	.	.....	.....	.....	8	4.81	.002	2.16	8	5.19	.011	1.06
29	8	5.58	.015	1.34	8	5.00	.022	2.13	6	3.60	.010	1.00	.	.....	.....	...
30	16	10.58	.011	1.01	8	5.00	.005	.54	2	1.20	.001	.13	8	5.19	.006	.54
31	16	10.58	.011	1.01	8	5.00	.005	.47	8	4.81	.005	.50	8	5.19	.005	.47
Total	1224	280.66	.379	34.24	215	135.00	.199	19.45	208	125.01	.199	19.74	208	134.94	.169	15.82
Avg.	13.7	9.05	.012	1.10	7.0	4.50	.006	.63	6.7	4.03	.006	.64	6.7	4.35	.005	.51

TABLE D
HOURS AND COST OF LABOR PER AREA PER DAY (Cont.)

DATE	A.L.C. CASHIER, BOOKKEEPER ¹				CONTRACT STOREROOM ²				A LA CARTE SUPERVISORS				CONTRACT SUPERVISORS			
	TOTAL HR.	WAGE	PER MEAL WAGE	MIN.	TOTAL HR.	WAGE	PER MEAL WAGE	MIN.	TOTAL HR.	WAGE	PER MEAL WAGE	MIN.	TOTAL HR.	WAGE	PER MEAL WAGE	MIN.
1	8	5.00	.013	1.27	.	....	....	...	17	20.63	.055	2.70	12	11.51	.048	3.00
2	16	11.73	.012	.99	8	7.11	.007	.46	22	20.63	.021	1.36	16	12.58	.012	.92
3	16	11.73	.011	.94	8	7.11	.007	.50	20	20.63	.020	1.17	16	12.58	.013	.99
4	16	11.73	.011	.92	8	7.11	.007	.48	21	20.63	.020	1.21	16	12.58	.013	.95
5	16	11.73	.012	.95	8	7.11	.007	.49	19	20.63	.020	1.13	16	12.58	.013	.97
6	16	11.73	.014	1.16	8	7.11	.008	.53	17	20.63	.025	1.23	12	7.36	.008	.80
7	8	5.00	.014	1.39	8	7.11	.013	.88	11	9.57	.028	1.97	11	10.45	.019	1.21
8	8	6.73	.015	1.08	.	....	....	...	13	11.06	.025	1.75	4	1.07	.004	.87
9	16	11.73	.012	.97	8	7.11	.008	.52	21	20.63	.021	1.27	16	12.58	.014	1.04
10	16	11.73	.012	.97	8	7.11	.007	.48	18	20.63	.021	1.09	16	12.58	.013	.96
11	16	11.73	.012	.96	8	7.11	.007	.46	19	20.63	.021	1.15	16	12.58	.012	.93
12	16	11.73	.012	.98	8	7.11	.007	.46	19	20.63	.021	1.17	16	12.58	.012	.92
13	16	11.73	.014	1.16	8	7.11	.008	.53	18	20.63	.025	1.31	12	2.13	.002	.79
14	8	6.73	.025	1.79	8	7.11	.016	1.07	10	11.06	.041	2.24	..	....	....	...
15	8	5.00	.011	1.10	.	....	....	...	13	9.57	.022	1.78	12	10.45	.047	.33
16	16	11.73	.012	.99	8	7.11	.008	.53	18	20.63	.021	1.12	16	12.58	.014	1.06
17	16	11.73	.012	.95	8	7.11	.007	.48	18	20.63	.021	1.07	16	12.58	.013	.97
18	16	11.73	.012	.99	8	7.11	.007	.48	19	20.63	.021	1.17	16	12.58	.013	.97
19	16	11.73	.012	.95	8	7.11	.007	.44	21	20.63	.020	1.25	16	12.58	.011	.88
20	16	11.73	.014	1.13	8	7.11	.008	.52	18	20.63	.024	1.27	12	2.13	.002	.78
21	8	5.00	.009	.83	8	7.11	.011	.73	11	9.57	.017	1.14	15	10.45	.016	1.36
22	9	6.73	.013	1.04	.	....	....	...	13	5.53	.011	1.51	..	....	....	...
23	16	11.73	.012	1.02	8	7.11	.008	.52	20	9.57	.010	1.27	16	12.58	.013	1.03
24	16	11.73	.013	1.04	8	7.11	.007	.49	18	9.57	.010	1.17	16	12.58	.012	.98
25	17	11.73	.012	1.05	8	7.11	.007	.46	19	9.57	.010	1.17	16	12.58	.012	.92
26	17	11.73	.012	1.03	8	7.11	.007	.48	20	9.57	.010	1.21	16	12.58	.013	.96
27	16	11.73	.016	1.31	8	7.11	.010	.66	17	15.85	.022	1.40	8	1.07	.001	.66
28	9	6.73	.030	2.43	8	7.11	.016	1.06	9	11.06	.050	2.43	8	2.13	.005	1.06
29	11	11.73	.032	1.84	.	....	....	...	3	11.06	.031	.50	8	10.45	.046	2.13
30	16	11.73	.012	1.01	8	7.11	.008	.54	9	11.06	.012	.57	16	12.58	.014	1.07
31	16	11.73	.012	1.01	8	7.11	.007	.47	9	11.06	.011	.57	16	12.58	.012	.94
Total	431	316.71	.435	35.25	208	184.86	.220	14.72	500	484.81	.687	41.35	402	295.64	.427	30.45
Avg.	13.9	10.22	.014	1.14	6.7	5.96	.007	.47	16.1	15.64	.022	1.33	13.0	9.54	.014	.98

