

A FOOD PRODUCTION MANAGEMENT IN-BASKET TEST

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INTRODUCTION

Problems of management and decision making have become increasingly complicated with the growth of large-scale food establishments, multi-feeding operations, and extensive product selection. Over one-fourth of the food sold in the United States is eaten away from home, thus creating an industry needing more personnel at all levels.

The food service industry currently is faced with a critical shortage of managers and supervisors, according to Beck (1970), yet college enrollment of institution management majors is lower than 10 years ago. Increasing demands for management personnel have caused educators to evaluate the education of individuals for effective managerial performance. Food service management requires a high degree of managerial ability and many recent graduates have expressed the feeling of having too much theory and not enough opportunity for practical application of knowledge (Miller, 1962).

Educators realize improvement in teaching food service administration at the university level is needed according to a survey conducted by Food Executive (1968). Daniels and McCullough (1962) recognized the need to develop persons with management skills and recommended five abilities needed to carry out management functions. The graduate should be able to:

1. Look at food service operation objectively.
2. Make decisions that will be useful and productive.
3. Use verbal, written, and visual tools for communication.

4. Direct personnel that includes delegation of responsibility and subsequent follow-through.
5. Apply technical knowledge effectively.

Opportunity for management development and decision making is not always possible in a laboratory setting in a college or university. One method that can be used to strengthen, supplement, and provide laboratory experience is simulation.

Greenlaw et al. (1962) defined business simulation as a sequenced decision-making exercise structured around a model of a business operation in which participants assume the role of managing the simulated operation. Although sophisticated forms of simulation have developed within the last 20 years, the basic concept has been used for centuries. War games are the oldest on record; business games have been used in recent years to teach management development in higher education. Management games have been used for individual study in institution management at several universities.

The in-basket has been gaining in acceptance as a simulation technique. Lopez (1968) defined the in-basket exercise essentially as a model, a simulation of reality. As a model, its utility lies in the fact that it is a dynamic representation of reality moving through a telescoped time sequence. The in-basket presents a participant with a hypothetical work situation in which a written course of action must be taken on several letters, memos, and papers found in the incoming mail. Decision making is based on the ability to analyze the work situation. The in-basket exercise has been used for assessment, education, training,

and testing. In-basket tests have been developed to fit specific backgrounds or needs, but these are not interchangeable.

The purpose of this study was to develop an in-basket test for possible use as a pre- and post-test for an undergraduate institution management course in Food Production Management. Test items were based on work experience and production problems applicable to a simulated residence hall food service.

REVIEW OF LITERATURE

Preparation of Students in Institution Management

Preparation for the role of food service administrator has changed, according to Robinson (1965), because of increased labor costs, differences in food production processes, and new management techniques. The administrator must have knowledge and skill in planning for effective and efficient operation, in setting realistic objectives, and in developing policies to implement attainment of goals. Dietitians not only must establish and maintain high standards of quality and satisfaction in food production and service, but must be experts in business management.

Adjustment for graduates from an academic situation to a position of managerial responsibility is difficult, according to Miller (1960), but curriculum development of technical and management skills could improve this transition.

Undergraduate Curriculum. Modern-day educational theorists have defined curriculum, according to Dressel (1963), as all experiences of the learner that are controlled by the school. King (1966) stated the chief function the college performs is the curriculum. If a student is to master the significant concepts of a field, stated Kreutz (1969), the curriculum must be organized in such a way that learning is efficient and effective.

Present curriculums in institution management are being evaluated, according to Miller (1960), to insure that qualified professional personnel are provided for the future. Miller further added that subject matter basic to careers in food service management must include managerial and technical skills. For undergraduate curriculums in food service administration, Moore (1968) advocated specialization because of the expansion of knowledge and the complexity of functions in the profession. She also believed that education should stress development of fundamental skills such as problem solving, analysis, evaluation, and understanding of basic principles. Donaldson (1965) thought problem-orientated teaching on theoretical concepts and principles should be emphasized. Opportunity for solving problem situations, according to Atkinson (1953), could help the student think for himself. Students must be guided in developing their capabilities to their fullest potential.

An extensive study by Miller (1960) revealed that certain inadequacies in academic preparation for management were due to insufficient coverage rather than omission.

Problems and needs within a profession change constantly. Effective education should provide students with a kind of knowledge and attitude of mind that gives facility and flexibility to meet the needs of tomorrow, according to Mongeon (1964). What to teach is regarded a value judgment by Kreutz (1969).

Although an attempt is made to teach practical application of principles in a college curriculum, according to Bonnell (1962), there is little time set aside for this practice. Students must do more independent work so they can think in terms of actual food service institutions and how to handle their problems. Classroom lectures may be supplemented, according to Baskin (1965), by simulation methods such as case study, role playing, or in-basket technique to develop the students' skill in understanding problem solving and decision making. Alexander (1963) agreed that simulation techniques have been effective methods for teaching food service administration. Weatherford (1960) believed the use of simulation technique led to creative thinking which generated expressiveness, inspiration, and responsiveness. The case approach, according to Merry (1962), has great value in teaching because it adds dimensions to the generalizations and principles of theory.

Many institution management students complete a year's internship following graduation. Preparation in management of students entering an internship was evaluated in a study by Mongeon (1964). Internship directors questioned in that study noted inadequacies of interns functioning in an actual situation.

Blaker (1968) reported a weakness among dietitians in conceptual thinking ability.

The internship phase of the dietitian's education has been affected by her changing role. Dietitians today must employ effective management techniques, according to Robinson (1963), and routine supervision responsibilities must be delegated to food service supervisors. Internships should build on the principles and theories relating to decision making, control, and use of resources that were taught in college (Donaldson, 1965).

Laboratory Experience. A science-based college curriculum, as stated by Reaves (1965), is a program of study in a technical field planned to educate students so that they gain specific knowledge in a certain practical field and receive a broad liberal education. Miller (1960) believed students need to be motivated through laboratory experience so they can relate classroom theory to practical food service situations.

Butterworth (1966) stressed the importance of active participation of the student in the learning process. An instructor needs to be concerned with helping to create a learning situation, according to Umstattd (1964), and laboratory experience is a necessary element. Laboratory experiences enable students to be observant, to demonstrate initiative, and to observe the value of cooperation (Stollberg, 1953).

Laboratory activities stress practice in inquiry, in investigation, in the collection of evidence, and in reaching decisions, according to Hatch (1957). Shugart (1965) believed laboratory

experiences should be planned around creative and analytical thinking rather than merely technical experiences. Blaker (1969) cited the laboratory as an excellent place to bridge the gap between theory and reality. Problems may be acted on by a person or by several persons working toward a similar goal. The student becomes aware of real life problems of food service, stated Hunzicker (1965), and he develops an understanding of how to deal with them.

The laboratory setting in a university program may be in a campus food service, such as cafeterias and dining rooms in university residence halls, union building, faculty clubs, or tearooms. Laboratory experiences may be gained through affiliation with a public school system, a commercial food service, or a hospital (Robinson, 1961).

Mongeon's study (1964) revealed a varied opinion about laboratory experiences among responding internship directors and faculty members. Since many universities lack facilities, the internship directors believed laboratory experience in management should be obtained in the internship. Over half of the faculty members answering this questionnaire believed that a laboratory experience must be provided prior to internship if a student is to be successful. Further comments by faculty indicated it is the responsibility of the college to provide this experience. Additional results indicated that "on-the-job experience" was necessary to apply management principles. One faculty member stated that laboratory experience in college: (1) provides

feeling of security, (2) helps in coping with problems, (3) strengthens over-all management ability, and (4) gives insight into the internship program.

Management. Welch (1962) defined management as the act of getting things done through people. Management is a continuous process, according to Newman and Summer (1961), and it is performed through the application of principles. The responsibility for directing and guiding an organization toward the realization of established goals lies with management.

Ways and means of providing management experience have caused some concern among those responsible for education of the dietitian (Mongeon, 1964). As a result, several conferences have been held for college and university institution management faculties. These educators concentrated on the improvement of education in management for dietetics students. Coleman (1965) proposed two generalizations regarding management:

1. Management is an interpersonal relationship and is present when one individual has authority over another individual for performance in relation to a stated goal.
2. Management is the use of formal authority to make decision in order to direct, organize, represent, and evaluate the contributions of responsible individuals in the use of resources to produce a product and/or a service in order to reach institution goals.

Bonnell (1962) stressed the need for giving students an opportunity to recognize problems of management, to evaluate them, and to make decisions on scientific principles related to the solution. Greenaway (1962) believed that skill in food service

management requires a high order of managerial ability.

LeTourneau (1957) stressed that management in the profession of dietetics must be taught to keep abreast of the changing conditions of society. Increased size of food service units, greater diversification of services, and increased government control are indicative of an increase in the complexity of the management function. This complexity is evidenced by a greater volume of business, an increased number of employees, and longer hours of service. Technological advances require a continuing change in the system of operation. Blaker (1969) agreed that increased complexity will necessitate a change in management process. The dietitian today must be a manager as well as a food expert according to Hunzicker (1965).

In a study of academic preparation for food service management, Miller (1960) reported close correlation between the inadequacies expressed by graduates and by employers of these graduates. Recommendations resulting from her study included these four suggestions in the area of management:

1. Required courses need critical review of theoretical coverage and availability of opportunities for realistic application of the principles presented.
2. Greater emphasis should be directed toward the study of realistic problems in food service management, operational control, and personnel administration.
3. Instructional materials and methods should be evaluated, and increased opportunities for the student to develop skills of effective communication and group leadership should be provided.
4. Academic coverage should focus on the student's transition from university environment to the business world.

