

AN ABSTRACT OF THE THESIS OF

Suzanne R. Curtis for the degree of Master of Science  
in Foods and Nutrition presented on November 16, 1981

Title: Time Allocations to Job Functions of School Foodservice  
Directors in Oregon

Abstract approved: \_\_\_\_\_  
Ann M. Messersmith

The increasing costs of labor and food accompanied by limited budgets are some of the problems facing the school foodservice director. A plausible solution for cost increases is more efficient use of time. The purpose of this research is to develop a method to determine the time spent in common job functions by school foodservice directors with an outcome of providing an initial time data base for ultimate time and performance evaluations.

A two part questionnaire of all sixty-eight school foodservice directors in Oregon was conducted to identify how time was allocated among job functions identified by the American School Food Service Association, 1978, and among routine office tasks. Part one: an estimation of time allocations per job functions and demographic information was requested. Part two: a time study in which the school foodservice director kept a record of activities for a five-day period. The response rate was fifty percent.

Of the school foodservice directors surveyed, there were no significant differences in the estimated and actual amount of time spent in job functions for eighty percent of the sixty-one job

functions surveyed. Of the twenty percent with significant differences, the majority were overestimates of time spent in job functions. Demographic variables correlating with significant differences in the estimated and actual time spent in job functions were: (1) education level, (2) number of years in the foodservice profession and (3) number of days of administrative assistance. The majority of school foodservice directors surveyed accurately plan their time to complete job functions.

Time Allocations to Job Functions of School  
Foodservice Directors in Oregon

by

Suzanne Render Curtis

A THESIS

submitted to

Oregon State University

in partial fulfillment of  
the requirements for the  
degree of

Master of Science

Completed November 16, 1981

Commencement June, 1982

APPROVED:

---

Ann M. Messersmith, Ph.D., Associate Professor and  
Head of Department of Institution Management

---

Dean of Graduate School

Date thesis is presented November 16, 1981

Typed by Linda A. Duhan for Suzanne Render Curtis

## ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to my major professor, Dr. Ann Messersmith, for sharing her professional expertise and the guidance offered during my graduate studies.

A special thank you goes to Judy Shafer, who offered her unselfish assistance and spiritual support when it was needed.

My deepest gratitude goes to my husband and children. Without their constant encouragement and support, this effort would have been impossible.

## TABLE OF CONTENTS

INTRODUCTION . . . . .	1
REVIEW OF LITERATURE . . . . .	6
I. Time as a Resource . . . . .	6
II. Productivity: An Overview . . . . .	8
III. Productivity in Foodservice. . . . .	10
IV. Managerial Productivity. . . . .	12
A. Business Sector . . . . .	12
B. Foodservice Industry. . . . .	13
V. School Foodservice . . . . .	15
METHODOLOGY. . . . .	17
Research Instruments. . . . .	18
Pilot Study . . . . .	22
Description of Population . . . . .	23
Instrument Administration . . . . .	23
Statistical Analysis. . . . .	25
RESULTS AND DISCUSSION . . . . .	26
Descriptive Profile . . . . .	26
Correlations. . . . .	35
Paired t Analysis . . . . .	38
Study Outcomes. . . . .	42
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS . . . . .	43
BIBLIOGRAPHY . . . . .	46
APPENDIX . . . . .	50

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1.	Percent Distribution of Respondents by Total Number of Years in Foodservice Profession . . . . .	30
2.	Percent Distribution of Respondents by Number of Years in Present Position . . . . .	31
3.	Percent Distribution of Respondents by Education Level . . . . .	32
4.	Percent Distribution of Respondents by Number of Hours Worked per Five Day Week. . . . .	33

## LIST OF TABLES

<u>Table</u>		<u>Page</u>
1.	Demographic Profile of School Foodservice Directors in Oregon, Response Categories, Number of Respondents; Percentages and Means. . . . .	27
2.	Job Functions with Significant Differences and Independent Variable Correlations . . . . .	36
3.	Significant Mean and Standard Deviation (SD) Differences in Estimated and Actual Time Spent in Job Functions of School Foodservice Directors in Oregon . . . . .	39
4.	Recommended Competencies for School Nutrition Program Personnel . . . . .	52
5.	Frequency and Estimated Time Allocations per Job Function for School Foodservice Directors . . . . .	58
6.	Demographic Questionnaire . . . . .	65
7.	Job Functions for School Foodservice Directors. . . . .	69
8.	Time Log Instructions and Example . . . . .	73
9.	Time Log. . . . .	74
10.	Mean Hours Spent in Job Functions per Five Day Week by School Foodservice Directors in Oregon. . . . .	75



Time Allocations to Job Functions of School  
Foodservice Directors in Oregon

INTRODUCTION

The director of a school foodservice operation assumes responsibility for the planning, organizing, directing and administration of the foodservice program. Van Egmond (1) identified important objectives for the director of a school foodservice including meeting the needs of students by serving quality, nutritious food and operating the foodservice program within budgetary guidelines. Some of the problems facing the school foodservice director are the increasing costs of labor and food accompanied by limited budgets. Students, parents and teachers are demanding quality in both food and service while administrators are seeking cost effectiveness in resource utilization. A plausible solution to this situation is more effective utilization of resources and increases in productivity.

The basic resources available to the school foodservice director are people, money and time. People can be hired, trained or transferred and money can be saved, borrowed or redistributed thus exhibiting the flexibility of these resources (2). However, time is an inflexible, irreplaceable resource that cannot be expanded or compressed. According to Marvin (3), once this resource is lost, it cannot be replaced. To use time more effectively, one first must know how time is presently being used.

For the past two decades, attention has been focused on productivity. Methods have been devised for explaining, measuring and

increasing this component of the work environment. There has been concern for the slowing of aggregate United States labor productivity growth as well as methods for measuring productivity within organizations (4). Adam, et al. (5) reported that two-thirds of the work force of the economy is employed in the labor intensive service sector which includes the foodservice industry. Adam, et al. (5) also stated that productivity measurement within the service sector is more difficult because of the intangible nature of services due to the lack of a product to be measured. Bowen (6) also affirmed that productivity measurement methods and studies are more prevalent in manufacturing industries and the average level of productivity is lower in services than in manufacturing.

Productivity may be defined as output per unit of input (7). Output is a measureable criterion such as units of a product or services rendered while input can be expressed in terms of time, money or other resources. The ratio resulting from output as the numerator and input as the denominator is the productivity ratio. Pope (8) stated that setting standards for performance is one of the most important ways to increase productivity.

Productivity measurement has occurred within the foodservice industry. Matthews (9) has reviewed productivity studies related to foodservice and stated that the comprehensive concept of productivity is in its beginning stages of research. Studies measuring labor productivity in hospital foodservices have been conducted by Klein (10) and Griesbaum (11). Other studies relating to productivity in foodservice include a work sampling method by Welch and Hockenberry (12) designed to increase employee efficiency, while

Chappell (13) utilized flow charts to identify time consuming activities to thus increase the productivity of foodservice workers.

Measurement of managerial productivity has been a complex task with much diversity among viewpoints. The management skills involved in business also apply to foodservice (1). Likewise, the same basic management principles are used in various foodservice operations: hospitals, restaurants and school foodservice (14). It is management who sets the work pace and attempts have been made to measure managerial productivity within the business sector (15, 16, 17). Bagley (18) has stressed the importance of effective management and the utilization of basic management techniques to obtain increases in productivity for workers in foodservice. However, research aimed at measuring managerial productivity in foodservice is scarce. Productivity data of dietitians occupying management positions have been combined with total labor hours for productivity determinations (10). David (19) has reviewed work measurement methods and stated the necessity for evaluating the effective use of management resources. The managerial position of public health nutritionists has also been the subject of productivity research (20, 21). However, documentation of specific methodology for productivity measurement was not included in published reports of these studies.

School foodservice is considered a major business which requires qualified management personnel. In 1980, the National School Lunch Program was the world's largest institutional feeding program with sales totaling close to ten billion dollars (22). The school foodservice director is a unique individual who must possess a myriad of skills to function effectively and serve the students, personnel and

governing school board. The role of the school foodservice director embodies a management level position, expertise in nutrition and foods, knowledge of quality food production and an endurance to interpret and comply with detailed federal rules and regulations (1).

Actual productivity research in the area of school foodservice is not abundant. Early studies, 1952-1958, involved observations of individual workers and continuous time studies determining labor time per meal (23, 24). More recent studies related to school foodservice include work sampling and flow charting (12, 13). However, specific studies involving school foodservice directors in productivity studies have not been recorded.

The purpose of this study is to develop a method to determine the time spent in common job functions of school foodservice directors. An outcome of the study is to provide an initial data base for the development of time standards. The establishment of job function time standards would allow quantifiable performance and time evaluations and ultimate productivity comparisons to be made. This would allow the school foodservice director to view how time is allocated to job functions and to provide bench marks for future comparisons. According to David (19), standard data resulting from work measurement studies can be a useful managerial aid.

The objectives of the study are: (1) identify time spent in job functions by school foodservice directors in Oregon, (2) identify a demographic profile of the school foodservice directors and (3) identify demographic variables affecting the allocation of time.

The hypothesis of this study is: no significant difference exists between the estimated time and actual time spent in common job functions of school foodservice directors.

## REVIEW OF LITERATURE

A search of the literature has identified five areas of study pertaining to this research. They are: (1) the effective management of time as a resource, (2) defining the concept of productivity, (3) methods to improve efficiency and increase productivity in foodservice, (4) managerial productivity in business and foodservice and (5) school foodservice.

### I. Time as a Resource

The importance of time as a resource and the need for effective time management has been reported in business and in foodservice (2, 3, 25, 26, 27). Drucker (25) suggested that time is the primary resource and effective management of time is necessary before other management functions can occur. Craig and Turner (2) perceived time as the most perishable resource since it cannot be stored, substituted or borrowed. Therefore, time lacks the flexibility of other resources such as people and money. Marvin (3) confirmed the perishable nature of time stating that once time is lost, it cannot be replaced. Lakein (26) stated that time is irreversible as well as irreplaceable and achieving control of time allows for personal flexibility and the accomplishment of tasks. Davis and Dahl (27) stated that time, as a resource, represents the ultimate energy crisis since it cannot be expanded or contracted.

To use time more effectively, it must first be determined how time is being used. Craig and Turner (2) stressed the importance in determining actually how time is spent and stated that estimates of

how time is spent are usually incorrect. To determine the actual use of time, Craig and Turner also suggested keeping a record of activities for a period of one to two weeks. Recording the amount of time spent in job categories would allow the identification of areas where time is wasted, thus needing corrective action. In a hospital-wide time management study, Davis and Dahl (27) collected random time observations with the objective of identifying and improving the use of the study participants' time. An estimate of time spent in specific job functions was initially obtained and compared with the actual time. The results identified significant differences between the estimated and actual use of time, indicating the participants did not have a clear picture of how time was being spent. Davis and Dahl also stated that the effective management of time is necessary before other effective management can occur.

In an executive time management study, Marvin (3) surveyed managers to identify how time is spent among the managerial functions of decision making, planning, organizing, delegating, staffing, implementing, evaluating, controlling and innovating. A time analysis worksheet was designed to allow the manager to increase effectiveness through the analysis of how time was spent. Marvin recorded the average percentage of time spent in management functions of the respondents to allow any manager to make comparisons with the work patterns of the survey respondents. Thompson (28) affirmed the need for using comparisons to measure time spent in job functions by stating that comparisons with pre-established time standards is the most effective method to evaluate time spent in job functions.

## II. Productivity: An Overview

The topic of productivity has been approached from many viewpoints and on many levels. Likewise, the definition of this popular topic has encompassed a wide variety of concepts ranging from production input and outputs to human resources and the efficient use of employee skills (29). Adam, et al. (5) gave a general definition of productivity as a concept dealing with the conversion of inputs to outputs. Ruch and Hershauer (7) said the simplest definition of productivity is output per unit of time or the ratio of output to input. McCarthy (4), dealing with national productivity, defined U.S. labor productivity as the ratio of the gross national product to labor hours employed. Sutermeister (30) and Sibson (31), emphasizing human resource management, defined productivity as the ratio of output to man hours.

Ruch and Hershauer (7) suggested a problem exists when using a simple definition of productivity. Ruch also stated that specific terms be used for output and input. For example, specifying output as a specific product or service rendered and a unit of time for input. In Ruch and Hershauer's opinion, it is unlikely that a universal definition of the term will ever emerge, therefore, the term should be used with appropriate modifiers conveying the intended meaning.