¹Contract dorm has students filling these positions. ²A la carte dorm has students filling this position.

TABLE D
HOURS AND COST OF LABOR PER AREA PER DAY (Cont.)

DATE	A LA CARTE DIETITIAN				CONTRACT DIETITIAN				A LA CARTE TOTAL				CONTRACT TOTAL			
	TOTAL		PER MEAL		TOTAL		PER MEAL		TOTAL		PER MEAL		TOTAL		PER MEAL	
	HR.	WAGE	WAGE	MIN.	HR.	WAGE	WAGE	MIN.	HR.	WAGE	WAGE	MIN.	HR.	WAGE	WAGE	MIN.
1	15	20.85	.055	2.38	.	.....	.....	...	126	97.20	.257	20.00	60	44.47	.184	15.00
2	11	20.85	.021	.86	8	17.45	.017	.46	178	129.29	.130	10.98	114	111.96	.107	8.30
3	10	20.85	.023	.59	6	.....	.....	.37	178	132.90	.132	10.34	112	94.51	.097	8.82
4	9	20.85	.020	.52	8	17.45	.017	.48	178	132.90	.128	10.24	114	111.96	.111	8.59
5	9	20.85	.021	.54	8	17.45	.018	.49	176	132.90	.133	10.48	114	111.96	.114	8.77
6	8	20.85	.025	.58	7	17.45	.019	.46	165	127.32	.155	11.96	139	106.74	.117	9.21
7	9	20.85	.060	1.56	.	.....	.....	...	101	78.89	.227	17.59	75	55.82	.100	8.24
8	13	20.85	.047	1.75	8	17.45	.063	1.75	112	86.91	.193	15.11	68	55.08	.200	14.87
9	11	20.85	.021	.66	7	17.45	.019	.45	174	129.29	.130	10.52	113	111.96	.122	9.29
10	10	20.85	.021	.60	8	17.45	.017	.48	177	133.37	.135	10.70	114	111.96	.112	8.64
11	8	20.85	.021	.48	8	17.45	.017	.46	175	132.90	.134	10.54	114	111.96	.108	8.33
12	8	20.85	.021	.49	8	17.45	.017	.46	176	133.37	.135	10.80	114	111.96	.108	8.26
13	2	.....	.....	.15	8	17.45	.019	.53	164	110.17	.134	11.90	110	101.51	.111	9.23
14	10	20.85	.078	2.24	8	17.45	.039	1.07	96	80.14	.300	21.49	80	66.89	.149	10.72
15	13	20.85	.048	1.78	.	.....	.....	...	116	82.64	.189	15.93	52	37.56	.168	11.18
16	9	20.85	.022	.56	5	.....	.....	.33	169	129.29	.133	10.48	111	94.51	.104	9.34
17	8	20.85	.021	.48	8	17.45	.017	.48	174	132.90	.134	10.36	114	111.96	.113	8.69
18	9	20.85	.021	.55	8	17.45	.017	.48	177	133.37	.136	10.91	114	111.96	.114	8.69
19	10	20.85	.021	.59	9	17.45	.016	.50	179	132.90	.132	10.63	115	111.96	.102	7.98
20	10	20.85	.025	.71	8	17.45	.019	.52	168	127.32	.149	11.86	110	101.51	.110	9.10
21	10	20.85	.036	1.04	2	8.73	.013	.18	106	81.73	.142	11.00	89	68.98	.104	8.09
22	9	20.85	.040	1.04	8	17.45	.055	1.52	108	79.23	.153	12.51	56	49.58	.157	10.64
23	7	20.85	.022	.45	7	17.45	.019	.45	161	114.00	.119	10.26	113	111.96	.119	9.24
24	10	20.85	.023	.65	8	17.45	.018	.49	168	117.61	.126	10.92	114	111.96	.114	8.82
25	9	10.42	.010	.55	8	17.45	.017	.46	170	107.65	.109	10.44	114	111.96	.108	8.28
26	7	.....	.....	.42	8	17.45	.017	.48	168	96.76	.098	10.18	114	111.96	.112	8.64
27	10	.....	.....	.82	7	.....	.....	.58	159	97.27	.117	11.05	135	83.00	.123	11.12
28	9	.....	.....	2.43	8	17.45	.039	1.06	95	59.48	.269	25.65	80	64.97	.146	10.61
29	13	.....	.....	2.17	.	.....	.....	...	105	69.48	.193	17.54	64	46.99	.208	17.05
30	8	.....	.....	.50	8	17.45	.019	.54	152	95.11	.099	9.59	114	111.96	.123	9.67
31	11	.....	.....	.69	9	17.45	.017	.53	160	98.25	.102	10.08	115	111.96	.110	8.05
Total	298	189.97	.723	28.83	203	110.08	.545	16.06	4711	3391.82	4.723	392.04	3765	2863.48	3.875	301.46
Avg.	9.6	15.81	.023	.93	6.5	13.23	.017	.52	152.	109.41	.152	12.65	121.5	92.37	.125	9.72