Blaker (1969) reported that dietitians know how to "talk" management, but they can't "do" management.

Management is shifting from job-centered to employee-centered supervision (Likert, 1961). Managers must possess technical, administrative, and human skills. Human factor problems cause managers the most trouble, according to Knudson (1963), because a set of rules that tell how to deal more effectively with people doesn't exist. Use of judgment and development of communicative skills, according to Laboskey (1960), are factors considered vital in managerial activity.

Mongeon's (1964) study revealed the need for emphasis in personnel management at the college level. The apparent belief that personnel management should be emphasized in the internship may be due to lack of realistic laboratory experiences possible at the college level.

The emphasis in education has been on decision making, according to Harger (1963). A report at the Second Conference for College and University Faculties of Institution Management (Proceedings, 1963) revealed the concepts management and decision making rank second and third, respectively, as being meaningful and most representative of the field of institution management.

Evaluation

Education is a purposeful activity, and teachers seek to have students learn what is taught. Evaluation is vitally important as it assesses whether learning has taken place. It involves quantitative and qualitative descriptions. In addition

to numerical and verbal descriptions, evaluations include value judgments (Gronlund, 1968). Teachers are concerned with evaluating the achievements of a student, the effectiveness of instruction, and the appropriateness of curriculum.

Establishing objectives, teaching, and evaluation--the three basic steps in the educational process--should be planned together. Objectives must be defined carefully, according to Phillips (1968), for effective evaluation of stated objectives translated into specific educational outcomes. Any procedure appraising the extent to which specified educational objectives have been achieved is called educational evaluation by Lindvall (1967). Today, according to Kreutz (1969), two concepts exist in the evaluation of learning. They are the content reference score and norm reference score. The norm reference score compares the student with others in class to give information about his achievement. The content reference score test gives a student's standing in mastery of content studied. By giving a pre-test, to determine that the student has the necessary background knowledge to handle the content, there is evidence that instruction actually does teach the content (Bloom, 1968). Bloom further stressed assessment after each learning to determine whether the student has acquired capabilities to continue on to the next learning. Because of the lack of success in developing content reference score tests, according to Lindvall (1967), test users rely on norm reference scores. Several procedures for assessing students and determining bases for grading are listed and explained:

Pre-test. Gronlund (1968) stated the purpose of a pre-test is to determine if a student has the background to benefit from the course. It is given at the beginning of the course, and it measures the student's readiness to learn material in the course.

Mastery. The formative test is used, according to Bloom (1968), wherever there are minimum essentials to be completely mastered by all students. He maintains that "it paces the learning of the student, it helps to motivate them, and it gets them started at the appropriate time." It is used throughout the course, but principally at the beginning. It is a part of the learning process and not to be confused with judging the capabilities of the students or with grading. Mastery tests are used for assessing students and assessing instruction.

Diagnostic Tests. Diagnostic tests are essentially the same as mastery. If the student lacks mastery of a particular unit, the formative test should reveal the particular points of difficulty. It is important that when the difficulty has been revealed that some specific prescription be given him so he can correct the weakness. It may be additional learning, direction, or guidance for correcting the learning, according to Gronlund (1968).

General Achievement. This is a test designed to measure a broad range of learning outcome (Gronlund, 1968). It ranks the students in order of their achievement. It has to be comprehensive and representative of the important features of the content.

Bloom (1968) referred to this general type of classroom testing as summative evaluation. Item analysis gives valuable data for assessing instructional strength and weaknesses. The general achievement test can be used for all purposes of evaluation, and alone it can serve as a basis for grading.

Performance and Product Analysis. Bradfield and Moredock (1957) described performance as appraising whatever happens as it happens. Product analysis assesses an "artifact." It stands still and can be reassessed. These procedures reflect teacher bias, making it difficult to obtain reliable measures. Rating scale is an example of this evaluation procedure. On the vertical axis are the identified factors being observed and on the horizontal axis are teacher judgments. On a rating scale, the teacher makes a judgment as to the extent the factor is present. Essay tests are examples of evaluation by product analysis. For these, scoring keys are used to increase the reliability by product analysis. The teacher states the factors being considered and gives a rating for each factor.

Students want a variety of testing methods as they want to learn results of the test immediately, according to Owens (1969). Situational tests are considered a realistic approach to evaluation. Evaluation seems to motivate students at the college level, as research shows tests given one or two times per semester provide as much motivation as weekly tests.

The evaluation process provides a means of determining the extent to which the student has developed expected behavior

weakness, assesses the effectiveness of the teacher, and indicates the value of the curriculum.

Management Decision Making

The function of the manager is primarily decision making (Barnard, 1964). Jackson (1966) concurred that making effective decisions is the most important part of the businessman's job. In the administrative process, the proper unit of analysis is the decision.

Lopez (1966) stated: "A decision represents a choice, a judgment, a final resolution and a conclusion of a conflict of needs, means or goals and a commitment to action made in the face of uncertainty, complexity and even irrationality." A degree of freedom is implied on the part of the decision maker as it has conscious and subconscious aspects. Decision making, according to Lopez (1968), must remain a purely human responsibility since it is predominantly volitional in nature. Gellerman (1968) indicated that decisions still must be based on managerial intuition. Decision making implies uncertainty, and managers earn their salaries by taking action on the basis of incomplete information, by estimating probabilities, and by calculating risks. Administrative decisions, Griffiths (1959) explained, are those that establish criteria by which others in an organization make their decisions.

Every good decision meets three conditions, according to Foreman (1967). First, a good decision will be as technically

perfect as possible. Supporting studies and research will be done skillfully and completely. Second, by the way it is presented and its "rightness," a good decision will have a good, built-in chance of being carried out successfully. Finally, a good decision will produce as few as possible harmful side effects. Foreman warned that a seemingly sound decision can sometimes bring on difficulties in another area of the business.

In the decision process there are three areas of concern: the decision situation, the decision implementers, and the decision maker. Lopez (1968) reported attention has been paid to the decision situation in the literature of decision theory and even more attention to the decision implementers through participative management, but little thought has been given to the decision maker himself.

The central element can be the decision maker and the focus of attention is the commitment he makes for the organization and of himself (Lopez, 1968). Managers can be held accountable for the decisions they make and the resources they commit. These commitments will reflect the utility of the outcome to the decision maker. He must be concerned with how his resources are committed compared to the degree of personal risk to himself.

Hardwick and Landuyt (1966) believed that an administrator faces four questions in decision situations: (1) Are my superiors expecting me to make a decision? (2) What do they want me to decide? (3) How do they want me to take action? (4) To what extent do they want to be connected with the decision?

The total decision commitment is the product of economic and human factors (Barksdale, 1963). A decision is also affected by information and time, two limiting factors that increase both the risk of making a poor decision and uncertainty about the outcome. The information needs of management are varied and extensive but seldom fully satisfied. Within this framework of uncertainty, decisions must be made and action taken to meet the demands of day-to-day operations and the requirements of future planning. Planning minimizes time pressure and makes decision making more manageable.

Oliver (1964) described decision making as basically an invisible process, one that isn't perceived mentally. If the process can be made visible and understandable, a person can improve his ability to make decisions.

Decision-makers also are affected by the complexity of the decision situation, in the opinion of Clifton (1969). A decision implies at least two options, but there can be an indefinite number. As the number of alternatives increases, the number of separate evaluations required of the decision-maker also increases following the formula: $\frac{N(N-1)}{2}$. The decision-maker, consciously or not, resorts either to sequential decision making or to random decision-making to reduce the uncertainty and complexity of a multi-option decision. An example of sequential decision-making is the decision tree often seen in the management literature. Choosing by lots is an example of random decision-making.

Technological advances cause an organization to assess the decision-making abilities of management on both cognitive and connative dimensions (Lopez, 1968). The decision-maker must have the intellectual and technical competence to understand the variables involved in a decision. Individual humans undoubtedly have minimum and maximum levels of decision magnitudes with which they can cope, just as they do in hearing sound frequencies. Individual differences exist in ability to deal with decision complexity. Lopez (1968) stated most people are comfortably only with a two-option decision. Consciously or unconsciously, the decision-maker will carefully weigh the personal risk involved in making an organizational decision.

A person brings to his role a background of experiences in decision-making that are independent of the requirements of his role or of the organization structure. People with rigid personalities tend to be over-cautious, conservative, and slow to make decisions. Others, because of immaturity or of over-dependency, may be inclined to impulsivity and overly decisive actions. Managers lacking the cognitive skills will focus on minor decisions and tend to avoid important decisions (Lopez, 1968).

Few executives are selected on the basis of their ability to make sound decisions in the face of complexity and uncertainty according to Lopez (1966). Management of the future must base its selection and development of managers on organized, accurate evaluation of their decision-making capacities.

In an academic setting, opportunities for practical management decision-making may be limited due to increased size of food operations and complex organizational procedures. Simulation, according to Oliver (1964), is an alternative method to teach improved decision-making.

Simulation

Simulation has been defined by Greenlaw et al. (1962) as "a sequential decision-making exercise structured around a model of a business operation in which participants assume the role of managing the simulated operation." Business simulation assumes many forms: among them the case study, role playing, computer games, and in-basket technique.

Development of managerial abilities can be provided for in a "real life" situation within an organization or synthetically in the classroom. Situational tests, described by Gellerman (1968), are only an approximation of real managerial behavior; but they are a closer approximation than can be provided by objective tests, interviews, and other off-the-job procedures.