The fact that productivity growth has been declining during the past fifteen years has received attention in the literature (4, 6, 32). The rationale of why there has been a slowing trend varies with each of the following authors. McCarthy (4), focusing on U.S. labor productivity, attributed productivity decline during the 1970s



to a slow growth in the capital-labor ratio and the emergence of large numbers of young, inexperienced workers into the work force. Bowen (6), focusing on productivity within the private business sector, agreed with McCarthy, but suggested four additional factors that provide interacting influences believed to have adversely affected productivity growth since the middle 1960s. These factors are: (1) intersectoral shift--the movement of workers from farm to work areas with higher productivity, (2) shift to services--a greater increase in employment in services as compared to the increase in employment in manufacturing, (3) federal regulation--which increased rapidly during the late 1960s and (4) lack of growth in the economy--as identified by a declining rate of growth in the gross national product beginning in 1966.

Rockmore (32), compiling information from "preeminent experts" in business, government and education, stated four reasons why U.S. productivity growth is lagging. The reasons are: (1) American workers are not motivated by a strong work ethic, (2) American industry is paying a high cost for labor safety and protective environmental legislation, (3) inflation and tax laws that inhibit expansion, (4) lack of investment in improving technology and equipment and (5) shift to a service economy with sixty percent of the work force being employed in services.

Bowen (6) stated that the average level of productivity is lower in services than in the general economy, but warned not to look on the service sector as a single entity, but as an aggregate composed of many levels of productivity. Adam, et al. (5) and Rockmore (32) emphasized the difficulty in measuring productivity in the service

sector because of the lack of a product to be measured. Adam also stated that any attempt to measure productivity within the service sector should measure output as the number of services produced. However, for this to be accomplished, a unit of service must be established. Carpenter (33) stated that a unit of service should be the basic function or service within a department or organization.

### III. Productivity in Foodservice

The aim of a foodservice facility is the efficient and economical production and service of quality food. Because of increasing costs of food and labor, the efficiency of a foodservice should be measured (34). David (19) stated that work measurement is essential for increasing productivity in foodservice and defines work measurement as:

"...a method of establishing an equitable relationship between the amount of work performed (output) and the manpower (input) used to complete that work."

Production time standards derived from work measurement allows for productivity comparisons. Standards can improve productivity in foodservice by showing what is possible to achieve and encouraging improvement (8). There are various work measurement techniques that produce production time standards. These include: activity analysis, activity or work sampling and predetermined motion time.

Activity analysis involves the continuous observation of activities performed by individual workers (19). This technique was used by Heinemeyer and Ostenso (35) to determine if labor time in food production could be reduced by utilizing a central inventory control system.

The study involved continuous stop watch timing of six cooks in the process of assembling supplies and ingredients. The time and tasks involved were compared to the time and tasks utilizing a single employee issuing and delivering the supplies and ingredients from a central ingredient room. A significant amount of time was saved using the central ingredient room, indicating the use of a central inventory control system would allow more time for productive activities.

Activity or work sampling involves making randomly spaced, instantaneous observations of activities over a specific period of time (19). The activities are classified as direct labor, indirect labor or delay time with specific tasks defined and coded within each classification. Wise and Donaldson (34) utilized the technique of work sampling to analyze the work activities of seven hospital foodservice employees. The percentage of time the employees spent in nine categories of work was analyzed to provide information for more effective classification and scheduling of employees. Welch and Hockenberry (12) have provided a step-by-step method of work sampling. Definitions and examples of forms to collect data were included to identify how a work sampling procedure could be conducted in a foodservice facility. Yung, et al. (36) utilized work sampling in a study of nursing home foodservice personnel. The purpose of the study was to determine labor productivity by time spent in work and delay activities.

Predetermined motion time utilizes a system that identifies the basic motions used to accomplish work and describes the conditions under which the motions occur (9). A standard time value for the performance of each motion is the result of this work measurement

technique. The purpose of this technique is to establish a time frame for performing a specific task without actually performing the task. Therefore, a synthesis of time for the basic motions comprising the task is the result. Waldvogel and Ostenso (37) conducted a study comparing synthesized time values and stop watch studies of actual production items. The synthesized time values resulting from the study were identified as a valid and reliable indicator of time involved in food production.

It has been stated the concept of productivity in foodservice is in the beginning stages of research (9). Foodservice operations should establish standards of productivity based on past, as well as ideal, performance and work measurement must continue to determine progress and the achievement of objectives (19).

#### IV. Managerial Productivity

##### A. Business Sector

The measurement of managerial productivity has been a complex task with much diversity among viewpoints. The relevancy of using the term productivity when referring to management has been raised (31, 38). Sibson (31) states that the term productivity does not apply to management and the term "productiveness" is more appropriate. Deutsch (38) referring to the confusion arising when distinguishing between productivity and performance, states that the performance of chief executive officers and other top level managers should be measured. However, the distinction between productivity and performance for the professional and managerial positions filled by the educated white-collar employee is a "muddied shade of gray."

The dual use of the terms productivity and performance for measuring management effectiveness is further detected in the literature (16, 17, 39, 40). Referring to productivity as a measurement of management effectiveness, Conley (17) stated that using a management by objective program will influence managerial productivity. Kearney (16) suggested basing managerial productivity on behavioral rating scales, with behavior determined from a job analysis. Referring to performance as a measurement of management effectiveness, Kuin (39) suggested that management performance can be determined by the optimum use of resources available to management and the rate of growth in sales and profits. DeWitt (40) referred to measuring management performance by the effective management of revenues, expenditures and profits.

Robinette (41) stated that while subjective human relations skills will always be a point of evaluation for management personnel, objective measurements of the effectiveness of management are needed. Robinette further stated that using resource consumption criteria as a bases for evaluation will reinforce the importance of resource management.

## B. Foodservice Industry

By adopting increasingly sophisticated management techniques, the foodservice industry has advanced to one of the most important service industries in this country (42). Van Egmond (1) recognized that management skills involved in business also apply to the foodservice industry. Van Egmond also identified foodservice management responsibilities as:

"...planning, directing and controlling the foodservice in a sound financial manner and serving good, nutritious foods..."

The importance of evaluating the effective use of management has been reported in foodservice as well as in other businesses (43, 19). Drucker (43) suggested productivity measurements should include the utilization of managerial time. David (19) stated measurement is essential in the evaluation of the effective use of management resources.

Bagley (18) discussed productivity in the foodservice industry and stressed the sharpening of management techniques as a creative approach to increasing employee productivity. However, managerial productivity and effectiveness were not identified.

Foodservice management personnel have been included in work measurement studies (44, 45, 46). A work sampling technique was developed to classify and analyze the management activities of dietitians and food production managers (44). Management activities of college foodservice managers were classified in a study by Sanford and Cutlar (45). The results of this study showed each manager emphasized different categories of work. A work sampling study analyzing the activities of therapeutic dietitians showed time allocated to activities was similar for all study participants (46). While these studies do not involve actual productivity measurements, they are initial studies for developing standards.

Productivity measurement is described in two studies involving the middle management position of public health nutritionists (20, 21). These studies involved judgments made by the participants to the occupancy, effectiveness and efficiency of work performed.

## V. School Foodservice

Prior to national legislation, school lunch programs were financed by local organizations and governments with some federal assistance to defray labor costs (47). The National School Lunch Act of 1946 established the non-profit school lunch program with the purpose of safeguarding the health of the children of this country (1). Since 1946, school foodservice has grown to be the world's largest institutional feeding program serving over twenty-five million children per day (22).

The need for work measurement in school foodservice was recognized by Bryan (48) who stated the lack of procedures and standards as the cause of difficulties in handling school foodservice employees. Studies dating back to 1952 and 1958 involved observations of individual school foodservice workers and continuous time studies to determine labor time per meal (23, 24). These studies identified variations of time allocated to work categories as more prepared foods and modern equipment were introduced. More recent unpublished research on time measurement in school foodservice operations has been reviewed by David (19). These studies involved work sampling to determine man hour production rates and labor minutes per meal.

Articles have been written giving instructions on work sampling and flow charting as a means of achieving productivity increases in school foodservice (12, 13). Welch and Hockenberry (12) gave the school foodservice director a step-by-step work sampling method to measure employee efficiency stating that lower labor costs are a result of increasing efficiency. Chappell (13) outlined the steps

involved in flow process charting to enable the school foodservice director to evaluate work flow. She indicated such an evaluation can identify ways to make work more efficient thus increasing productivity.

Van Egmond (1) stated that a foodservice director must possess sound leadership abilities including planning, organizing, directing and administering the foodservice program in a school system. The school foodservice director must also take the responsibility to see that services are supplied in the most effective manner and be accountable for resources (49). Much has been written identifying the responsibilities and importance of the position of the school foodservice director. However, research studies involving this position are almost nonexistent. Prentiss (50) identified characteristics of school foodservice administrators as compared to commercial foodservice administrators. Additional research focusing on the school foodservice director's activities and time allocations have not been found in the literature.



## METHODOLOGY

This study was conducted to initiate a data base for ultimate productivity measurements for the position of school foodservice director. For this to be accomplished, a method to determine the time spent in common job functions had to be developed. Data collected for the study included: (1) estimation of time spent in common job functions, (2) actual time spent in common job functions and (3) demographic data. Providing the school foodservice director with data representing the amount of time allocated to job functions would allow quantifiable performance evaluations and a basis for determining productivity ratios.

A survey research design was selected to collect current information regarding the use of time in common job functions of individuals occupying the position of school foodservice director in the state of Oregon. It was intended that the information would provide data to plan and implement the use of time effectively in the work routine. Several criteria were formulated on which the design of the study was based. The first criterion was that the method to be developed to assess the time allocated to job functions by school foodservice directors be flexible to allow utilization by all school foodservice directors involved in the study, regardless of the job tasks involved in the position. The second criterion was to achieve a method that was simple in design. The final consideration was the amount of time required to administer the method be minimal to encourage completion.

## Research Instruments

The research instruments were developed for recording data of the estimated and actual amount of time the school foodservice director spent in job functions. Demographic information was requested to identify a descriptive profile of the responding foodservice directors. The research was divided into two phases: Part I requested information regarding the estimated time spent in job functions and demographic information, and Part II requested documentation of the actual time spent in job functions for a specific five day work week.

The initial phase, Part I, of the study was composed of two documents: a time estimation questionnaire, Table 5 (Appendix p. 58) and a demographic questionnaire, Table 6 (Appendix p. 65). Table 5 required an estimation of time allocated to fifteen specific job functions identified by the American School Food Service Association (51). The major categories of job functions were:

1. Personnel - included responsibilities describing the procurement, development and utilization of personnel
2. Labor Management - defined responsibilities applying effective labor management relations to the school foodservice operation
3. Budgeting and Financial Control - described responsibilities involved in the development and implementation of a budget and the collection of data and the preparation of financial reports

4. Federal, State, Local Governmental Regulations - defined responsibilities regarding the compliance with legislation affecting the school foodservice operation
5. Purchasing - defined responsibilities in the systematic procurement of food and non-food items for use in the school foodservice system
6. Receiving and Storage - defined responsibilities for developing and monitoring receiving, inventory control and warehousing
7. Distribution - included responsibilities defining the planning, evaluating and monitoring of a distribution system for food and non-food items
8. Food Production and Service - defined responsibilities of planning, assembly and service of food for the operation
9. Menu Planning - defined responsibilities involved in establishing and maintaining adequate nutrition through the planning of menus
10. Merchandising - involved the responsibilities of implementing systems to increase student interest for the promotion of the consumption of nutritious foods

11. Nutrition Education Programs - defined the responsibilities of setting program goals and objectives, evaluating the program and participating as a resource person in the program development
12. Facility Planning, Equipment Specification and Selection - defined responsibilities in the design and utilization of space, equipment specification and selection
13. Safety and Sanitation Standards - defined responsibilities for the establishment, monitoring and evaluation of safety and sanitation standards for personnel and the foodservice operation
14. Communications and Public Relations - defined responsibilities for the promotion and maintenance of communications and public relations within the school foodservice operation
15. Professional Research, Growth and Self Development - involved responsibilities for the maintenance of professional knowledge through participation in professional organizations, seminars and reading current research.

Two additional categories were added to account for miscellaneous office related tasks and time spent in activities that were not included in the categories identified by the American School Food Service Association. The additions were:

16. Office Related Tasks - involved responsibilities such as instructing assistants, incoming and outgoing telephone calls, and sorting, reading mail
17. Break and Personal Time - provided a category for the recording of time allocated to coffee and lunch breaks and time spent away from the office

The second document included in Part I of the study was a demographic questionnaire, Table 6 (Appendix p. 65). Information requested from the foodservice directors included: (1) number of years in foodservice profession, (2) number of years in present position, (3) availability of administrative assistance, (4) professional organization membership, (5) number of hours worked per five day week, (6) number of students in school district, (7) student participation and (8) education level.