APPENDIX C

Women students who eat their meals in Murray and Stout are requested to complete the attached questionnaire and mail in the return envelope not later than November 4, 1961.

This questionnaire forms a portion of work being done to fulfill requirements for a master's degree in the department of Food, Nutrition, and Institution Administration. It is necessary that each question be answered.

This study involves a comparison of the satisfactoriness, food cost and labor cost of meals served in an a la carte and a contract dining hall on the Oklahoma State University campus.

Your cooperation in this study is appreciated.

Josephine Mitchell

FNIA Graduate Student

Questionnaire to compare a la carte and contract food service

1. How are you classified?

_____ Freshman _____ Junior _____ Graduate
_____ Sophomore _____ Senior

2. How long have you lived in your present dorm?

_____ Less than a year _____ Two years
_____ One Year _____ Three years or more

3. Did the type of food service influence your desire to live in this dorm? _____ Yes _____ No

4. Check the column which most accurately describes how frequently you miss meals.

	Never	Occasionally	Often	Always	On Week Ends
Breakfast					
Lunch					
Dinner					

5. Write in the approximate number of meals you miss per week _____

6. Indicate the reasons why you miss meals. Number reasons 1, 2, and 3 in order of their importance.

- _____ a. Go off campus
- _____ b. Work away from dorm
- _____ c. Inconvenient serving hours
- _____ d. Too little time
- _____ e. Like to eat out
- _____ f. Not hungry
- _____ g. Dislike food
- _____ h. Other _____

7. How often do you eat between meals?

Never Twice a day Occasionally
 Once a day Three or more times a day

8. Do you buy between-meal snacks in your dormitory canteen?

Never Occasionally Often Seldom

9. Check the terms which most accurately describe your satisfaction with your cafeteria.

	Makes no difference	Satisfactory	Unsatisfactory
a. Noise			
b. Odors			
c. Appearance of food			
d. Music			
e. Serving hours			
f. Attitude of personnel			
g. Temperature of food			

10. Which type of food service do you prefer?

A la carte, as in Murray Hall

Contract, as in Stout Hall

11. Indicate the reasons for your preference given in question 10 in order of their importance. Number choices 1, 2, and 3 in order of importance.

a. Choices of food

b. Ease of obtaining a well balanced meal

c. Cost of food

d. Easily accessible

e. Speed of service

f. Manner of dress

g. Freedom to choose associates

h. Other _____

VITA

Josephine Friesen Mitchell

Candidate for the Degree of

Master of Science

Thesis: A COMPARISON OF AN A LA CARTE AND A CONTRACT FOOD SERVICE AT
OKLAHOMA STATE UNIVERSITY

Major Field: Institutional Administration

Biographical:

Personal Data: Born near Hooker, Oklahoma, September 11, 1934,
the daughter of Dick B. and Eva Friesen.

Education: Attended grade school and high school at Adams High
School, Adams, Oklahoma. Graduated in 1952. Attended
Panhandle A&M College, Goodwell, Oklahoma, 1952-53. Re-
ceived Bachelor of Science degree from Oklahoma State Uni-
versity in January, 1960, with a major in Food, Nutrition,
and Institutional Administration. Completed requirements
for Master of Science degree in May, 1962.

Professional Experience: Served as dietary supervisor at Epworth
Hospital, Liberal, Kansas, January, 1954 until February, 1957.
Completed a dietetic internship at Oklahoma State University
in January, 1961, and thus became a member of the American
Dietetic Association. Served as Assistant Food Production
Manager at Bennett Cafeteria on the Oklahoma State campus from
January until May, 1961. From September, 1961 until January,
1962, filled the position of head dietitian at McElroy Dining
Hall at Oklahoma State University.