Greenlaw et al. (1962) called simulation "one of the most promising approaches to management development which has come along in recent years; simulation exercises are a unique opportunity for development of the 'doing' part of human skill." Simulation techniques are thought by Ward (1962) to be in line with the tradition of using materials that are realistic and having problems in a form that come directly from experience

rather than theory or a systematic organized academic course. Simulation exercises provide opportunities for the student to put his thinking into action (Knudson, 1963).

The concept of simulation has been used for centuries. War games are the oldest on record; business games have been used in recent years to teach management development in higher education. The attempt to arrange situations that mirror in many ways various aspects of a managerial position is of recent origin (Ward, 1964).

Hemphill (1962) attributed the quick acceptance of these management games to their novelty. Participant performance in hypothetical work situations is the common characteristic in the various simulation techniques. Simulation exercises, according to Oliver (1964), place a person into a life-like situation that allows him to learn the fundamentals of the decision-making process.

Simulation makes the solving of day-to-day business problems involve an understanding of problem-solving and decision-making within time restrictions (Lopez, 1966). Greene (1959) found the business game to be the best educational method to use in teaching decision-making. Simulation techniques arouse the participants' interest, involve them emotionally, and make them carry out their own decision-making process (Knudson, 1963). In training situations, according to Gellerman (1968), simulation spurs enthusiasm and lifts morale. The different techniques are organized and compact.

Hemphill (1962) pointed out that simulation techniques have some drawbacks. The expense of material and time limits the

accurate reproduction of an organization. Statistical evidence regarding the educational effectiveness of simulation techniques, in comparison with conventional teaching procedures, has not been reported. Lopez (1966) cited additional difficulties as achieving realism, allowing adequate time for simulation administration, and reliable evaluation methods.

Simulation, according to Knudson (1963), teaches the student increased effectiveness in dealing with people and increased awareness of the presence of individual and organizational goals in a managerial situation. Business games provide most students with their first opportunity to solve the problems of a business in its totality; to develop the "commercial courage" required in a risk-based private enterprise economy; and to originate, place in effect, and experience the results of long-range planning (Greenlaw et al., 1962).

Because the in-basket exercise is a simulation of reality and requires the individual to call upon both administrative and social skills to solve the problems with which he is presented, it is properly classified as a situational test by Gellerman (1968).

In-Basket Technique

The in-basket exercise, according to Lopez (1966), is essentially a model, a simulation of reality. As a model, its utility lies in the fact that it is a dynamic representation of reality moving through a telescoped time sequence. Barksdale (1963) indicated the in-basket approach was designed to capture the

excitement of an ongoing organization and create an operational environment.

The in-basket exercise takes its name from the in-basket or tray on a manager's desk in which a steady stream of inputs are deposited for his attention and action (Crooks, 1968). The inputs are mainly in the form of letters, reports, telephone calls, memoranda, and other papers; typical of the problems a manager faces on his job. By simulating a management job in a prescribed setting under given conditions and asking a participant to handle a cross-section of problems likely to be encountered in this job (as if he were indeed in this job), a sample of his administrative behavior is obtained. In-basket exercises, according to Knudson (1963), contain elements of pressure, frustration, and complexity which are part of most managerial positions.

Basically, most in-basket exercises contain instructions, background material, a set of problems, and appropriate feedback procedures (Hemphill, 1960). The instructions provide the setting for the participant, who he is, what his job consists of, and something about his associates. The background material usually includes organizational charts, data about the organization, and current conditions. The problems range in level of difficulty, may be interrelated or even be trivial. The problems come from many sources: subordinates, peers, superiors, customers, and outsiders. In-basket problems call for decisions, provide information, or request information. Lopez (1966) stated that the employment of letterheads, handwritten notes, and actual

organizational forms add to realism of the problems to be acted upon. The participant must make a number of decisions during a brief time period without being able to consult other people or obtain additional information. Participants are requested to write decisions on a designed action form giving priority, what action was taken and why. The essential purpose of any in-basket game, according to Frederiksen (1966), is to provide analysis of the participant's performance and feed it back to him. Thornton (1964) described the in-basket exercise as a more meaningful means of job knowledge than conventional essay examinations. In a study conducted by Huse (1968), results showed the in-basket measured skills rather than personality. It is important for each participant to be himself and handle each problem as if he were actually on the job.

Roberts (1965) was of the opinion that the in-basket exercise should be representative of the organization in which it is to be used. Crooks (1968) stressed gearing the in-basket exercise around the job level at which participants move into management. Limited use of the in-basket technique at the operational level has been reported, according to Crooks (1968).

To illustrate a procedure for creating a new in-basket, a composite list of developmental steps from several authors is given (Hemphill, 1960; Gibb, 1962; Crooks, 1968). Suggested steps are:

1. Decide objectives of the in-basket study.
2. Study the job to be simulated to establish activities encompassed within the job.

3. Copy paperwork associated with the job.
4. Observe surroundings, design setting and background material to enable the writing of instructions.
5. Select and develop in-basket problems and pre-test.
6. Eliminate, rewrite, and add additional problems to improve quality for a final version of the exercise.
7. Develop guidelines for scoring.
8. Administer and evaluate.

In discussing criteria for in-basket items, Lopez (1966) stated that items must: (1) call for utilization of personal judgment, (2) have a wide range of solutions, and (3) occur in the normal process of the business.

Authors vary on the number of items to be included in an in-basket. For a two-hour in-basket, Hemphill (1960) found 25-30 items to be a heavy load of work for an average participant. In studies conducted by the Educational Testing Service (Proceedings 1960), between 8-19 in-basket items per hour were required to create a time pressure factor.

Lopez (1964) found it essential to begin administration of the in-basket with a briefing session that should include: what the exercise is, how it was developed, and what its purposes and uses are.

Various advantages of the in-basket technique have been reported by several authors. Greenlaw (1960) outlined five advantages:

1. Provides participants an opportunity to actually perform managerial skills in a realistic laboratory situation.

2. Provides an opportunity for both individual decision-making and group problem solving and the two can be tied together.
3. Provides excellent opportunity to receive feedback from others in a group as to the appropriateness of their decision-making approach.
4. Provides material covering a wide variety of problems which are faced by managers.
5. It is easy to develop and flexible to use.

Additional advantages have been identified by Lopez (1966):

1. Action is the essence of decision-making and an in-basket is an action tool.
2. Subjects must use written communication which will help develop and improve their ability to prepare clean and concise letters, memoranda, and reports.
3. Previous managerial experience is not necessary to perform satisfactorily on an in-basket exercise.

Merry (1962) added the discrimination between relative sources of action and the necessity of deciding priority of time as definite advantages of the technique. Since each item creates a problem to be solved, Bray (1960) judged it difficult to make a mistake in constructing an in-basket exercise. Participants make their own decisions on in-basket items and are not faced with making choices among predetermined alternatives is a merit substantiated by Myers (1962).

Comments from management personnel after taking an in-basket exercise were summarized by Hemphill (1962):

1. Appreciation of how a company and its operations appear to top management.
2. Showed importance of management activity for having a successful operation.

3. Pointed out difficulties in setting company policies and implementing them in everyday operating decisions.
4. Participants learned more about their own management potentialities and capabilities and regarded it as a fairer evaluation of their management skills than abstract exercises.

The lack of suitable in-basket materials has hampered its use, according to Roberts (1965), and Greenlaw (1960) pointed out the difficulty of finding capable and competent discussion leaders. He further stated that it is not easy to define precisely what the in-basket does teach since participation causing behavioral change has not been reported. Lopez (1966) listed some additional shortcomings of the in-basket exercise:

1. The in-basket is but a representation of reality and not the reality itself.
2. The transformation of in-basket performance into numerical categories is subject to error.
3. The construction and evaluation lack a theoretical framework.

The cost of materials, administration, and evaluation in terms of time and money are other weaknesses supported by Thornton (1964).

Development and Assessment. The in-basket has been used in a variety of ways. Evidence on the utility of the in-basket as a development and assessment tool for managers is available. Most organizations that have incorporated this game in their management development program report it a useful and popular way of making the learning of management skills more attractive (Lopez, 1966). The Bell Telephone system was the first to use the in-basket as part of an assessment program, according to Bray and

Grant (1966). McNamera (1960) reported International Business Machine participants have responded favorably and that the in-basket program is quite profitable to them as a learning experience. Results of the elementary school principal's in-basket exercise, according to Hemphill et al. (1962), further demonstrated that the technique is a convenient way to assess on-the-job administrative performance.

Training. The in-basket exercise has been utilized in management training programs in a wide assortment of formats and for a number of purposes. Goals for an in-basket exercise as a training tool are improvements in the trainee's ability to delegate, to organize his work, to separate the important from the trivial, to deal with conflict, and to make on-the-spot decisions (Lopez, 1966). The aim of in-basket training, according to Ward (1964), is to provide a series of activities in which managers could learn useful skills which they could apply later on in their own jobs. Barksdale (1963) maintained the in-basket an effective training device since it bridges the gap between classroom instruction and business application. In-basket problems should be designed to conform to training objectives, noted Lopez (1966). Serif (1964) reported the Small Business Administration used in-basket training techniques to teach assistant managers the art of making decisions quickly.

Proctor and Gamble, according to Mollenkopf (1962), has used the in-basket to expose student trainees to the management field within their organization. The enthusiastic reaction of students,

management, and teachers to this game indicated it was a success as an aid in the orientation of college students to a potential career in plant management. Crooks (1968) wrote that the in-basket approach was used in Medicare workshops to teach the law and its application to nursing home administrators across the United States.