The second phase, Part II, of the study was composed of two documents. Job Functions for School Foodservice Directors, Table 7 (Appendix p. 69) restated job functions listed in Table 5 (Appendix p. 58) to provide an aid to the school foodservice director in keeping a time record. The time record, identified as a time log, Table 9 (Appendix p. 74), was designed in three sections: (1) dividing the work day into one hour blocks, (2) recording of specific job function(s) accomplished during each one hour block and (3) recording the actual amount of time spent in each job function. An example of the time log and instructions for its use, Table 8 (Appendix p. 73), were included in the materials mailed to each school foodservice director.

### Pilot Study

A pilot study was conducted to determine if the design criteria had been achieved through the newly developed instruments. The pilot study participants were representative of school foodservice directors, each performing the job functions identified by the American School Food Service Association (51). The pilot study participants were not a part of the actual study but completed and provided written feedback of the instruments. Three school foodservice directors representing the school districts of Vancouver, Spokane and Battleground Washington participated in the pilot study. The state of Washington was chosen because of its close proximity to Oregon.

Responses from the participants indicated that the information requested in the demographic questionnaire (Table 6 p. 65) was applicable to the position of the school foodservice director and was clearly stated. A need was indicated for minor format changes in the form for estimating time allocated to job functions and in the time log for recording actual job functions. The suggested changes were incorporated and the forms were re-designed to allow more space in recording estimated and actual time spent in job functions. The respondents indicated that the directions for estimating and recording actual time spent in job functions were clearly stated and the amount of time involved in completing the requested forms was reasonable.

### Description of Population

The administrator or director of a school foodservice operation assumes responsibility for the planning, organizing, directing and administration of the foodservice program (1). All school foodservice administrators (N=68) in the state of Oregon were surveyed. Titles other than director were indicated for the administrative school foodservice personnel including supervisor of foodservices, lunch supervisor and lunch coordinator. However, the population was identified as administrative school foodservice personnel by the School Nutrition Program of the Oregon Department of Education. To maintain uniform terminology with the American School Food Service Association, all positions were referred to as director.

### Instrument Administration

The two phase research instruments were mailed to the population in two separate mailings. The first phase, mailed February 9, 1981, included: (1) a cover letter, (2) a consent form, (3) a reprint of the competencies for school foodservice directors identified by the American School Food Service Association (51), and (4) Part I of the research instrument. The cover letter (Appendix p. 50), constructed utilizing the method of Dillman (52), described the study, explained that participants could withdraw from the study if desired and insured confidentiality of responses. A consent form (Appendix p. 51) was enclosed in compliance with Oregon State University Committee for the Protection of Human Subjects. A reprint of Recommended Competencies for School Nutrition Program Personnel, Table 4

(Appendix p. 52) for the position of school foodservice director was included to familiarize the participant with the document from which the job functions listed in Part I of the instrument were taken. Part I was composed of two documents: (1) time allocation questionnaire, Table 5 (Appendix p. 58) requesting an estimation of time allocated to specific job functions and (2) demographic questionnaire, Table 6 (Appendix p. 65) requesting information for a descriptive profile of the respondents. A telephone follow-up was carried out on February 18, 1981 to determine if the mailing had been received, to answer questions regarding the instrument and to encourage a response. An identification number was assigned each respondent in the first phase of the study to assure anonymity of response. The identification number was placed on the returned time allocation questionnaire, demographic questionnaire and consent form.

The second phase, mailed February 28, 1981, was sent to the school foodservice directors who responded to the first phase. The second mailing included: (1) a cover letter, (2) an addendum to the demographic questionnaire and (3) Part II of the research instrument. The cover letter (Appendix p. 67) thanked the respondent for participation in the first phase of the study and described and encouraged the continuation of the second phase. An error in the wording of the response categories of three of the demographic questions necessitated an addendum to clarify the response (Appendix p. 68). Part II of the research instrument was composed of two documents: (1) Table 7, Job Functions for School Foodservice Directors (Appendix p. 69) enclosed as an aid in recording the time



log and (2) Table 9, Time Log (Appendix p. 74) for recording actual time spent in job functions for the five day week of March 9-13, 1981. An example of the time log and instructions for its use were also included, Table 8 (Appendix p. 73). A telephone follow-up was carried out on March 6, 1981 to determine if the mailing had been received, to answer questions and to encourage a response. Return of the time log was requested upon completion on the final day, March 13, 1981.

### Statistical Analysis

The estimated amount of time spent in job functions obtained from Table (Appendix p. 58) was computed in hours per week for comparison with the actual time recorded during the sample week in the time log, Table (Appendix p. 74). The computer program, Statistical Package for the Social Sciences (SPSS) (53), was used in the analysis of the data. Subprograms of SPSS provided distributional statistics of demographic items and correlations between demographic variables and differences in estimated and actual time spent in job functions. Data of the estimated and actual time spent in job functions by each respondent were paired. An additional subprogram computed the t values for each pair and the differences in the estimated amount of time spent in job functions and the actual time recorded in the time log were analyzed for significance at the .05 level.

## RESULTS AND DISCUSSION

Survey instruments were developed to determine the estimated and actual time spent in job functions of school foodservice directors. The two phase study was mailed to all sixty-eight school foodservice directors in Oregon. Data were collected identifying three specific areas relevant to the study: 1) demographic information, 2) estimation of time spent in job functions and 3) actual time spent in job functions. Demographic information and estimation of time spent in job functions composed Part I of the study. Demographic data were requested to identify a descriptive profile of the school foodservice directors surveyed. Data were collected regarding an estimation of time school foodservice directors allocated to job functions. A time log for recording the actual time allocated to job functions composed Part II of the study. The sample five day week was March 9-13, 1981. Data were analyzed from the school foodservice directors who returned both parts of the survey instruments which represented a fifty percent response (n=34).

### Descriptive Profile

The profile of the school foodservice directors identified from the demographic questionnaire (Appendix p. 65) has been compiled in Table 5 (p. 27). The total number of years spent in the foodservice profession was requested to identify the experience level of the school foodservice directors surveyed (Figure 1, p.30). The number of years spent in the foodservice profession ranged from four to thirty-five years with a mean of 16.3 years. Six percent of the respondents

Table 1

Demographic Profile of School Foodservice Directors in Oregon  
 Response Categories, Number of Respondents, Percentages and Means

Demographic Response Category	Respondents Number (n=34)	Respondents Percent (%)	Mean, Standard Deviation
<b>Total Years in Foodservice</b>			
4 years	2	6	16.3 ± 8.1
5-10 years	7	20	
11-15 years	6	18	
16-20 years	11	32	
21-25 years	2	6	
26-30 years	5	15	
> 30 years	1	3	
<b>Number of Years in Present Position</b>			
1- 5 years	20	59	7.1 ± 8.1
6-10 years	5	15	
11-15 years	2	6	
16-20 years	7	20	

Table 1 Continued

Demographic Response Category	Respondents Number (n=34)	Respondents Percent (%)	Mean, Standard Deviation
<b>Hours Worked per Five Day Week</b>			
38-40 hours	11	32	43.9 $\pm$ 4.2
41-45 hours	14	41	
46-49 hours	2	7	
> 50 hours	7	21	
<b>Student Population per District</b>			
630- 4,999 students	21	62	6173 $\pm$ 9009
5,000- 8,999 students	9	26	
9,000-12,999 students	2	6	
> 13,000 students	2	6	
<b>Student Participation per Day</b>			
0- 2,999 students	22	65	3662 $\pm$ 5995
3,000- 5,999 students	9	26	
6,000- 9,999 students	2	6	
> 10,000 students	1	3	

Table 1 Continued

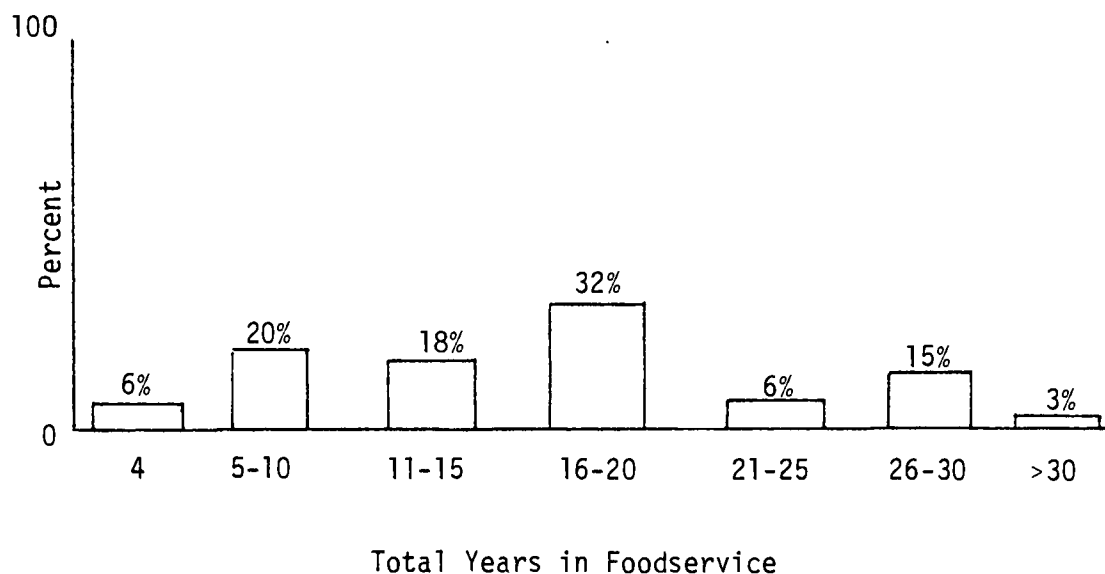
Demographic Response Category	Respondents Number (n=34)	Respondents Percent (%)	Mean, Standard Deviation
Availability of Administrative Assistance			
Yes	21	62	NA*
No	13	38	
Membership in Professional Organizations			
American School Food Service Association	23	68	NA
American School Food Service Association and American Dietetic Association	5	15	
None	6	17	
Education Level			
High School	18	53	NA
College Degree	16	47	

\* Not Applicable

had foodservice experience of four years while the range from five to ten years included twenty percent of the respondents. Eighteen percent had foodservice experience ranging from eleven to fifteen years. There were more school foodservice directors, thirty-two percent, with sixteen to twenty years experience in the foodservice profession. Only six percent of the respondents had foodservice experience ranging from twenty-one to twenty-five years. Three percent of the respondents had thirty-five years of foodservice experience.

Figure 1

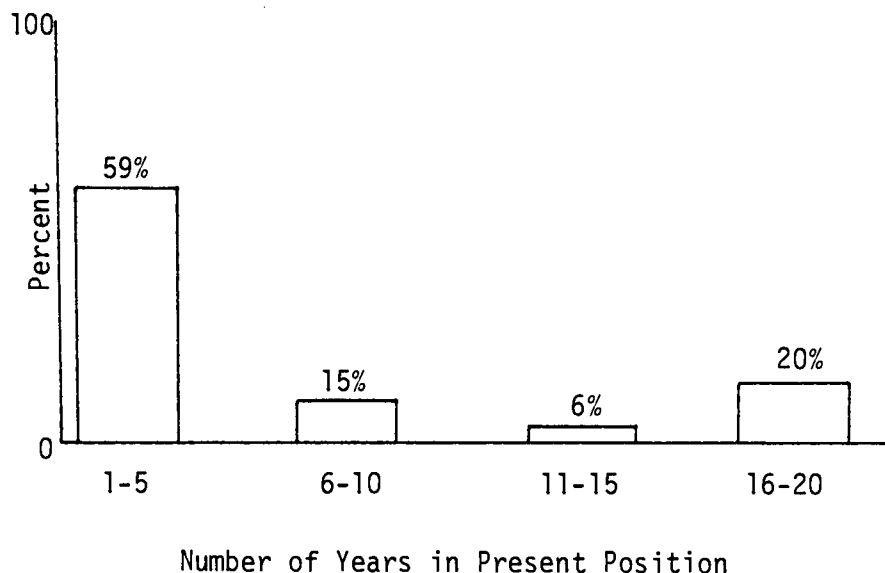
Percent Distribution of Respondents by Total  
Number of Years in Foodservice Profession



The number of years worked in the present position of school foodservice director was requested to determine the experience level within the position (Figure 2). There was a range from one to twenty years with a mean of 7.1 years for the number of years worked in the present position of school foodservice director. More than one-half of the respondents, fifty-nine percent, had been in the position five years or less. Approximately fifteen percent had been employed in the school foodservice position from six to ten years. Six percent of the respondents were employed in the position from eleven to fifteen years while twenty percent of the respondents had been in the position sixteen to twenty years.

Figure 2

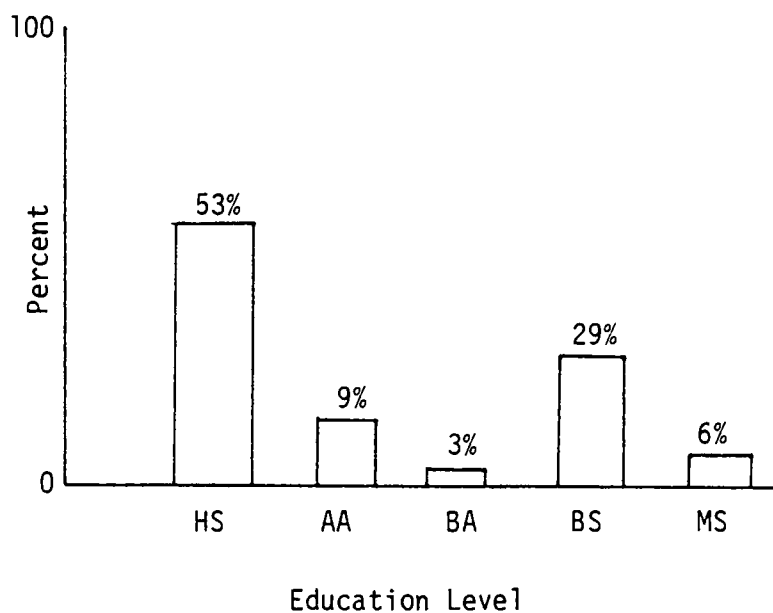
Percent Distribution of Respondents by  
Number of Years in Present Position



The educational level was relatively evenly distributed between high school education and college degree. Fifty-three percent of the responding school foodservice directors had a high school education while forty-seven percent had a college degree (Figure 3). Included in the college degree category were: associate arts degree, nine percent; bachelor of arts or bachelor of science degree, eighteen percent; master's degree, six percent. Fifteen percent of the directors had completed a dietetic internship.

Figure 3

Percent Distribution of Respondents by  
Education Level

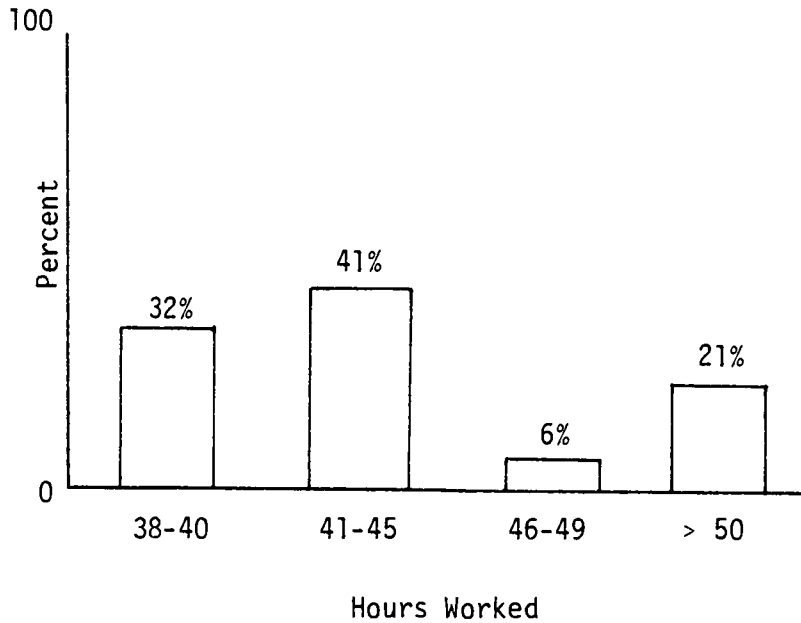




The number of hours worked per five day week was requested to determine the workspan of the school foodservice directors (Figure 4). The number of hours worked per five day week ranged from thirty-eight to fifty-three hours with a mean of 43.9 hours. Thirty-two percent of the respondents worked thirty-eight to forty hours per week, while forty-one percent worked from forty-one to forty-five hours per week. Only six percent worked from forty-six to forty-nine hours per week while twenty-one percent worked greater than fifty hours per week.

Figure 4

Percent Distribution of Respondents by  
Number of Hours Worked per Five Day Week



Information regarding the availability of administrative assistance was requested to determine if the management function of delegating was a part of the work routine of the school food-service director. Sixty-two percent of the respondents had administrative assistance available to them ranging from a few hours per day to eight hours per day. The assistance varied for each director and included positions such as clerk typist, bookkeeper, field specialist, warehouse and delivery assistance. The responding school foodservice directors with administrative assistance represented the school district with a mean district size of 7,766 students. The school foodservice director without administrative assistance represented the smaller school district with a mean district size of 3,230 students. The information requested regarding administrative assistance was in the form of an open ended question (Appendix p. 65) allowing the respondent to write in the type and amount of assistance available. The question should have been stated in a specific format that would allow a precise statement regarding the type and amount of administrative assistance.

Information regarding membership in a professional organization was requested to determine if the foodservice directors were involved in a program that offered professional growth. Sixty-eight percent of the respondents were members of the American School Food Service Association, the professional association representing school foodservice personnel. Fifteen percent of the respondents maintained membership in both American School Food Service Association and American Dietetic Association, the professional association

of dietetic practitioners. Seventeen percent of the respondents had no professional affiliation.

The student population of the school districts represented in the study varied greatly. The range was from 630 to 53,000 students in the school districts in Oregon. The mean district size was 6,173. Many of the school districts in Oregon are small. Thirty-five percent of the population of the state reside in twenty-nine counties while sixty-five percent of the population reside in eight counties (54).

The participation of students in the school lunch program varied over a wide range from 400 to 35,700 students per day. The mean student participation was 3,662. Based on the mean district size of 6,173 students, the mean participation rate for Oregon was fifty-nine percent, which is 1.8 percent lower than the national participation rate of 60.8 percent (22).

### Correlations

Correlations of  $\pm .5$  or greater were identified between demographic variables and job functions which exhibited a significant difference in the actual and estimated time. Three job functions exhibiting a significant difference with an  $r$  value of  $\pm .5$  or greater were: (1) Job Function 5C, bidding and purchasing, (2) Job Function 15A, participation in seminars, workshops, and (3) Job Function 16D, instructing assistants (Table 2 p. 36).

Education level was positively correlated with Job Function 5C, bidding and purchasing, with an  $r$  value of .54. As the education level of the school foodservice director increased, the

Table 2

Job Functions with Significant Differences  
and Independent Variable Correlations

Significant Job Functions	Independent Variable	Correlation r value*
5C Bidding and purchasing	Education level	.54
	Years in foodservice	-.58
15A Participate in seminars, workshops	Education level	.70
16D Instructing assistants	Education level	.51
	Number of days of administrative assistance	-.67

\* Significant at .05

difference between estimated and actual time spent in the job function increased. The director perceived more time spent in the job function than was recorded during the sample week and this misperception of time increased as the education level increased. Number of years in the foodservice profession was negatively correlated with Job Function 5C with an  $r$  value of  $-.58$ . As the years of experience in the foodservice profession increased, the difference between estimated and actual time spent in the job function decreased. This indicated that experience may have had some influence on the accuracy in estimating time spent in the job function.

For Job Function 15A, participation in seminars, workshops, a positive correlation was identified with education level with an  $r$  value of  $.70$ . As the education level increased, there was a greater difference between estimated and actual time spent in the job function. This could be explained by the fact the sample week fell prior to a state American School Food Service Association meeting. The estimate of time was recorded without any knowledge of when the sample week was to occur. The resulting underestimate of time allocated to the job function possibly occurred as the school foodservice director with a higher education level was involved in preparation for the state meeting.

Education level was positively correlated with Job Function 16D, instructing assistants, with an  $r$  value of  $.51$ . As the education level of the school foodservice director increased, the difference between the estimated and actual time spent instructing assistants also increased. This indicated that education level of the director possibly had little if any effect on estimating time

spent in the job function. The director perceived more time spent instructing assistants than actually occurred during the sample week. The number of days of administrative assistance was negatively correlated with Job Function 16D with an  $r$  value of  $-.67$ . As the number of days of administrative assistance increased, the difference between the estimated and actual time spent instructing assistants decreased. This indicated the availability of administrative assistance could have had some influence on the accuracy in estimating time spent in the job function.

#### Paired t Analysis

Job functions were analyzed using paired  $t$  analysis to determine if the difference in the estimated amount of time spent in job functions and the actual time recorded in the time log was significant. Of the sixty-one job functions surveyed, forty-nine did not show a significant  $t$  value indicating the school foodservice directors in this study accurately plan their time to complete job functions. The remaining twelve job functions had a mean difference resulting in  $t$  values significant at the  $.05$  level (Table 3 p. 39).

Six of the twelve job functions exhibiting a level of significance related to the competencies of school foodservice directors as defined by the American School Food Service Association (51) and displayed in Table 4, (Appendix p. 52). The job functions with significant differences were: (1) Job Function 3A, prepare required financial reports, (2) Job Function 5C, participate in bidding and purchasing, (3) Job Function 6A, develop and/or monitor receiving procedures for quality and quantity control, (4) Job Function 8A,

Table 3

Significant Mean and Standard Deviation (SD) Differences  
in Estimated and Actual Time Spent in Job Functions of  
School Foodservice Directors in Oregon

Job Function	Estimate Mean SD (Hours/Week)	Actual Mean SD (Hours/Week)
3A Prepare financial reports	5.25 ± 3.88	3.01 ± 2.11*
5C Bidding and purchasing	3.10 ± 3.34	.96 ± .71*
6A Monitor receiving for quality/quantity control	2.08 ± 1.61	.87 ± .49*
8A Monitor food production standards	4.95 ± 3.66	2.54 ± 3.18*
8B Monitor system for control of food production	3.26 ± 2.08	.64 ± .39*
15A Participate in seminars, workshops	1.09 ± .69	4.63 ± 2.95*
16A Incoming phone calls	5.47 ± 3.21	2.01 ± 1.01*
16B Outgoing phone calls	3.79 ± 2.22	1.43 ± .79*
16C Sorting, opening, reading mail	2.38 ± 1.14	1.33 ± .63*
16D Instructing assistants	3.23 ± 1.25	.73 ± .54*
17A Coffee break	1.67 ± .72	1.23 ± .74*
17B Lunch break	3.21 ± 1.37	2.59 ± 1.05*

\*Significant at .05

establish and/or monitor standards for quality food production, (5) Job Function 8B, monitor delivery schedule efficiency, and (6) Job Function 15A, participate in seminars, workshops.

Job Function 3A, preparing required financial reports, contained observations from fifty-six percent of the survey respondents. The estimated amount of time spent in the job function was greater than the actual amount of time recorded, with statistical significance at the .05 level. Participating in bidding and purchasing of items, Job Function 5C, contained observations from fifty-six percent of the respondents. The estimated time spent in the job function was greater than the actual time recorded and was significant at the .05 level. Job Function 6A, monitoring receiving procedures, contained observations from fifteen percent of the respondents. The estimated amount of time was greater than the actual time spent in the job function and was statistically significant at the .05 level. For Job Function 8A, monitoring standards for quality food production, the estimated amount of time was greater than the actual time and was statistically significant at the .05 level with a fifty percent response. Monitoring a system for control of quality and quantity food production, Job Function 8B, contained observations from twenty-four percent of the respondents. The estimate of time spent in the job function was greater than the actual time with significance at the .05 level. Job Function 15A, participation in seminars, workshops, contained observations from forty-four percent of the respondents. In this case, the estimated time spent in the job function was less than the actual time spent with significance at the .05 level. This underestimation could be attributed to the fact that



the spring, 1981 meeting of the Oregon School Food Service Association was held for two days following the end of the sample week. Many of the directors were involved in preparations for the meeting during the sample week, resulting in more time spent in Job Function 15C.

The remaining six job functions of the twelve that exhibited significant t value differences consisted of routine office tasks and functions common to the on-going daily operation. These were: (1) Job Function 16A, incoming telephone calls, (2) Job Function 16B, out-going telephone calls, (3) Job Function 16C, sorting, opening, reading mail, (4) Job Function 16D, instructing assistants, (5) Job Function 17A, coffee break, and (6) Job Function 17B, lunch break (Table 3 p. 39).