Education. The in-basket possibilities appear to be unlimited in the educational process. Greenlaw (1960) believed that the in-basket problem provides a real contribution to the repertoire of teaching instruments.

An in-basket exercise causes the student to face everyday problems in a job situation as contrasted to the classroom where problems are more clearly defined (Lopez, 1966). Students exposed to in-basket teaching programs, according to Ward (1964), learn to see other students' point of view, learn that there are many different ways to solve a particular problem, and are stimulated to think. Barksdale (1963) suggested designing in-basket problems to supplement classroom lectures, textbooks, and laboratory work.

In addition to its popularity with players, sound learning principles were shown by Lopez (1966) to justify the use of the in-basket in management education. It helps participants understand management theories more fully by observing how they apply to the solution of a series of problems in a particular organizational setting. Clapp (1969) regarded the in-basket technique a useful teaching device when a managerial role is involved.

Barksdale (1963) published in-basket exercises to improve students' analytical skills and to provide insights into operational decision-making on marketing research.

The in-basket technique has been used in several colleges and universities offering institution management. Espeland (1967) developed an in-basket problem to supplement institution management teaching. The study attempted to assist students to understand the process of decision making and to recognize the functions of management. Enthusiasm on the part of the students and staff members of the Institutional Management Department at Kansas State University, concluded Espeland (1967), indicated that the in-basket technique was worthy of inclusion in lesson plans for courses. Results pointed out that the in-basket technique provided an opportunity to use logic and judgment in a realistic setting, and it produced a high degree of self-involvement. Hubbard (1967) believed the results of her studies on the in-basket problem at Ohio State University encourage its use for teaching institution management. An in-basket problem to improve the students' decision-making abilities in institution management was developed at Purdue University by Hartt (1969). For an organization and management course in dietetics at the College of St. Catherine, St. Paul, Minnesota, Konhauser (1969) developed a hospital in-basket exercise. Results indicated student interest and motivation to strive for improved decisions during the discussion that followed the in-basket problem.

Testing. An advantage of the in-basket not to be overlooked, according to Thornton (1964), is the acceptability of the exercise as a test. Several in-basket tests developed to fit different needs were noted by Crooks (1968), but there is no standardized in-basket test available at the present time. Hemphill (1962) defined an in-basket test as: "A collection of documents which presumably accumulate in the in-basket of an administrator and are awaiting his attention. The documents constitute the test items and the participants' response to the items are his answers." Gibb (1962) stated that the in-basket test is a job sample test to determine specific skill performance. Fredericksen (1962) suggested that the in-basket can be considered as a personality test. The in-basket test, verified by Hemphill (1962), meets the psychologist's definition of a test: a systematic procedure for comparing the behavior of two or more persons. Lopez (1966) created an in-basket test for the American Management Association as well as several other instruments. Bray (1966) reported in-basket tests used at American Telegraph and Telephone to evaluate college students immediately after employment were the most effective predictors of managerial ability and potential. The Educational Testing Service has developed several in-basket tests for a variety of purposes which are not available to others (Crooks, 1968). However, the Consolidated Fund In-Basket Test is an assessment instrument available to outsiders. General Electric (1961) found the in-basket test provided valuable information not only in regard to a

participant's ability to handle administrative aspects of a managerial position, but also in relation to his style of operating as a manager. A feature of this type of test is it allows for identifying training and development needs of managers. General Electric further reported previous managerial experience is not necessary to perform satisfactorily on the in-basket test.

Fredericksen et al. (1957) suggested the in-basket be used as a test at the beginning and end of a teaching period. Hubbard (1967) conducted a study using a pre- and post- in-basket test for an undergraduate institution management course. Results revealed an increase of the mean score between the two tests. In another study, Hubbard (1967) used an in-basket problem as a final examination in a graduate institution management course, Problems in Food Administration. Results of the study revealed a positive student feeling toward this type of examination.

Participants have been found to be more satisfied with their in-basket evaluation where they can see a relationship to the job for which they are being tested (Thornton, 1964).

Evaluation. The evaluation and scoring of an in-basket has varied widely. Little theoretical or empirical knowledge comparing scoring systems has been reported, according to Huse (1968). For example, Bray (1960) found the following variables valuable when evaluating an in-basket exercise: decision making, planning and organizing, communicative skills, human relation skills, and quality of decision. He further emphasized the need of an interview at the conclusion of the in-basket experience in order

to get the real quality of the decision. Huse (1968) and Crooks (1968) agreed with Bray regarding the importance of the interview. An analysis of the Bell scoring system by Bray and Grant (1966) indicated the in-basket could be scored reliably by the following categories: activity level, situational analysis, decisiveness of judgment, planned work distribution, planned work organization, delegation, and consideration of others. Grant (1964) advocated the use of a simple quantitative scoring procedure. In a study conducted by Lopez (1960), appropriate and correct answers to in-basket items were based on experts' judgments in the field being simulated. Hemphill et al. (1962) determined that factor analysis of the School Administration In-Basket identified measures of performance: preparation for decision making, taking final action, and amount of work expended in handling the tasks. Lopez (1966) developed a formal "objective" scoring system in which the participant taking the in-basket completed a multiple choice questionnaire. The validity of this scoring method is questionable and should be studied, according to Crooks (1968). Results of studies involving undergraduate students by Frederickson (1960), showed a high level of work output based on items attempted and words written. From the viewpoint of face validity, according to Lopez (1966), there is no reason to question the in-basket exercise. In the Air Force Study, Frederickson (1957) found that the over-all test reliability was reasonably high. An in-basket study conducted by Huse (1968) revealed that untrained scorers could make reliable and valid judgments on scoring

categories, but training will improve the reliability. One difficulty in estimating the validity of an in-basket exercise, revealed by Hemphill (1960), is inadequate real-life criteria measures with which to compare in-basket performance.

Work with the in-basket technique by Lopez (1968) has included the construction of several in-baskets and their administration to thousands of managers of every level in all types of business. Conclusions on their utility were summarized by Lopez:

1. The in-basket exercise simulates most accurately the functions of managerial or executive class of positions.
2. The specific behavior elicited by the in-basket exercise that differentiates one participant from another in a unique manner is identified as decision-making in an organizational context.
3. The decision-making behavior displayed in an in-basket exercise is quite representative of the participant's real-life decision-making in his own organization.
4. The decision-making behavior of the typical manager reflects his personal traits and his unique organizational experiences and the perceptions he has of the organization structure and climate in which he makes his decisions.
5. The utility of the in-basket exercise and its maximum potential as an administrative technique is realized when it is used as diagnostic instrument.

Thornton (1964) stressed the continued use of the in-basket technique in expanded management areas with further analysis of results and the sharing of findings with others.

PROCEDURE

The food production in-basket test developed for this study was designed for possible use as a pre- and post-test for Food

Production Management, an undergraduate institution management course. Objectives for the test were:

1. To test the student's understanding of decision-making process.
2. To learn if realistic problems typical of those encountered by a residence hall food production dietitian could be acted upon and answered by students in an improved manner after a seven-week laboratory experience.
3. To learn if simulated on-the-job decision-making is related to grade point average and previous food service experience.
4. To learn if results of the in-basket test are related to results of a pre-tested food production management objective examination and the practical final evaluation for the course.

Development of the Test

To provide a realistic setting for this in-basket test, a residence hall food center serving 1200 students was simulated. Since a majority of the graduates in institution management enter food production management positions in their first jobs (Moore, 1962), a food production dietitian's job was selected to be used for this test.

Seventeen situations typical of problems encountered by the dietitian were selected. These items were based on problems encountered by the students in Food Production Management the previous year. Test items included equipment breakdowns, personnel problems, memoranda, a telephone call, two letters, and food production technical problems. To add to the realism, items were reproduced on appropriate letterhead or residence hall food service forms. Each item was constructed to create a decision-

making or problem-solving situation that utilized personal judgment and that could not be resolved by referring to background material.

To be sure that the items selected were typical activities performed by a residence hall food production dietitian, they were evaluated by three food production dietitians at Kansas State University (Appendix C).

Decision-making steps were adapted for this study from several sources. The following steps were selected for background information for the student:

1. Recognize and state the problem.
2. Diagnose the problem.
3. List the solutions or courses of action that are realistically possible.
4. Analyze and compare possible solutions.
5. Select the most logical course of action to follow.
6. Evaluate course of action.

Background materials and instructions were developed to create the test setting. Descriptive information concerning the simulated residence hall food center included organizational charts, applicable policy statements, menus for one week, employees' schedule, and a list of telephone numbers. Instructions were written directing the student to put into writing all actions taken in handling the items. A "Decision and Reason" form was developed for recording actions. This form provided for the rating of each item in terms of urgency and importance and for recording of what was done and why.

A pilot in-basket problem, consisting of 12 items, was constructed and tested by students in a class in Organization and Management of Food Services. The purpose of the pre-testing, which was conducted during a regular 50-minute class period, was to obtain reactions to types of items, the number of items completed, and the acceptance of the simulation technique.

Students exhibited an unusual degree of personal involvement. They believed the directions were clear and the situation appeared quite realistic to them. This initial administration demonstrated that each item was capable of eliciting a range of individual responses. Several students were able to complete all 12 items, which indicated that more items were needed to create a time pressure factor. The pilot in-basket problem was then used as a basis for developing the test to be used for this study.