Job Function 16A, incoming telephone calls, contained observations from seventy-one percent of the respondents with significance at the .05 level. Job Function 16B, out-going telephone calls, contained observations from sixty-five percent of the respondents with significance at the .05 level. The estimated time spent in these two job functions was greater than the actual time recorded. Sorting, opening, reading mail, Job Function 16C, contained observations from sixty-two percent of the survey respondents. The estimation of the amount of time spent in the job function was greater than the actual time with significance at the .05 level. Job Function 16D, instructing assistants, contained observations from thirty-five percent of the survey respondents. The estimation of the amount of time spent in the job function was greater than the actual time recorded and was significant at the .05 level. Two job functions concerning break

and personal time exhibited significant results at the .05 level. Job Function 17A, coffee break, contained observations from fifty percent of the survey respondents while Job Function 17B, lunch break, had an eighty-two percent response. Both estimates were greater than the actual amount of time recorded in the job function. A compilation of the mean time spent in all sixty-one job functions is exhibited in Table 10 (Appendix p. 75).

### Study Outcomes

There were three major outcomes from this study. First, a method to record time allocated to job functions and identify a demographic profile of school foodservice directors was developed. Second, an initial data base of time allocated to job functions of school foodservice directors was established. The establishment of job function time standards, obtained by additional time data gathered from further research, would allow the school foodservice director to make quantifiable time and performance evaluations. Third, the results of this study indicated time estimates could be used instead of recorded time for identifying time allocated to job functions. However, this outcome would need to be supported by additional studies.

The results of this study allow for the acceptance of the hypothesis that there is no significant difference between the estimated time and actual time spent in common job functions of school foodservice directors in Oregon.

## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

A survey of all school foodservice directors in Oregon was conducted to determine time allocated to common job functions. An outcome of the study was to provide an initial data base for the development of time standards. A demographic profile was identified and demographic variables affecting the allocation of time were examined. Fifty percent of the school foodservice directors surveyed participated in the study.

### Summary

A demographic profile identified the school foodservice directors in Oregon as having sixteen years of experience in the foodservice profession with seven years in the present position. More school foodservice directors (sixty-two percent) had some form of administrative assistance and eighty-three percent of the directors belonged to a professional organization. Fifty-three percent of the foodservice directors had a high school education while forty-seven percent had a college degree. The mean district size was 6,173 students and mean student participation was 3,662.

Demographic variables correlating with significant differences (.05) in the estimated and actual time spent in job functions were: (1) education level, (2) number of years in the foodservice profession and (3) number of days of administrative assistance. An increase in the education level of school foodservice directors in Oregon had no apparent effect on how time was perceived and actually allocated to job functions. The number of years in the foodservice

profession and number of days of administrative assistance had a positive effect on the perception and actual allocation of time to job functions of the respondents.

There were no significant differences in the estimated and actual amount of time spent in job functions for forty-nine of the sixty-one job functions surveyed. The results indicated the perception of the amount of time spent in job functions parallels the actual time school foodservice directors spent in job functions. Of the twelve job functions with a significant difference in estimated and actual time spent in the job function, eleven were overestimates. The responding school foodservice directors perceived the amount of time spent in these job functions as greater than the actual time recorded. Only one job function, 15A, participation in seminars, workshops, involved an underestimate of the time spent in the job function as compared to the actual time recorded in the time log.

### Conclusions

A survey of all school foodservice directors in Oregon (N=68) yielded a fifty percent response (n=34). The perception of the amount of time the respondents spent in job functions paralleled the actual time recorded in a time log. This indicated the school foodservice directors in this study accurately planned their time to complete job functions.

Correlations were identified between demographic variables and job functions which exhibited a significant difference in the actual and estimated time spent in the job function. Significant differences

in job functions correlated with three demographic variables: (1) education level, (2) number of years in foodservice profession, and (3) number of days of administrative assistance.

The above conclusions were based on results identified from this study of school foodservice directors in Oregon. Generalizations were not made to school foodservice directors outside this study.

### Recommendations

A data base of time allocated to job functions would provide time standards necessary for quantifiable time and performance evaluations and ultimate productivity determinations for the position of school foodservice director. Therefore, additional research to gather data to establish input time standards should continue. Further studies should be pursued to collect additional time data and establish time standards. The method developed for estimating and recording actual time spent in job functions could be adapted for other school foodservice positions identified by the American School Food Service Association. This would enable the school foodservice director to quantitatively evaluate the use of time of other school foodservice employees. Studies expanding to include other states, then regional studies and ultimately a national level study would allow any school foodservice director in the nation the opportunity to compare individual use of time against a national standard.

## Bibliography

1. VanEgmond, D.: School Foodservice. Westport, Conn.: AVI Publishing Co., 1974.
2. Craig, R.J. and Turner, W.C.: How can foodservice supervisors get more accomplished. School Food Service Journal 30(7):68, 1976.
3. Marvin, P.: Executive Time Management. New York: AMACOM, 1980.
4. McCarthy, M.D.: The U.S. productivity growth recession: history and prospects for the future. J. of Finance 33(3): 977, 1978.
5. Adam, E.A., Hershauer, J.D. and Ruch, W.A.: Measuring the Quality Dimension of Service Productivity. National Science Foundation Grant #APR-76-076140, University of Missouri-Columbia and Arizona State University-Tempe, 1978.
6. Bowen, W.: Better prospects for our ailing productivity. Fortune 100(11):68, 1979.
7. Ruch, W.A. and Hershauer, J.D.: Factors Affecting Worker Productivity. Tempe, Arizona: Bureau of Business and Economic Research, 1974.
8. Pope, J.J.: Utilization - prerequisite to increasing productivity. In Wilkinson, J., ed.: Increasing Productivity in Foodservice. Boston: Cahners Publishing Co., 1973.
9. Matthews, M.D.: Productivity studies reviewed, trends analyzed. Hospitals 49(24):81, 1975.
10. Klein, C.: A Technique for Measurement in Missouri Hospital Dietetic Departments. Unpublished Master's thesis, University of Missouri, 1978.
11. Griesbaum, J.L.: Labor Productivity Measurement in Missouri Hospital Dietetic Departments. Unpublished Master's thesis, University of Missouri, 1979.
12. Welch, J.M. and Hockenberry, G.: Everything you always wanted to know about work sampling. School Food Service Journal 29(1):71, 1975.
13. Chappell, V.W.: Work productivity: getting the most for the time. School Food Service Journal 29(1):61, 1975.

14. West, B., Wood, L., Harger, V. and Shugart, G.: Food Service in Institutions. New York: John Wiley and Sons, 1977.
15. Kelly, J.H.: Productivity is something that should be audited. *The Office* 79:98, 1974.
16. Kearney, W.J.: Management development programs can pay off. *Business Horizons* 18:81, 1975.
17. Conley, W.D. and Miller, F.W.: MBO, pay and productivity. *Personnel* 50:21, 1973.
18. Bagley, R.L.: Increasing productivity in the foodservice industry. *School Food Service Journal* 31(7):114, 1977.
19. David, B.D.: Work measurement in foodservice operations. *School Foodservice Research Review* 2(1):5, 1978.
20. Dahl, T.: Economics, management and public health nutritionists. *J. Am. Diet. A.* 70:144, 1977.
21. Vermeersch, J.A., Feeney, M.J., Wesner, K.M. and Dahl, T.: Productivity improvement and job satisfaction among public health nutritionists. *J. Am. Dietet. A.* 75:637, 1979.
22. What the country really thinks about school foodservice. *Food Management* 15(7):44, 1980.
23. Kroener, V. and Donaldson, B.: Labor time in Type A school lunch programs in Wisconsin. *J. Home Econ.* 50:451, 1958.
24. Eifler, A.G. and Harris, K.W.: A comparative study of labor costs in three school cafeterias. *J. Home Econ.* 44:430, 1952.
25. Drucker, P.F.: How to be an effective executive. *Nation's Business* 49(4):34, 1961.
26. Lakein, A.: *How to Get Control of Your Time and Your Life.* New York: Peter H. Wyden, Inc., 1973.
27. Davis, S. and Dahl, T.: Time management in a hospital environment: a case study. *Mount Sinai J. Med.* 43:491, 1976.
28. Thompson, L.E.: How's it going? Evaluating job performance and productivity. *Cooking for Profit* 353:5, 1980.
29. Byrne, R.S.: Sources on productivity. *Harvard Business Review* 59(5):36, 1981.
30. Sutermeister, R.A.: *People and Productivity.* New York: McGraw-Hill, 1969.

31. Sibson, R.E.: Increasing Employee Productivity. New York: AMACOM, 1976.
32. Rockmore, M.: Why U.S. lags: a symposium by the experts. Parade 11(25):31, 1979.
33. Carpenter, W.W.: Developing a unit of service to measure productivity. Hospital Financial Management 32:14, 1978.
34. Wise, B.I. and Donaldson, B.: Work sampling in the dietary department. J. Am. Dietet. A. 39:327, 1961.
35. Heinemeyer, J.M. and Ostenso, G.L.: Food production materials handling. J. Am. Dietet. A. 52:490, 1968.
36. Yung, L.S., Matthews, M.E., Johnson, V.K. and Johnson, N.E.: Productivity in foodservice systems in fourteen nursing homes. J. Am. Dietet. A. 77:159, 1980.
37. Waldvogel, C.F. and Ostenso, G.L.: Quantity food production labor time. J. Am. Dietet. A. 70:172, 1977.
38. Deutsch, C.H.: Productivity: the difficulty of even defining the problem. Business Week 2640:52, 1980.
39. Kuin, P.: Management performance in business and public administration. Academy of Management J. 11:371, 1968.
40. DeWitt, F.: Measuring management performance. Management Accounting 54:18, 1972.
41. Robinette, T.K.: Effective middle management in an era of cost controls. Hospitals 51:56, 1977.
42. Axler, B.H.: Foodservice: A Managerial Approach. Indiana: D.C. Heath and Co., 1979.
43. Drucker, P.: Management-Tasks, Responsibilities, Practice. New York: Harper and Row, 1974.
44. Johnson, V.K.: Responsibilities of Food Production Managers Performing at the Middle Management Level. Unpublished Ph.D. thesis, University of Wisconsin, 1960.
45. Sanford, J. and Cutlar, K.: Work sampling of activities of foodservice managers. J. Am. Dietet. A. 44:182, 1964.
46. Noland, M.S. and Steinberg, R.: Activities of therapeutic dietitians - a survey report. J. Am. Dietet. A. 46:477, 1965.
47. La Chance, P.S.: U.S. school foodservice: problems and prospects. School Foodservice Research Review 2(2):73, 1978.



48. Bryan, M.: The School Cafeteria. New York: F.S. Crofts & Co., 1936.
49. AFSA, forecasts school foodservice in the 80's. Food Management 15(1):50, 1980.
50. Prentiss, B.R.: Selected public school food service and commercial administrators: personal attributes, management characteristics and scope of position. School Food Service Research Review 3(2):90, 1979.
51. Recommended Competencies for School Nutrition Program Personnel. Denver: American School Food Service Association, 1978.
52. Dillman, D.A.: Mail and Telephone Surveys: The Total Design Method. New York: John Wiley and Sons, 1978.
53. Nie, N.H., Hull, C.J., Jenkins, J.G., Steinbrenner, K. and Bent, D.H.: Statistical Package for the Social Sciences. Second Edition, New York: McGraw-Hill, 1975.
54. Metro area, county, city data listed by states. Sales Marketing Management 127(2):c-1, 1981.

## APPENDIX

School of  
Home Economics



Corvallis, Oregon 97331 (503) 754-3551

February 9, 1981

We are conducting a study this winter to determine how school foodservice directors in Oregon are focusing their time. The increasing costs of labor and food accompanied by limited budgets are some of the problems facing the school foodservice director today. Therefore, we are interested in the time demands that are imposed upon you. All school foodservice directors in the state are being surveyed and since this is a relatively small number, your contribution will be extremely valuable.

All responses will be treated with total confidentiality. Your name will not appear on any of the returning information or in the published results. A summary of the study results will be made available to enable you to see where school foodservice directors, as a group, are focusing their time. Please indicate your interest in obtaining the results on the consent form on the following page.

The study consists of two parts including a consent form. Part I is a questionnaire to be completed and returned with the consent form in the stamped, self-addressed envelope provided by February 20, 1981. Upon the return of this information, Part II will be sent for you to complete. If you have any questions regarding this study, please call the Department of Institution Management at 754-3101.

Thank you for your assistance.

Sincerely,

*Ann M. Messersmith*  
Ann M. Messersmith, Ph.D., R.D.  
Associate Professor and  
Head, Institution Management

*Suzanne R. Curtis*  
Suzanne R. Curtis  
Graduate Teaching Assistant  
Institution Management

/pal  
Enclosures

School of  
Home Economics



Corvallis, Oregon 97331 (503) 754-3551

Research Study  
Department of Institution Management

CONSENT FORM

I, \_\_\_\_\_, give my consent to participate in a research study in the Department of Institution Management at Oregon State University. I understand that the study is to examine how School Foodservice Directors use their time and the results will be made available to me upon completion of the study. I realize that my participation is voluntary and that I may withdraw from the study at any time. I understand that any questions which may arise will be answered by the researchers.

\_\_\_\_\_  
Participant

\_\_\_\_\_  
Date

Please send me a summary of the study results.

Table 4

**Recommended Competencies for  
School Nutrition  
Program Personnel**

**American School Food Service Association  
Denver, Colorado  
1978**

Table 4 Continued

## Foodservice Director I and II

### Job Summary

A person who plans, organizes, directs, and administers a school foodservice and nutrition information program for a school district. Basic responsibilities include program planning, resource allocation, designing of foodservice facilities, administration of the foodservice system, consultation and advisement to school district officials, and active participation in a program of nutrition information for students.

### Job Functions

1. Implements a program for continuous professional growth and self-development.
2. Implements and evaluates sanitation standards and system for control of microbiological infection among personnel and for quality food preparation, foodservice, and facility maintenance.
3. Implements and evaluates safety standards and a system for upholding such standards in facility design, and in the purchase, use, and maintenance of equipment.
4. Prepares and implements a system for food production, integrating available human and facilitating resources.
5. Plans and evaluates a system for the assembly and serving of food.
6. Plans and evaluates a system for the distribution of food, nonfood items, and supplies.
7. Establishes a system of food sales and merchandising.
8. Implements a program providing foodservice for special school-related and community activities and occasions.
9. Establishes a system for the procurement of all food and nonfood materials.
10. Establishes a system for the receiving, storage, and allocation of food and nonfood materials.
11. Assists in the development of and implements a system of budgeting and financial control.
12. Establishes the organizational framework necessary for achieving program goals and objectives.
13. Assumes responsibility for a program of personnel procurement, development, and utilization.
14. Applies effective labor-management relations to the foodservice operation.
15. Administers and directs the total foodservice/school nutrition programs of a school district.
16. Provides leadership to individual school foodservice units within the district by setting up procedures and priorities for their effective functioning.
17. Evaluates and determines the effectiveness of individual school foodservice units in order to achieve program goals and objectives.
18. Establishes effective working relationships as a member of the administrative team among all departments within the school district.
19. Promotes and maintains an effective communications and public relations program.
20. Participates in facility planning, equipment specification, and selection.
21. Establishes and maintains a program to ensure adequate nutrition for all consumers, including special feeding programs.
22. Provides leadership in the development and implementation of nutrition education programs.
23. Directs program activities in compliance with federal/state/local governmental regulations.
24. Initiates foodservice management research, innovative programs, and technological advances.

### Job Function 1

Implements a program for continuous professional growth and self-development.

Competencies required to carry out job function 1:

- A. Initiates plan for continuing self-development and education.
- B. Assumes active roles in professional organizations.
- C. Adapts to the changing roles and functions of the school foodservice director.
- D. Evaluates current research data and applies that which is relevant.
- E. Participates periodically in seminars and workshops and enrolls in courses offered at institutions of higher learning.

### Job Function 2

Implements and evaluates sanitation standards and system for control of microbiological infection among personnel and for quality food preparation, foodservice, and facility maintenance.

Competencies required to carry out job function 2:

- A. Establishes sanitation standards for personnel, equipment, and facilities to comply with federal, state, and local health and restaurant codes.
- B. Develops and approves basic procedures used in the cleaning of work areas, utensils, and equipment to maintain sanitary conditions.
- C. Maintains and evaluates a system of cleaning and sanitizing for all food preparation and service functions.
- D. Establishes and maintains an effective insect and rodent control system.
- E. Establishes and maintains a system of garbage and refuse disposal, floor maintenance, and storage and handling of cleaning supplies.
- F. Ensures that principles of sanitation and safety are observed in food handling, storage of raw and cooked foods, and storage of nonedible materials.
- G. Establishes and evaluates personal standards of grooming including dress, appearance, cleanliness, and habits.
- H. Establishes an on-going training program to keep employees informed of rules, regulations, and procedures relating to sanitary food systems for quality food production and service.

### Job Function 3

Implements and evaluates safety standards and a system for upholding such standards in facility de-

Table 4 Continued

sign, and in the purchase, use, and maintenance of equipment.

Competencies required to carry out job function 3:

- A. Implements safety rules established by federal (OSHA), state, and local governmental agencies that apply to school foodservice operations.
- B. Establishes safety standards for local school foodservice units.
- C. Establishes and evaluates safety systems used in operation, cleaning, and care of equipment.
- D. Assists in the design of facilities incorporating safety standards, proper selection and layout of equipment, and designation of materials.
- E. Specifies equipment needs, taking into consideration all safety requirements.
- F. Establishes an accident reporting system.
- G. Establishes rules to be followed following an accident.
- H. Provides first aid and safety courses for employees.

#### Job Function 4

Prepares and implements a system for food production, integrating available human and facilitating resources.

Competencies required to carry out job function 4:

- A. Establishes criteria and standards for quality food products.
- B. Establishes a system for standardization of recipes to control quality and yield.
- C. Selects and implements types of production and service systems best suited to the district's needs within budget limitation.
- D. Establishes a production system to produce the menu and other food products selected.
- E. Determines tasks to be performed and establishes procedures based upon time and motion study principles.
- F. Evaluates production procedures periodically and revises as necessary.
- G. Assesses employee capability and performance to ensure optimum production and efficiency.
- H. Assesses equipment utilization to assure maximum production and schedule.
- I. Sets work standards and prepares a plan to measure productivity.

#### Job Function 5

Plans and evaluates a system for the assembly and serving of food.

Competencies required to carry out job function 5:

- A. Establishes serving methods and procedures.
- B. Selects serving equipment and prepares layout for serving area.
- C. Selects portion control utensils and defines portion sizes.
- D. Sets standards for the attractive service of appetizing food to clientele.

#### Job Function 6

Plans and evaluates a system for distribution of food, nonfood items, and supplies.

Competencies required to carry out job function 6:

- A. Develops a system of transport appropriate for the district's selected production and ser-

vice system

- B. Selects transport equipment and vehicles.
- C. Reviews delivery schedules based upon time, temperature, and efficient use of labor.

#### Job Function 7

Establishes a system of food sales and merchandising.

Competencies required to carry out job function 7:

- A. Implements merchandising programs that coordinate foods offered with classroom activity, i.e., ethnic, social, and health studies.
- B. Develops and provides "point-of-sale" materials to increase interest and consumption of nutritious foods.
- C. Provides school foodservice personnel with training sufficient to ensure their capability in merchandising and marketing nutritionally sound and client-acceptable items.
- D. Establishes food sales procedures that ensure prompt, courteous, and efficient service to clients.
- E. Evaluates on a continuing basis food consumption in school foodservice operations to determine the effectiveness of food sales/merchandising efforts.
- F. Uses available resources to plan effective and efficient food sales and merchandising programs.

#### Job Function 8

Implements a program providing foodservice for special school-related and community activities and occasions.

Competencies required to carry out job function 8:

- A. Serves as initial contact between the community and school foodservices.
- B. Schedules and coordinates special activities for optimum cooperation between school and community.
- C. Delegates responsibility for preparation and service of special activities.
- D. Evaluates activities through observation, written reports, and community acceptance.

#### Job Function 9

Establishes a system for the procurement of all food and nonfood materials.

Competencies required to carry out job function 9:

- A. Samples and compares products currently available for value, quality, and appropriateness for school use.
- B. Develops specifications for foods and nonfood materials most appropriate to the foodservice system.
- C. Determines quantities necessary to meet adequate production needs.
- D. Participates in the bidding and purchasing process of the school district.

#### Job Function 10

Establishes a system for the receiving, storage, and allocation of food and nonfood materials.

Competencies required to carry out job function 10:

- A. Develops receiving procedures for quality and quantity control.
- B. Establishes a control procedure for perpetual

Table 4 Continued

- and physical inventory.
- C. Develops and provides for proper warehousing and storage of dry, refrigerated, and frozen materials.
  - D. Prepares a procedure for ordering, receiving, and invoicing of products for individual school units.
  - E. Implements the system of delivery of all items to individual school units.

**Job Function 11**

Assists in the development of and implements a system of budgeting and financial control.

Competencies required to carry out job function 11:

- A. Establishes procedures for the maintenance of records.
- B. Collects data and prepares profit and loss balance sheet and required financial reports.
- C. Calculates food costs, labor costs, and operating and overhead costs within an established fiscal framework.
- D. Prepares departmental budget and recommendations for future expenditures.

**Job Function 12**

Establishes the organizational framework necessary for achieving program goals and objectives.

Competencies required to carry out job function 12:

- A. Defines personnel positions and establishes interrelationships between positions.
- B. Delegates supervision of production and service personnel to a staff of assistants and/or unit managers.
- C. Establishes lines of communication for effective departmental operation.
- D. Develops a coordinated system of record-keeping and reporting.

**Job Function 13**

Assumes responsibility for a program of personnel procurement, development, and utilization.

Competencies required to carry out job function 13:

- A. Prepares job descriptions and establishes staffing requirements.
- B. Participates in the procurement of departmental personnel.
- C. Selects and assigns personnel to meet staffing requirements and provides positive working and growth experiences.
- D. Establishes personnel orientation procedures.
- E. Provides for employee training and professional growth at all levels.
- F. Develops a career ladder for the advancement of employees within the system.
- G. Assists in the development of salary schedules and fringe benefits.
- H. Directs preparation of departmental payroll.
- I. Evaluates utilization of labor and staff and recommends necessary adjustments.
- J. Evaluates office and managerial staff and reviews all other employee evaluations.

**Job Function 14**

Applies effective labor-management relations to the foodservice operation.

Competencies required to carry out job function 14:

- A. Accepts management responsibilities as de-

lined in labor contracts.

- B. Cooperates with representatives of organized employee bargaining groups.
- C. Provides data concerning foodservice employees to the management bargaining team.
- D. Evaluates cause and effect of bargaining proposals.
- E. Assumes responsibility for the education of all management personnel in terms of contract and grievance procedures.
- F. Understands and participates in arbitration proceedings.

**Job Function 15**

Administers and directs the total foodservice/school nutrition programs of a school district.

Competencies required to carry out job function 15:

- A. Determines and evaluates available resources.
- B. Sets short-term and long-term goals for the foodservice program.
- C. Relates the departmental goals to the philosophy and policies set by the governing board.
- D. Analyzes the operation of sub-units in relation to the over-all goals of the program.
- E. Prepares goal-oriented objectives complete with time lines for achievement.
- F. Identifies and resolves operational problems as they occur.
- G. Collects data, evaluates alternative solutions, and makes necessary decisions.
- H. Utilizes, where possible, data processing to assist in making management decisions and in controlling and forecasting.

**Job Function 16**

Provides leadership to individual school foodservice units within the district by setting up procedures and priorities for their effective functioning.

Competencies required to carry out job function 16:

- A. Identifies priority needs within the school foodservice program, and develops procedures and/or recommends necessary policy changes to meet such needs.
- B. Communicates operational/administrative procedures and their purposes to school foodservice personnel.
- C. Evaluates the effectiveness of defined procedures to determine their validity and consistency.
- D. Obtains periodic reactions from school foodservice personnel regarding the relevancy of procedures to program effectiveness and efficiency.
- E. Communicates school foodservice program procedural decisions to members of the administrative team of the local school unit.
- F. Develops a professional, business-like climate and identifies roles needed for local school staff.

**Job Function 17**

Evaluates and determines the effectiveness of individual school foodservice units in order to achieve program goals and objectives.

Competencies required to carry out job function 17:

- A. Establishes criteria for evaluation of individual school foodservice units.
- B. Communicates evaluation criteria to person-



Table 4 Continued

- nel whose foodservice programs will be evaluated.
- C. Develops and publishes the evaluation schedule for the following year.
  - D. Identifies or develops necessary records and evaluation instruments.
  - E. Conducts evaluations of individual school foodservice units using sound evaluation techniques.
  - F. Communicates evaluation results to the personnel of the individual school foodservice unit affected.
  - G. Prepares and implements recommendations for the improvement of individual school foodservice unit operations, based upon evaluation results.
  - H. Develops evaluation reports that are distributed to other members of the administrative team.