Administering the Test

Students in the Food Production Management class at Kansas State University were used as subjects for this study. The class was composed of 13 students, including three men and ten women. Nine were seniors in Dietetics and Institutional Management, two were seniors in Restaurant Management, and two were graduate students in Institutional Management.

The in-basket test was given at the beginning of the laboratory unit of the class and again at the conclusion of the seven-week laboratory experience and will be referred to as the Pre-test and Post-test.

The two tests were the same except that dates on the items were changed to correspond with the week in which each test was administered. The pre-test was given in a dining room at Kramer Food Center. Each student had considerable space for spreading and organizing his papers. The post-test was administered in a university classroom. Students were seated in regular chair-desks which lacked ample space for shuffling and arranging papers.

Pre-test Class Period I. Although the class had previously discussed steps in decision making, these were reviewed to stress the objectives of the in-basket test. A description of the simulation technique was explained and the test procedure reviewed.

Pre-test Class Period II. All material except the 17 test items was assembled in a folder and distributed to the students (Appendix A). They were given one hour to read and study background information. The instructor discussed the background material and answered students' questions. When all of the students thought they had adequate time to become familiar with their new role, the in-basket test items were distributed (Appendix A). Each student was asked to handle the 17 items as if he were on the job as the food production dietitian. At the conclusion of the test, the background material and test items were collected along with the "Decision and Reason" forms. No discussion was held with the students after the pre-test.

Post-test Class Period I. The students were given an objective multiple choice Food Production-Management examination, as developed for this class in a previous study (Appendix C).

Post-test Class Period II. The decision-making steps were reviewed and the background material was distributed (Appendix B). Students were allowed adequate time to re-familiarize themselves with the situation. The test items (Appendix B) were given to the students and they were asked to respond in writing to as many of the 17 items as possible in the 50-minute period. At the conclusion of the post-test, the class was divided into thirds and each group was given one item to discuss during the next class period. The instructor interviewed each student within one day after the post-test to obtain personal student reaction to the test. A sample questionnaire is given in Appendix C.

Post-test Class Period III. This 50-minute period was devoted to a "feedback" by group discussion on possible solutions for the in-basket test items.

Evaluation

A procedure for evaluating students' performance on the test items was developed with the aid of the Kansas State University College of Education. Evaluation categories from other in-basket studies were redesigned for scoring the Food Production Management In-basket Test. A scorer evaluated student responses on a five-point scale. A "one" indicated very poor performance,

"three" average, and "five" outstanding. Ratings of "two" and "four" were used for intermediate judgments. Student responses were evaluated according to the following categories:

1. Decision Making:
 - a) Recognition of problems to be solved.
 - b) Evidence of analysis of item.
 - c) Initiating action in preparation for solving the problem or making decisions.
 - d) Delegation to responsible individuals.
 - e) Provision for follow-up action.
2. Planning and Organizing:
 - a) Priority of item.
 - b) Relation of item to background material.
 - c) Unwarranted assumptions.
3. Written Communications:
 - a) Comments clear and to the point.
 - b) Directed to persons involved in the problem.
 1. Peers and superiors.
 2. Subordinates.
 - c) Adequate for item.
4. Productivity:
 - a) Acted on item.
 - b) Amount of material prepared.
 - c) Number of separate actions taken.
5. Subjective Judgment:
 - a) Scorer's overall impression based on in-basket test and interview.

Average scores for these five categories were calculated and used as the sixth evaluation category. A zero score was given for "productivity" if a test item was not attempted.

Students' performances also were evaluated for quality of action by three Kansas State University residence hall food service food production dietitians and the two instructors for the course (Appendix D). Their ratings were based on priority of item and appropriateness of response, using the five-point scale.

Students' correct answers also were tabulated for the general information, multiple choice examination (compiled by Greig, 1969). A copy of the test is included in Appendix C.

Students were asked to list kind, amount, and location of previous food service experience. This experience was divided into three categories. Category "1" denoted a form of structured or supervised experience; "2" was minimal experience with no supervision; and "3" indicated no experience.

Statistical Analysis

Scores for the pre- and post- in-basket test, general information multiple choice objective examination, and the practical final for the course were tabulated and recorded on computer cards according to amount of experience. Data were analyzed by the Kansas State University Statistical Laboratory. Analysis of variance, using least squares and correlations of scoring categories, were used to ascertain significant differences.

Statistical analyses were designed to: (1) compare gain in ability for students to handle problems and take action between

pre- and post-test, (2) compare the class by experience level between the pre- and post-test for each evaluation category, (3) determine if correlation exists between scores for the in-basket evaluation categories, students' cumulative grade point average, multiple choice objective examination scores, and practical final grade for the course, and (4) determine if correlation exists between the in-basket evaluation categories.

RESULTS AND DISCUSSION

Evaluation

Test Results. Students No. 8 and 12 took action on all 17 items on the pre-test, while on the post-test, 10 students attempted all test items (Table 1). Student action by in-basket items for pre- and post-tests are shown in Table 2. Students apparently worked item by item on the pre-test as items 12 through 17 were attempted by fewer students than the first 11 items. Students either remembered the pre-test or were more confident in their ability to take action on the post-test.

Average ratings for the 13 students on each of the seven scoring categories showed a gain between the pre- and post-test (Table 3). Area of greatest gain was productivity which indicated more items were attempted in the post-test. Ratings in subjective judgment were higher at the beginning of the laboratory than in other areas which may account for the small gain. The average score for the class as determined by a scorer, and the quality of decisions as judged by the dietitians, were the

Table 1. Action taken by individual students on 17 in-basket items.

Student number	Number items attempted	
	Pre-test	Post-test
1	13	15
2	15	17
3	9	17
4	15	17
5	10	17
6	10	17
7	11	15
8	17	17
9	15	16
10	14	17
11	12	17
12	17	17
13	11	17

Table 2. Student action on individual in-basket items.

Item number	Number students attempting items	
	Pre-test	Post-test
1	12	13
2	12	13
3	10	13
4	10	13
5	12	13
6	12	13
7	12	13
8	9	13
9	12	11
10	10	13
11	10	13
12	7	13
13	8	13
14	7	13
15	11	12
16	8	12
17	7	12

Table 3. Average student scores by categories on in-basket tests.

Areas scored	:Maximum : :points	Average rating		Increase	
		: Pre-test	:Post-test	:Average :	%
Decision making	5	2.95	3.30	0.35	11.9
Planning and organizing	5	3.07	3.44	0.37	12.1
Written communications	5	2.78	3.15	0.37	13.3
Productivity	5	2.43	3.03	0.60	24.7
Subjective judgment	5	3.11	3.12	0.01	00.3
Score average (Average of above scoring categories)	5	2.85	3.20	0.35	12.3
Dietitians' decision	5	2.85	3.26	0.41	14.4

on the pre-test and varied 2 per cent on the post-test. Tabulations of individual student evaluations and class ranking are given in Tables 13-21 (Appendix D).

Test scores based on the five-point scale were evaluated by a scorer in five categories, indicating the amount of previous experience (Table 4). Significant differences for the class were found between the pre- and post-test, indicating an apparent increase in ability to solve problems resulting from the laboratory experience. A significant difference at the 5 per cent level was shown in ability to communicate in writing and make decisions.

An increase in the number of items attempted by students between the pre- and post-test resulted in a significant difference

Table 4. Analysis of variance (least squares) comparing experience level and pre- and post-test by scoring category.

Scoring category :	Factors	Degrees of freedom :	Sum of squares :	Mean squares :	F value :	Probability :
Decision making	Experience	2	0.0325	0.0162	0.130	0.8789
	Pre- and post-test	1	0.7852	0.7852	6.268*	0.0211
	Exper. x pre- and post	2	0.0463	0.0231	0.185	0.8324
	Error	20	2.5056	0.1252		
Planning and organizing	Experience	2	0.4223	0.2111	1.920	0.1727
	Pre- and post-test	1	0.8992	0.8992	8.177**	0.0097
	Exper. x pre- and post	2	0.0769	0.0385	0.350	0.0790
	Error	20	2.1994	0.1100		
Written communications	Experience	2	0.0063	0.0031	0.020	0.9806
	Pre- and post-test	1	0.8617	0.8619	5.402*	0.0308
	Exper. x pre- and post	2	0.1513	0.0757	0.474	0.6291
	Error	20	3.1909	0.1595		
Productivity	Experience	2	0.4145	0.2072	0.763	0.4793
	Pre- and post-test	1	2.309	2.3091	8.503**	0.0085
	Exper. x pre- and post	2	0.2867	0.1433	0.528	0.5979
	Error	20	5.4312	0.2716		
Subjective judgment	Experience	2	0.0626	0.0313	0.205	0.8165
	Pre- and post-test	1	0.0010	0.0010	0.007	0.9362
	Exper. x pre- and post	2	0.1023	0.0511	0.335	0.7195
	Error	20	3.058	0.1529		
Average (Average of above five scoring categories)	Experience	2	0.0378	0.0190	0.200	0.8206
	Pre- and post-test	1	0.7912	0.7912	8.351**	0.0091
	Exper. x pre- and post	2	0.0676	0.0338	0.357	0.7045
	Error	20	1.8950	0.0947		

*Significant at the 5 per cent level.