**Job Function 18**

Establishes effective working relationships as a member of the administrative team among all departments within the school district.

Competencies required to carry out job function 18:

- A. Apprises other administrative team members of school foodservice department goals and objectives.
- B. Provides other administrative team members with periodic reports indicating school foodservice program status, needs, and future directions.
- C. Works closely with curriculum specialists to ensure that a nutrition education program is defined and implemented.
- D. Obtains necessary support from administrative team members to plan and implement an on-going professional growth program for the district's school foodservice personnel.
- E. Establishes and maintains mutually satisfactory business practices with members of the administrative team responsible for purchasing, fiscal control, and payroll.
- F. Develops procedures to facilitate cooperative interaction with maintenance department.
- G. Cooperates with personnel department to assure availability of qualified persons to fill foodservice positions.
- H. Demonstrates ability to support program goals and objectives of other administrative team members.

**Job Function 19**

Promotes and maintains an effective communication and public relations program.

Competencies required to carry out job function 19:

- A. Establishes within the school foodservice department the means and opportunities for personnel to communicate concerns, needs, and accomplishments.
- B. Relates periodically to other administrative team members the concerns, needs, and accomplishments of district school foodservice personnel.
- C. Seeks active involvement of students in the planning and implementation of foodservice program components directly affecting them, e.g., Youth Advisory Councils considering

- menu planning and nutrition education.
- D. Involves parents in the implementation of a nutritionally sound school foodservice program.
- E. Instructs school foodservice personnel to develop and maintain positive working relationships with district teachers and administrators.
- F. Maintains regular contact with local media to apprise them of school foodservice progress with emphasis upon individual accomplishments.
- G. Demonstrates knowledge of public relations resources and techniques available through governmental agencies and professional organizations.

**Job Function 20**

Participates in facility planning, equipment specification, and selection.

Competencies required to carry out job function 20:

- A. Assists with planning the utilization of space for a foodservice unit according to menu production systems.
- B. Determines tasks to be performed and selects required equipment.
- C. Establishes work flow and assists in the design of the work centers.
- D. Prepares layout to provide efficient flow of foods and materials through the facility.
- E. Writes equipment specifications for purchase of required equipment.
- F. Assists in the selection of materials and finishes in the foodservice facility.
- G. Provides for equipment maintenance and repair.
- H. Provides justification for the renovation of existing school foodservice facilities and/or the replacement of obsolete equipment.

**Job Function 21**

Establishes and maintains a program to ensure adequate nutrition for all consumers, including special feeding programs.

Competencies required to carry out job function 21:

- A. Plans nutritionally adequate menus in compliance with current program constraints.
- B. Identifies consumer profiles and uses as data to plan acceptable menus.
- C. Selects foods for optimum nutritional value.
- D. Identifies preparation procedures that preserve maximum nutritional value.
- E. Initiates programs and activities to stimulate interest and increase participation in school feeding programs.
- F. Establishes standards for quality food preparation and its aesthetic presentation to clientele.

**Job Function 22**

Provides leadership in the development and implementation of nutrition education programs.

Competencies required to carry out job function 22:

- A. Uses knowledge of human growth and development to plan nutrition education programs.
- B. Cooperates with instructional staff in devel-

Table 4 Continued

- oping nutrition education curriculum and materials.
- C. Reviews and selects scientifically valid nutrition information for use in educational programs.
- D. Serves as a resource person for and assists in presentation of nutrition programs.
- E. Provides for the use of the school feeding programs as learning laboratories for nutrition education.
- F. Uses the menu as a tool for nutrition education.
- G. Provides staff and supplies to support the program.
- H. Evaluates the effectiveness of nutrition education.

**Job Function 23**

Directs program activities in compliance with federal/state/local governmental regulations.

Competencies required to carry out job function 23:

- A. Complies with federal/state/local legislation that directly affects district school foodservice operations.
- B. Reviews school foodservice program operations as required by changes in federal/state and local regulations.
- C. Communicates to other administrative team members information pertaining to federal and state regulations governing school foodservice operations.
- D. Informs school foodservice department personnel on a regular basis of federal/state/local

regulations as they affect program operations.

- E. Maintains an effective working relationship with the director and staff members of the state department agency responsible for school foodservice program administration.
- F. Cooperates with federal agencies and personnel responsible for the administration and review of district foodservice programs.
- G. Informs local/state/federal personnel, concerned with school foodservice programs, of needs to alter policies affecting said programs in order to improve them.

**Job Function 24**

Initiates foodservice management research, innovative programs, and technological advances.

Competencies required to carry out job function 24:

- A. Subscribes to and reads current trade, technical, and professional publications.
- B. Establishes a reference library for school foodservice.
- C. Implements innovative programs and procedures.
- D. Apprises district foodservice personnel of current management research and innovative program and technological advances.
- E. Encourages staff to contribute research information and innovative ideas.
- F. Apprises district and local school staff and foodservice personnel of changes and innovations to be introduced.

Table 5

FREQUENCY AND ESTIMATED TIME ALLOCATIONS PER  
JOB FUNCTION FOR SCHOOL FOODSERVICE DIRECTORS

Check (✓) the appropriate frequency and estimate the amount of time spent in each job function.

JOB FUNCTION	FREQUENCY						ESTIMATE
	Not applicable	Daily	Weekly	Monthly	Yearly	Other, specify	Estimated time
1. PERSONNEL							
A. Prepare and/or revise job descriptions							
B. Establish and/or revise staffing requirements							
C. Participate in personnel selection							
D. Participate in personnel orientation							
E. Provide employee training and professional growth							
F. Direct preparation of payroll							
G. Evaluate personnel							
2. LABOR MANAGEMENT							
A. Participate in bargaining/arbitration proceedings							
B. Provide labor related information concerning food-service employees							
C. Evaluate bargaining proposals							

Table 5 Continued

JOB FUNCTION	FREQUENCY						ESTIMATE
	Not applicable	Daily	Weekly	Monthly	Yearly	Other, specify	Estimated time
3. BUDGETING AND FINANCIAL CONTROL							
A. Prepare required financial reports							
B. Calculate food costs, labor costs, operating costs							
C. Plan and prepare budget							
4. FEDERAL/STATE/LOCAL GOVERNMENTAL REGULATIONS							
A. Compliance with federal legislation that directly affects district school foodservice operations							
B. Compliance with state legislation that directly affects district school foodservice operations							
C. Compliance with local legislation that directly affects district school foodservice operations							
5. PURCHASING							
A. Evaluate quality and value of current products available for school use							
B. Determine quantities appropriate for needs							
C. Participate in bidding and purchasing of quality items							

Table 5 Continued

JOB FUNCTION	FREQUENCY						ESTIMATE
	Not applicable	Daily	Weekly	Monthly	Yearly	Other, specify	Estimated time
6. RECEIVING AND STORAGE							
A. Develop and/or monitor receiving procedures for quality and quantity control							
B. Develop and/or maintain control procedures for perpetual and physical inventory							
7. DISTRIBUTION							
A. Develop and/or monitor delivery system to accommodate production and service							
B. Monitor delivery schedule efficiency as to length of time, temperature of food items, efficient use of labor and vehicles							
8. FOOD PRODUCTION AND SERVICE							
A. Establish and/or monitor standards for quality food production							
B. Establish and/or monitor a system for control of quality and quantity food production							
C. Evaluate production procedures for effectiveness							
D. Set and/or monitor work standards							
E. Set and/or monitor standards for attractive service of food							

Table 5 Continued

JOB FUNCTION	FREQUENCY						ESTIMATE
	Not applicable	Daily	Weekly	Monthly	Yearly	Other, specify	Estimated time
<p>9. MENU PLANNING AND PARTICIPATION</p> <p>A. Plan nutritionally adequate menus with regard to consumer need</p>							
<p>10. MERCHANDISING AND FOOD SALES</p> <p>A. Develop and/or provide materials to increase interest and consumption of nutritious food</p>							
<p>B. Train school foodservice personnel in merchandising techniques</p>							
<p>C. Establish and/or evaluate food sales system to enable prompt, courteous efficient service</p>							
<p>11. NUTRITION EDUCATION PROGRAMS</p> <p>A. Set nutrition education program goals</p>							
<p>B. Set objectives for achieving goals</p>							
<p>C. Collect information and evaluate existing programs</p>							
<p>D. Participate as resource person in developing nutrition education materials</p>							

Table 5 Continued

JOB FUNCTION	FREQUENCY						ESTIMATE
	Not applicable	Daily	Weekly	Monthly	Yearly	Other, specify	Estimated time
12. FACILITY PLANNING, EQUIPMENT SPECIFICATION AND SELECTION							
A. Design work centers and pattern work flow							
B. Pattern efficient foods and materials flow							
C. Prepare equipment specifications							
D. Select equipment							
E. Provide for equipment maintenance and repair							
13. SAFETY AND SANITATION STANDARDS							
A. Establish and evaluate safety standards for equipment, personnel, food and facility							
B. Participate in accident reporting							
C. Provide first aid and safety programs for employees							
D. Set sanitation standards for personnel, equipment, food preparation, foodservice and facilities							
E. Monitor sanitation standards							
F. Provide training programs in sanitation procedures for employees							

Table 5 Continued

JOB FUNCTION	FREQUENCY						ESTIMATE
	Not applicable	Daily	Weekly	Monthly	Yearly	Other, specify	Estimated time
14. COMMUNICATIONS AND PUBLIC RELATIONS							
A. Establish and/or maintain communication lines within the foodservice department							
B. Seek student involvement in applicable activities, i.e., menu planning, etc.							
C. Seek parent involvement in applicable activities, i.e., menu planning							
D. Develop positive relations with non-foodservice personnel							
15. PROFESSIONAL RESEARCH, GROWTH AND SELF DEVELOPMENT							
A. Participate in seminars, workshops							
B. Participate in professional organizations							
C. Read current research							
16. OFFICE RELATED TASKS							
A. Incoming phone calls							
B. Outgoing phone calls							
C. Sorting, opening, reading mail							
D. Instructing assistants							



Table 5 Continued

JOB FUNCTION	FREQUENCY						ESTIMATE
	Not applicable	Daily	Weekly	Monthly	Yearly	Other, specify	Estimated time
17. BREAK/PERSONAL TIME							
A. Coffee break							
B. Lunch break							
C. Away from office other than school business							
D. Restroom break							

## Table 6

## DEMOGRAPHIC QUESTIONNAIRE

COMPLETE OR CHECK THE APPROPRIATE RESPONSE

1. How many years have you worked in the foodservice profession?
  - A. One year to less than three years
  - B. Three years to less than five years
  - C. Five years to less than ten years
  - D. More than ten years
  - E. Other; Number of years \_\_\_\_\_
  
2. How many years have you worked in your present position?
  - A. Six months to less than one year
  - B. One year to less than three years
  - C. Three years to less than five years
  - D. Five years to ten years
  - E. Other; Number of years \_\_\_\_\_
  
3. If administrative assistance is available to you on a routine basis, please identify the assistance and amount of time worked (example: clerical help - 4 hours, 5 days/week).  
\_\_\_\_\_
  
4. Do you belong to any professional organizations related to your position?
  - Yes
  - No
  
5. If yes to question 4, please identify.
  - A. American School Food Service Association
  - B. American Dietetic Association
  - C. Other (identify) \_\_\_\_\_

## Table 6 Continued

6. What is the average number of hours worked per five day week?

\_\_\_\_\_

7. What is the number of students in your school district?

\_\_\_\_\_

8. How many persons participate in the total school foodservice program?

\_\_\_\_\_ Students

\_\_\_\_\_ Faculty and staff

9. What is your highest level of education?

\_\_\_\_\_ A. High School

\_\_\_\_\_ B. College University Degree

\_\_\_\_\_ Associate Arts

\_\_\_\_\_ Bachelor of Arts

\_\_\_\_\_ Bachelor of Science

\_\_\_\_\_ Other

\_\_\_\_\_ C. Masters Degree

\_\_\_\_\_ D. Other (identify) \_\_\_\_\_

School of  
Home Economics



Corvallis, Oregon 97331 (503) 754-3551

Thank you for your response to Part I of our study. Your participation is greatly appreciated and your input will be beneficial in determining how Oregon school foodservice directors focus their time.