**Significant at the 1 per cent level.

at the 1 per cent level for the scoring category productivity. A significant difference at the 1 per cent level was found for students' ability to plan and organize. The average score reflecting the results of the five scoring categories showed a significant difference at the 1 per cent level. No significant difference was evident between pre- and post-test for the category subjective judgment, as shown in Table 4. Previous experience evidently had no effect on students' scores for any of the factors. Greig's (1969) study for this same course in a previous year also indicated that there was no significant difference in test scores attributable to the experience level of the student prior to taking the pre-test.

Table 5 shows a significant difference at the 5 per cent level between the pre- and post-test scores based on the dietitians' decisions, indicating an increase in learning due to the laboratory experience. Again, there was no significant difference due to previous experience.

Table 5. Analysis of variance (least square) comparing experience level and pre- and post-test for scoring category dietitians' decisions.

Factors	:Degrees: : of : :freedom:	: Sum of : : squares:	: Mean : : squares:	: F : : value:	: Prob.
Experience	2	0.0431	0.0215	0.096	0.9085
Pre- and post-test	1	1.0789	1.0789	4.830*	0.0399
Exper. x pre- and post	2	0.1643	0.0821	0.368	0.6969
Error	20	4.4670	0.2233		

*Significant at the 5 per cent level.

Students deviated from the mean in lesser amounts on the post-test than on the pre-test for all categories scored (Table 6). This indicated increased learning since the student scores on the post-test were closer to the mean.

Table 6. Comparison of standard deviation for the pre- and post-test by scoring categories.

Scoring categories	Standard deviation	
	Pre-test	Post-test
Decision making	0.3809	0.2846
Planning and organizing	0.3962	0.2933
Written communications	0.4684	0.3311
Productivity	0.5825	0.4038
Subjective judgment	0.4003	0.3615
Average	0.3289	0.2416
Dietitians' decisions	0.5106	0.2706

To determine validity of the in-basket test, scores on the seven categories were correlated with the following measures:

1. Grade Point average. The scholastic average at Kansas State University of each student tested.
2. Objective examination. A multiple choice objective examination used for the course in a previous year (Appendix C).
3. Practical Final. As a final grade for the laboratory experience, each student was evaluated on-the-job by two instructors for the course.

Tables 7 and 8 show the relationship between the in-basket scoring categories and these other measures. All in-basket scoring categories correlated positively with the objective examination; a majority correlated positively with grade point average and practical final. In the pre- and post-test, written communications correlated negatively with grade point average and practical

Table 7. Correlations between in-basket scoring categories and other measures (Pre-test).

Factors	:Grade :Objec-: Prac-: Deci-:Plan. :Written : :Subjec-: :Dieti- :point : tive : tical: sion : and :communi-:Produc-: tive :Scorer's:tians' : av. : exam.: final:making:organ.:cations :tivity : judg. :average :decis.									
	1.00	.38	.39	-.05	-.02	-.28	.18	.05	.02	.05
Grade point average										
Objective examination	1.00	.01	.05	.11	.31	.50	.01	.36	.27	
Practical final	1.00	.07	.31	-.14	-.05	.30	.11	.06		

Table 8. Correlations between in-basket scoring categories and other measures (Post-test).

Factors	:Grade :Objec-: Prac-: Deci-:Plan. :Written : :Subjec-: :Dieti- :point : tive : tical: sion : and :communi-:Produc-: tive :Scorer's:tians' : av. : exam.: final:making:organ.:cations :tivity : judg. :average :decis.									
	1.00	.38	.39	.03	.16	-.23	.26	.22	.14	.38
Grade point average										
Objective examination	1.00	.01	.24	.01	.19	.43	.12	.29	.28	
Practical final	1.00	-.41	-.23	-.29	.04	.07	-.20	.03		

final. Objective examination and practical final correlated positively but not significantly with grade point average. Also, objective examination correlated positively but not significantly with the practical final. It appeared from an overall appraisal of the relationship that no significant correlations resulted, but the in-basket scores correlated with student grade point average, objective examination scores, and practical final grade comparable to the correlation between each of these three measures.

An analysis of Table 9 reveals the scoring category average (made up of scoring categories 1-5) correlated significantly at the 1 per cent level with decision making, written communications, and subjective judgment; and to productivity and planning and organizing at the 5 per cent level. Subjective judgment correlated with decision making and planning and organizing at the 1 per cent level. Productivity correlated with written communication at the 5 per cent level and written communication correlated significantly at the 1 per cent level with decision making. Dietitian ratings correlated significantly with the scorer's ratings on written communication and the average at the 1 per cent level and with productivity at the 5 per cent level.

Table 10 shows results similar to Table 9 with some minor differences. Dietitian ratings correlated to all scorer categories, but a significant correlation at the 5 per cent level existed between subjective judgment and the scorer's average.

Table 9. Correlations between in-basket scoring categories (Pre-test).

Factors	: :Decision: : making : (1)	:Planning: and :organiz- : (2)	:Written: communi- : (3)	:Produc- tivity : (4)	:Sub- jective :judgment: : (5)	: Dieti- tians' average :decisions : (6)	: Dieti- tians' average :decisions : (7)
Decision making (1)	1.00*	.49	.73**	.27	.69**	.76**	.51
Planning and organiz- ing (2)		1.00**	.34	-.13	.79**	.59*	.48
Written communica- tions (3)			1.00**	.62*	.50	.87**	.71**
Productivity (4)				1.00**	.18	.63*	.56*
Subjective judgment (5)					1.00**	.78**	.54
Scorer's average (6)						1.00**	.80**
Dietitians' decisions (7)							1.00**

*Significant at the 5 per cent level.

**Significant at the 1 per cent level.

Table 10. Correlations between in-basket scoring categories (Post-test).

Factors	: : Decision making (1)	: : Planning and organizing (2)	: : Written communications (3)	: : Subjective judgment (5)	: : Scorer's average (6)	: : Dietitians' decisions (7)
Decision making (1)	1.00**	.55	.57*	.35	.61*	.83**
Planning and organizing (2)		1.00**	.15	.24	.50	.64*
Written communications (3)			1.00	.71**	.32	.78**
Productivity (4)				1.00**	.05	.69*
Subjective judgment (5)					1.00	.67*
Scorer's average (6)						1.00
Dietitians' decisions (7)						1.00

*Significant at the 5 per cent level.

**Significant at the 1 per cent level.

Analysis of In-Basket Items by Dietitians. Evaluations by the three dietitians were similar in most cases (Table 11). Items 5, 9, and 17 scored highest which indicated these items were the most typical activities performed by a residence hall food production dietitian. This was the basis for choosing these items for class discussion. Since all items were evaluated satisfactory or higher, all 17 items were included in the in-basket test.

Classroom Observations

Students were attentive to the classroom presentation on decision-making steps, simulation methods, and in-basket technique. Many questions were raised regarding the background information prior to the pre-test, but students showed retention of this background material before taking the post-test. Much interest was shown in this testing technique even though the in-basket had no bearing upon a student's grade for the course.

Students appeared enthusiastic about the exercise the day of the tests. The 13 students wrote diligently throughout the entire period. At the end of 50 minutes for the pre-test, only two students had completed all 17 items, but they were re-checking their decisions. On the post-test, all but three students finished the multiple choice objective examination in less than the 50-minute class period.

The class period following the post-test was set aside for discussion. Each group responded to pre-assigned items (5, 9, 17)

Table 11. Evaluation of in-basket items by three dietitians.

Dietitians	: Suitability			: Involvement			: Simplicity		
	A	B	C	A	B	C	A	B	C
Item 1	9	8	9	9	8	9	7	9	8
Item 2	10	7	8	9	9	7	9	8	7
Item 3	6	8	7	9	9	7	7	9	8
Item 4	7	7	8	8	8	7	8	7	7
Item 5	10	9	9	10	9	8	8	9	8
Item 6	7	7	8	9	7	6	10	6	6
Item 7	8	9	9	8	9	8	8	6	8
Item 8	8	8	8	8	9	8	7	9	8
Item 9	10	9	7	10	9	7	10	9	7
Item 10	4	7	8	8	6	7	8	7	6
Item 11	6	7	7	7	7	7	6	6	7
Item 12	9	8	9	9	8	8	9	9	8
Item 13	8	9	6	8	8	6	8	8	6
Item 14	6	7	6	6	6	7	7	6	7
Item 15	6	8	9	9	8	9	7	7	8
Item 16	8	9	9	8	9	8	8	9	8
Item 17	10	9	9	10	9	8	10	9	8

Scale:

Excellent	10
Very good	9-8
Satisfactory	7-6
Fair	5-4
Poor	3-2
Very poor	1-0

Decisions varied and class interaction was noticed. No attempt was made to single out decisions in class as good or bad as most answers were logical and it would be difficult to say any were poor. Decisions in most cases were realistic except when students had not considered background information as a guideline and limitation. Test item No. 4 (pits in the bing cherry salad) created the most questions from the students.

Interviews

Eight students indicated they thought about and used the decision-making steps that were discussed in class while taking the in-basket test. Nine students sorted the in-basket items by priorities before taking action. Several students stated that they learned to think about several problems at once. All of the students mentioned the in-basket as a good experience, real, personally involved, and fun. A majority of the students believed they learned more the second time, and five students attributed this to the laboratory experience. Three students believed the in-basket can supplement laboratory experience but not replace it because of the needed exposure of working with employees. Two students thought they were more confident in their ability to analyze a situation, make a decision, and stand back of the decision. Three students found they were forced to solve the problems by themselves and not rely on the advice of others.