Part II of the study is enclosed and consists of:

1. Table 3 - Job Functions For School Foodservice Directors, a summary of the job functions identified in Part I.
2. Table 4 - Time Log for Job Functions--for recording activities for five consecutive days, Monday, March 9-Friday, March 13, 1981.

This final phase of the study involves an accounting of your time using the provided Time Log for Job Functions. The enclosed example will clarify how the form is to be completed. The dates on the Time Log, March 9 - 13, 1981 must be identical for all school foodservice directors participating in Part II of the study.

The enclosed yellow sheet is a revision of several questions asked in Part I of the study. Details are included and it will require only a minute of your time to complete.

Please return the completed Time Log for Job Functions for the five-day time period and the yellow sheet in the enclosed stamped envelope upon completion, Friday, March 13, 1981.

Your contribution as an Oregon school foodservice director is extremely valuable to our study. Thank you for your assistance.

Sincerely,

Ann M. Messersmith, Ph.D., R.D.  
Associate Professor and  
Head, Institution Management

Suzanne R. Curtis  
Graduate Teaching Assistant  
Institution Management

/bd  
Enclosure

## QUESTIONNAIRE ADDENDUM

Because of a problem arising from the statistical interpretation of the data, it is necessary to ask you to give more specific answers to three (3) questions found in Table 2.

Example:

If you have worked in the foodservice profession for 20 years, your present position for 10 years and completed high school and attended one year of college, your response would be:

1. Number of years experience in foodservice

20

2. Number of years experience in your present position

10

3. Highest level of education in years (check degree held)

13     High School diploma  
 College degree  
 Masters degree  
 Other, Identify \_\_\_\_\_

Please indicate the appropriate number of years in the spaces provided.

1. Number of years experience in foodservice

\_\_\_\_\_

2. Number of years experience in your present position

\_\_\_\_\_

3. Highest level of education in years (check degree held)

\_\_\_\_\_     High School diploma  
 College degree  
 Masters degree  
 Other, Identify \_\_\_\_\_

Table 7

JOB FUNCTIONS FOR SCHOOL  
FOODSERVICE DIRECTORS

The following is a listing of the job functions for use in completing the Time Log (Table 4).

JOB FUNCTIONS

## 1. PERSONNEL

- A. Prepare and/or revise job descriptions
- B. Establish and/or revise staffing requirements
- C. Participate in personnel selection
- D. Participate in personnel orientation
- E. Provide employee training and professional growth
- F. Direct preparation of payroll
- G. Evaluate personnel
- H. Other

## 2. LABOR MANAGEMENT

- A. Participate in bargaining/arbitration proceedings
- B. Provide labor related information concerning food-service employees
- C. Evaluate bargaining proposals
- D. Other

## 3. BUDGETING AND FINANCIAL CONTROL

- A. Prepare required financial reports
- B. Calculate food costs, labor costs, operating costs
- C. Plan and prepare budget
- D. Other

## 4. FEDERAL, STATE, LOCAL GOVERNMENTAL REGULATIONS

- A. Compliance with federal legislation that directly affects district school foodservice operations
- B. Compliance with state legislation that directly affects district school foodservice operations
- C. Compliance with local legislation that directly affects district school foodservice operations
- D. Other

Table 7 Continued

5. PURCHASING
  - A. Evaluate quality and value of current products available for school use
  - B. Determine quantities appropriate for needs
  - C. Participate in bidding and purchasing of items
  - D. Other
  
6. RECEIVING AND STORAGE
  - A. Develop and/or monitor receiving procedures for quality and quantity control
  - B. Develop and/or monitor control procedures for perpetual and physical inventory
  - C. Other
  
7. DISTRIBUTION
  - A. Develop and/or monitor delivery system to accommodate production and service
  - B. Monitor delivery schedule efficiency as to length of time, temperature of food items, efficient use of labor and vehicles
  - C. Other
  
8. FOOD PRODUCTION AND SERVICE
  - A. Establish and/or monitor standards for quality food production
  - B. Establish and/or monitor a system for control of quality and quantity food production and service
  - C. Evaluate production procedures for effectiveness
  - D. Set and/or monitor work standards
  - E. Set and/or monitor standards for attractive service of food
  - F. Other
  
9. MENU PLANNING
  - A. Plan nutritionally adequate menus with regard to consumer needs
  - B. Other

Table 7 Continued

10. MERCHANDISING
  - A. Develop and/or provide materials to increase interest and consumption of nutritious food
  - B. Train school foodservice personnel in merchandising techniques
  - C. Establish and/or evaluate food sales system to enable prompt, courteous, efficient service
  - D. Other
  
11. NUTRITION EDUCATION PROGRAMS
  - A. Set nutrition education program goals
  - B. Set objectives for achieving goals
  - C. Collect information and evaluate existing program
  - D. Participate as resource person in developing nutrition education materials
  - E. Other
  
12. FACILITY PLANNING, EQUIPMENT SPECIFICATION AND SELECTION
  - A. Design work centers and pattern work flow
  - B. Pattern efficient foods and materials flow
  - C. Prepare equipment specifications
  - D. Selection of equipment
  - E. Provide for equipment maintenance and repair
  - F. Other
  
13. SAFETY AND SANITATION STANDARDS
  - A. Establish and evaluate safety standards for equipment, personnel, food and facility
  - B. Participate in accident reporting
  - C. Provide first aid and safety programs for employees
  - D. Set sanitation standards for personnel, equipment, food preparation, foodservice and facilities
  - E. Monitor sanitation standards
  - F. Provide training programs in sanitation procedures
  - G. Other
  
14. COMMUNICATIONS AND PUBLIC RELATIONS
  - A. Establish and/or maintain communication lines within the foodservice department
  - B. Seek student involvement in applicable activities
  - C. Seek parent involvement in applicable activities
  - D. Develop positive relations with non-foodservice personnel
  - E. Contact with local media concerning district school foodservice
  - F. Other



## Table 7 Continued

## 15. PROFESSIONAL GROWTH AND SELF DEVELOPMENT

- A. Participate in seminars, workshops
- B. Participate in professional organizations
- C. Read current research
- D. Other

## 16. OFFICE RELATED TASKS

- A. Incoming phone calls
- B. Outgoing phone calls
- C. Sorting, opening, reading mail
- D. Instructing assistants

## 17. BREAK/PERSONAL TIME

- A. Coffee break
- B. Lunch break
- C. Away from office other than school business
- D. Restroom break

## 18. OTHER, SPECIFY USE OF TIME IF OTHER THAN ABOVE CATEGORIES

TABLE 8 - TIME LOG - INSTRUCTIONS:

Using the job function categories as listed in Table 3, complete the Time Log, Table 4, for the date listed. Within each hour interval, the actual time is to total 60 minutes.

TABLE 4

## TIME LOG FOR JOB FUNCTIONS

DATE: \_\_\_\_\_

EXAMPLE

TIME	JOB FUNCTION	ACTUAL TIME IN MINUTES
7:00 8:00	Work on budget 2-C	60 min
8:00 9:00	Work on budget 2-C	60 "
9:00	Coffee Break 17-A	15 min
10:00	Incoming Phone call 16-A	10 min
	BUDGET 2-C	35 min
10:00	Rest. Break 17-D	10 min
11:00	Open-read mail 16-C	35 min
	Drive to Spring School 18	15 min
11:00 12:00	Monitor Lunch Production 8-A	60 min
12:00	Monitor lunch Production 8-A	30 min
1:00	lunch Break 17-B	30 min
1:00	Lunch Break 17-B	30 min
2:00	Plan menu 9-A	30 min
2:00	Incoming Call 16-A	10 min
3:00	Plan Menu 9-A	50 min
3:00	Plan menu 9-A	45 min
4:00	Coffee Break 17-A	15 min
4:00	Rest. Break 17-D	5 min
5:00	Work in Washhouse 6-A	55 min

Table 9  
TIME LOG FOR JOB FUNCTIONS

DATE: \_\_\_\_\_

TIME	JOB FUNCTION	ACTUAL TIME IN MINUTES
8:00 9:00		
9:00 10:00		
10:00 11:00		
11:00 12:00		
12:00 1:00		
1:00 2:00		
2:00 3:00		
3:00 4:00		
4:00 5:00		

Table 10

MEAN HOURS SPENT IN JOB FUNCTIONS PER FIVE DAY WEEK  
BY SCHOOL FOODSERVICE DIRECTORS IN OREGON

Job Function	Mean Time (hours)
1. <u>Personnel</u>	
A. Prepare and/or revise job descriptions	.17
B. Establish and/or revise staffing requirements	.36
C. Participate in personnel selection	.49
D. Participate in personnel orientation	.30
E. Provide employee training and professional growth	3.18
F. Direct preparation of payroll	1.49
G. Evaluate personnel	.77
2. <u>Labor Management</u>	
A. Participate in bargaining/arbitration proceedings	N/R
B. Provide labor related information concerning foodservice employees	.94
C. Evaluate bargaining proposals	N/R
3. <u>Budgeting and Financial Control</u>	
A. Prepare required financial reports	3.01
B. Calculate food costs, labor costs, operating costs	2.64
C. Plan and prepare budget	1.98
4. <u>Federal/State/Local Governmental Regulations</u>	
A. Compliance with federal legislation that directly affects district school foodservice operations	1.36
B. Compliance with state legislation that directly affects district school foodservice operations	1.90
C. Compliance with local legislation that directly affects district school foodservice operations	2.94
5. <u>Purchasing</u>	
A. Evaluate quality and value of current products available for school use	1.33
B. Determine quantities appropriate for needs	1.45
C. Participate in bidding and purchasing of quality items	.96
6. <u>Receiving and Storage</u>	
A. Develop and/or monitor receiving procedures for quality and quantity control	.87
B. Develop and/or maintain control procedures for perpetual and physical inventory	1.51

N/R = No Response

Table 10 Continued

Job Function	Mean Time (hours)
<u>7. Distribution</u>	
A. Develop and/or monitor delivery system to accommodate production and service	.76
B. Monitor delivery schedule efficiency as to length of time, temperature of food items, efficient use of labor and vehicles	.62
<u>8. Food Production and Service</u>	
A. Establish and/or monitor standards for quality food production	2.54
B. Establish and/or monitor a system for control of quality and quantity food production	.64
C. Evaluate production procedures for effectiveness	1.30
D. Set and/or monitor work standards	1.24
E. Set and/or monitor standards for attractive service of food	.89
<u>9. Menu Planning and Participation</u>	
A. Plan nutritionally adequate menus with regard to consumer need	2.43
<u>10. Merchandising and Food Sales</u>	
A. Develop and/or provide materials to increase interest and consumption of nutritious food	.43
B. Train school foodservice personnel in merchandising techniques	.50
C. Establish and/or evaluate food sales system to enable prompt, courteous efficient service	.32
<u>11. Nutrition Education Programs</u>	
A. Set nutrition education program goals	.33
B. Set objectives for achieving goals	.38
C. Collect information and evaluate existing programs	.63
D. Participate as resource person in developing education materials	1.21
<u>12. Facility Planning, Equipment Specification and Selection</u>	
A. Design work centers and pattern work flow	2.92
B. Pattern efficient foods and materials flow	N/R
C. Prepare equipment specifications	N/R
D. Select equipment	1.18
E. Provide for equipment maintenance and repair	.60

N/R = No Response

Table 10 Continued

Job Function	Mean Time (hours)
<u>13. Safety and Sanitation Standards</u>	
A. Establish and evaluate safety standards for equipment, personnel, food and facility	.58
B. Participate in accident reporting	1.16
C. Provide first aid and safety programs for employees	.25
D. Set sanitation standards for personnel, equipment, food preparation, foodservice and facilities	N/R
E. Monitor sanitation standards	.16
F. Provide training programs in sanitation procedures for employees	.25
<u>14. Communications and Public Relations</u>	
A. Establish and/or maintain communication lines within the foodservice department	1.77
B. Seek student involvement in applicable activities, i.e., menu planning, etc.	1.25
C. Seek parent involvement in applicable activities, i.e., menu planning	2.08
D. Develop positive relations with non-foodservice personnel	1.73
<u>15. Professional Research, Growth and Self Development</u>	
A. Participate in seminars, workshops	4.63
B. Participate in professional organizations	4.54
C. Read current research	.76
<u>16. Office Related Tasks</u>	
A. Incoming phone calls	2.01
B. Outgoing phone calls	1.43
C. Sorting, opening, reading mail	1.33
D. Instructing assistants	.73
<u>17. Break/Personal Time</u>	
A. Coffee break	1.23
B. Lunch break	2.60
C. Away from office other than school business	2.53
D. Restroom break	.37

N/R = No Response