SUMMARY

Increasing demands for management personnel have caused college and university departments of Institution Management to evaluate the education of individuals for effective managerial performance. In an academic setting, opportunity for management development and decision making in a laboratory is not always possible. An alternative might be the use of simulation, a technique found to be effective in business assessment programs for solution of actual problems.

Simulation techniques have been used for centuries, but within the last 20 years sophisticated business games have been used to teach management development. Since most managers spend a considerable amount of time reading, analyzing, and disposing of vast amounts of written material, the in-basket in which the participant commits himself in writing to a specific course of action, has been effective for duplicating the realities of a working situation.

An in-basket test for this study was developed for possible use as a pre- and post-test for an undergraduate institution management course in food production management. Objectives for the test were:

1. To test the student's understanding of the decision-making process.
2. To learn if realistic problems typical of those encountered by a residence hall food production dietitian could be acted upon and answered by students in an improved manner after a seven-week laboratory experience.
3. To learn if there is a correlation between results of the in-basket test and cumulative grade point average, previous food service experience, results of a pre-tested food production management objective examination, and the practical final evaluation for the course.

As background for the test, a residence hall food center serving 1200 students was simulated. Seventeen situations typical of problems encountered by a food production dietitian were

selected. Test items included a telephone call, equipment breakdowns, memoranda, personnel problems, two letters, and food production technical problems.

Thirteen students in Food Production Management were used as subjects. The pre-test was given at the beginning of the laboratory and the post-test was administered after the seven-week laboratory experience.

Student actions on test items were evaluated by a scorer and by dietitians on a five-point scale: "1" indicated very poor performance, "3" average, and "5" outstanding. The scorer evaluated students on the following categories: (1) decision making, (2) planning and organizing, (3) written communication, (4) productivity, and (5) subjective judgment. Dietitians evaluated students on the quality of their actions.

Scores from the pre-test, post-test, multiple choice objective examination, and practical final were statistically analyzed by analysis of variance, using least squares and correlation of scoring categories to detect significant differences.

Statistical analysis of in-basket test scores showed a significant difference for all scoring categories except subjective judgment between the pre- and post-test due to the seven-week laboratory. No significant difference was indicated due to previous experience for any of the scoring factors. All in-basket scoring categories correlated positively with the objective examination; a majority correlated positively with grade point average and practical final but not significantly. There was a

significant correlation between the dietitians' ratings and the scorer's ratings of written communication, productivity, subjective judgment, and average of the scoring categories.

Students attempted more test items on the post-test than pre-test, which indicates they either remembered the pre-test or were more confident in their ability to take action.

Interviews with the students pointed out a favorable attitude toward the in-basket test technique. All students mentioned the in-basket as a good learning experience and a majority believed they were better prepared to take action in the post-test.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions derived from this study were:

1. The in-basket test can provide a realistic simulation of a food production dietitian's position in a residence hall food service system.
2. Test scores indicated a significant increase in students' ability to take action on realistic food production problems following seven-weeks' laboratory experience.
3. Previous experience apparently had little effect on advancement of learning between pre-test and post-test.
4. For all scoring categories there was agreement in scoring between the scorer and dietitians.

Enthusiasm on the part of students, instructors, and dietitians indicated that the in-basket is worthy of inclusion in future courses. Results of this study pointed out that the test

provided an opportunity to use logic and judgment in a realistic setting, and it produced a high degree of self-involvement. More research is needed to determine the nature of the skills being measured in a testing situation, even though the factors being measured appear to be related to progress in management.

Changes suggested by students and instructors for improvement of the testing technique were:

1. Background information should include a list of food items on hand.
2. A scoring system that would enable a quick evaluation of students' performance on the in-basket tests.
3. Increased and improved classroom feedback for comparison of student decisions.

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APPENDICES

APPENDIX A

Pre-test

INSTRUCTIONS FOR FOOD PRODUCTION MANAGEMENT IN-BASKET TEST

For 50 minutes you will work as an individual on some problems of the type that are normally dealt with by food production dietitians in any residence hall food service operation.

You are to assume the role of Mrs. Sarah Bee, food production dietitian of Crane Food Center, Central State University, Central, Kansas. You are 22 years old, a college graduate, and this is your first job. You have been employed since September and this is your first weekend on duty as the only professional person. Picture yourself on the job, Saturday, November 8, 1969. It is now 10:30 a.m. Your day off duty was Friday and you are the only dietitian on duty for the weekend. Assembled in this packet are the notes, messages, letters, and reports from the in-basket on your desk. You are interrupted by a phone call and an employee which are included in the in-basket packet.

In your role as food production dietitian you must act on the separate items by making or deferring decisions, delegating responsibilities, and by seeking additional information or advice. Refer to the provided background material as often as necessary. Make decisions on the items from the available information but avoid any assumptions that are not supported by the background material.

Indicate your specific decision on the "Reason for Action" forms provided. Everything you decide or do must be written down. You may write on the pieces of correspondence in the in-basket. Please try to put yourself in Mrs. Bee's role for this test. When signing all correspondence, use Mrs. Bee's name and not your own.

CENTRAL STATE RESIDENCE HALL FOOD SERVICE

CENTRAL, KANSAS

Central, located in the Kansas Flint Hills, is a typical midwestern college town. The community (15,000) is very pleasant, and Central is a fine place to live. The city lacks industry, and the majority of the population is associated with the university. Central State is a land grant school, and the enrollment has reached 13,000. One-third of the students live in residence halls.

There are five dining rooms in the residence hall system, all co-educational. Each resident pays \$1.65 per day by semester contract for food service. From the \$1.65, \$0.83 is budgeted for raw food with the remaining \$0.82 budgeted for all other operating expenses. The entire budget for the food service department is supported from residents' payments. Twenty meals are served each week, cafeteria style. The largest unit serves 2,000, and the smallest unit serves 150.

The residence hall food service department is administered by a director, four administrative assistants, three unit dietitians, three production dietitians, two service dietitians, and three relief dietitians. The professional staff are faculty members. The director of food service is directly responsible to the director of housing. The administrative assistants are staff positions and have the following responsibilities: personnel, purchasing, business operation, and production and service. The administration offices, located in Pitt Building, are opened daily except for the weekends. Any of the dietitians are free to discuss and decide material with the administrative people in regard to

(2)

their area of responsibility. The unit dietitians are responsible and accountable for the operation of their specific food centers. The production dietitians are responsible for food production in the food center--the planning for food, ordering, preparation, and delivery to the cafeteria line. The service dietitians are responsible for cafeteria service, sanitation operations, and resident contact and relations. The relief dietitians substitute for the production and service dietitians on their days off.

Within the residence hall food service department there are over 200 non-professional employees, all of whom are State Civil Service appointees. The department has a personnel dietitian who maintains employees records, recruits new employees upon food center requests, conducts screening interviews, and processes all personnel records. The dietitian in the food center has the final decision in selection.

The department works with the State Rehabilitation Center for the mentally retarded and physically handicapped. Capable people from the center are hired in positions as institution workers. After a person is hired, the social worker from the rehabilitation center consults every other week with the dietitian in whose area the employee is working.

Each employee works 40 hours per week on a two week schedule. Sunday begins each work week, and an employee usually has one weekend and two week-days off during the two week cycle. There is no paid overtime; and in case of emergencies, compensating time is given for approved overtime hours. When an employee is absent,

(3)

that person's work must be divided among those who are working in the unit. Today is Saturday of week I.

The residence hall food service department has a central purchasing facility which receives and processes all requisitions for food and supplies. Central purchasing has staple storage, extensive freezer space, and a meat processing section. Delivery is daily except Saturday and Sunday. The individual food centers request items up to two weeks in advance of use. Central purchasing orders quarterly and is under state contract and bid. When food or supplies are needed under emergency conditions, the food production dietitian may call a vendor direct. The administrative assistant in charge of purchasing must be informed of purchases that do not go through central purchasing prior to use.

A central business office in Pitt Building maintains all financial records for the department and for each food center. A weekly food cost is figured for each food center. Monthly reports which include itemized monthly expenditures, cumulative expenditures for the year, and relation of expenditures to the budget are sent to each food center.

The production and service administrative assistant is responsible for menu making, coordinating the individual food centers for uniformity, and operating the test kitchen. She works very closely with central purchasing.

Crane Food Center serves 1200 students. Residents from two residence halls of equal size, one for men (Denny Hall) and one for women (Laughlin Hall), dine at Crane. The food center has a compact

(4)

central kitchen consisting of salad area, cooks area, and bakery area. Two sets of two cafeteria lines are divided by a central dishroom. The production area, service area, dishwashing area, and dining room area are all located on one floor. On weekdays four cafeteria lines and two soiled dish return belts operate. On weekends, when absenteeism ranges from 30-60 percent, two cafeteria lines and one soiled dish return belt operate. Only one dietitian is on duty for the weekend; the work hours are 10:30 a.m.-7:30 p.m.

Each food center has a maintenance man. In case of equipment breakdown or emergency repair, the maintenance shop can be called when the maintenance man is off duty.

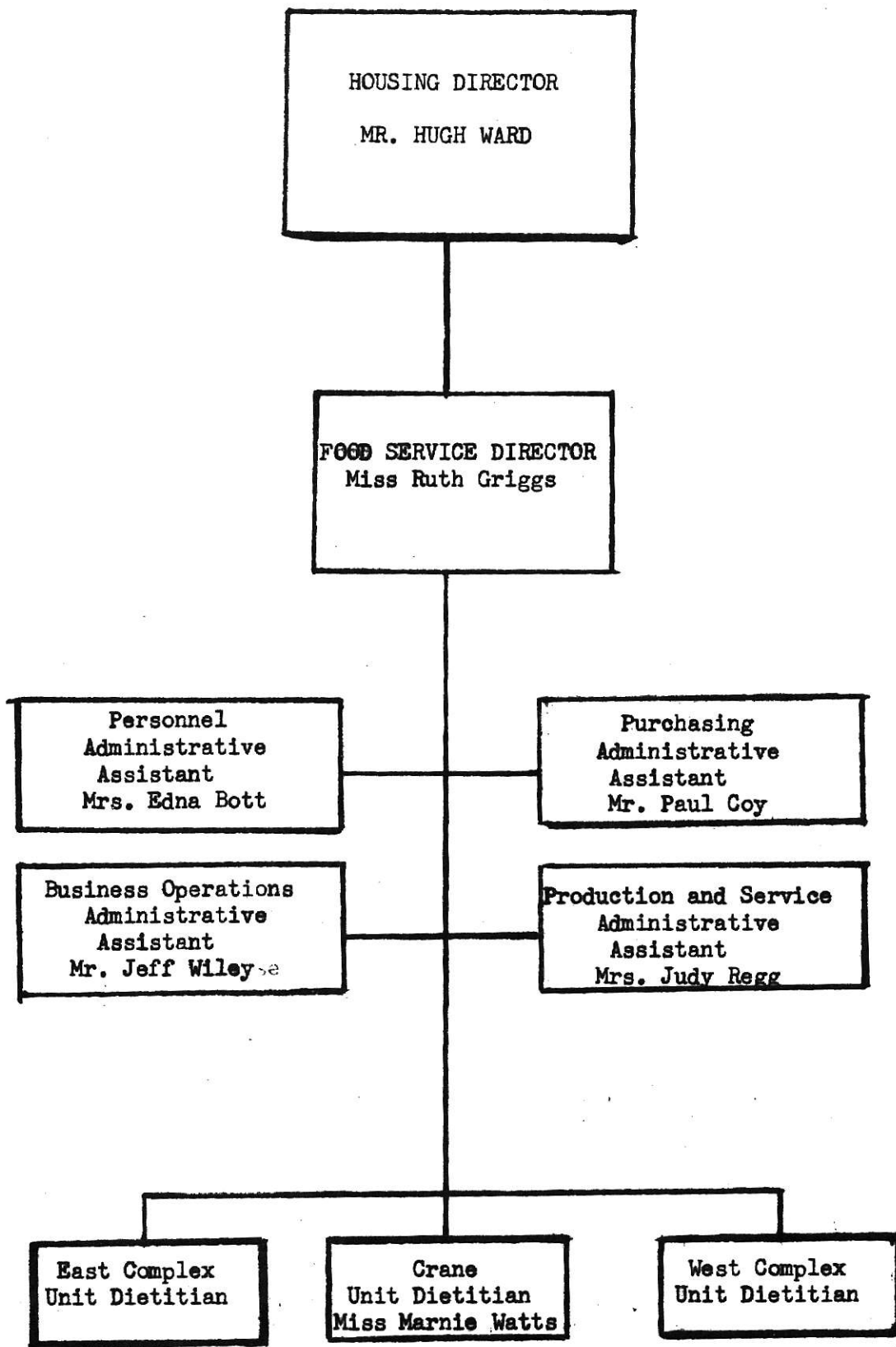
In addition to regular meal service, Crane Food Center furnishes food and supplies to either Denny or Laughlin Hall for special functions when requested. When functions involve activities outside the Crane Food Center, the director of food service must approve any catering service.

Food service policies are well established by the director of food service. Procedures and guidelines have been developed over the years and are located in a procedure manual. A sample is listed below.

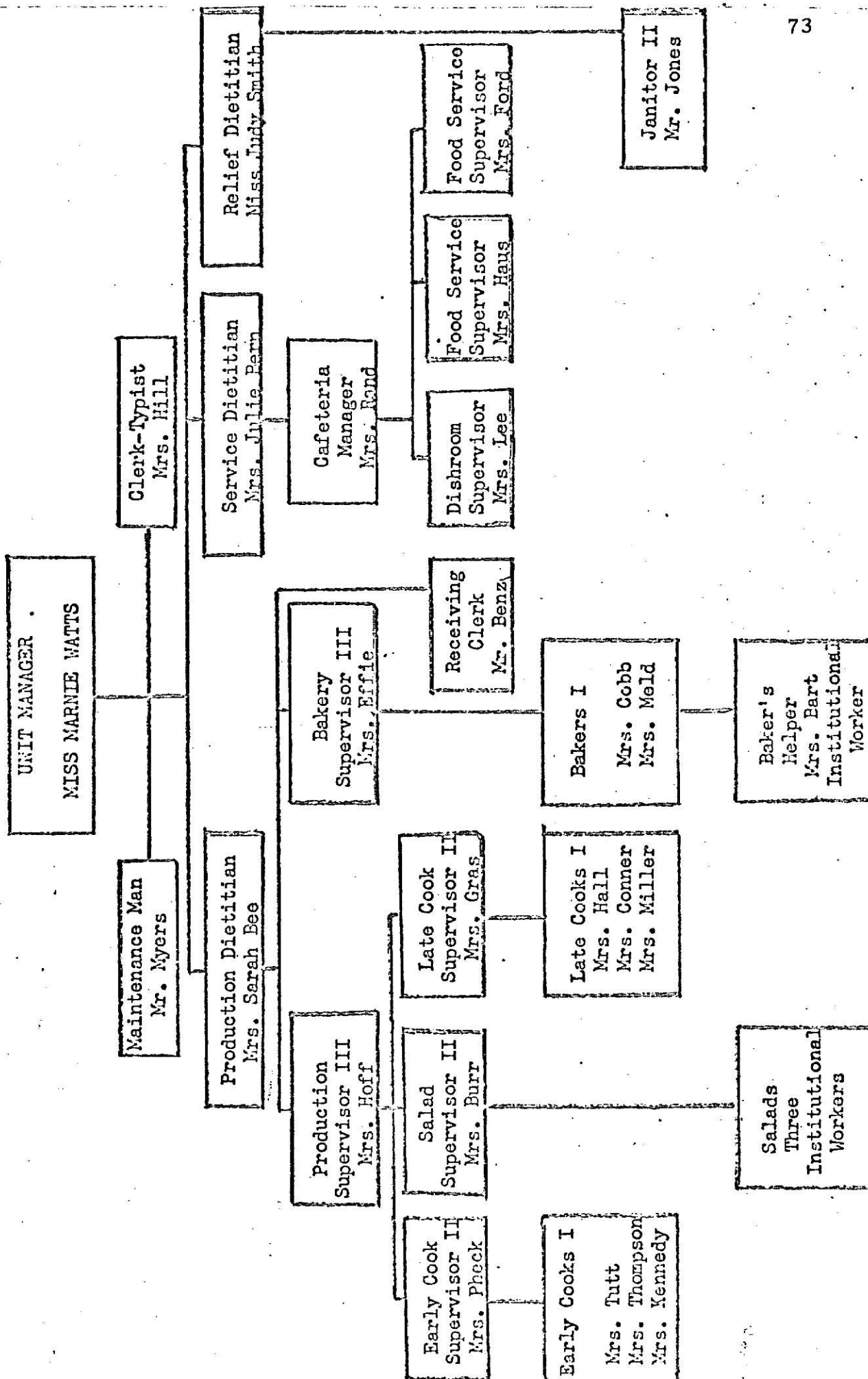
All items on the menu are expected to be available throughout the meal period. When a substitution is made, it should be as popular as the item it replaces. The last person through the cafeteria line pays the same amount as the first customer.

CENTRAL STATE UNIVERSITY
FOOD SERVICE ORGANIZATIONAL CHART

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CRANE FOOD CENTER
ORGANIZATIONAL CHART



CENTRAL STATE RESIDENCE HALL FOOD SERVICE MENU

Meal Hours: Breakfast: 6:30-8:15 Lunch: 10:45-12:45 Dinner 4:50-6:15

Breakfast	Date	Entrée	Potato	Vegetable	Salad	Bread	Dessert
Blended Juice	Thurs.	Corned Beef Sandwich on Rye		Cream Style Corn	Cottage Cheese		Glazed Doughnuts
Assorted Cold Cereals Oatmeal	Nov. 6	Beef Noodle Casserole			Tossed Greens		Fresh Fruit
Pancakes with Syrup Hard or Soft Cooked Egg Bacon slice		Barbequed Chicken	Parsley Buttered	Canned Peas	Peach Pinwheel Lettuce Cubes	Hot Rolls	Cherry Pie Frozen Strawberries
Toast, Jelly, Payverage							
Apple Juice or Stewed Apricots	Fri.	Hamburgers on Bun		Vegetable Soup Fruit Punch	Sliced Tomato Salad or Pear Half with Grated Cheese		Gingerbread Popsicle Fresh Fruit
Assorted Cold Cereals Pettijohns	Nov. 7						
Scrambled Eggs Canadian Bacon Cinnamon Coffee Cake		Roast Beef	Whipped with Gravy	Succotash Carrot Coins	Blue Plum Salad Tossed Salad	Texas Toast	Chocolate Ice Cream Slice Frozen Mixed Fruit
Toast, Jelly, Payverage							
Buffet Breakfast	Sat.	Chef's Salad Bowl or Grilled Cheese Sandwich		Cut Green Beans Potato Soup	Tokay Grape Salad Deviled Egg Halves		Oatmeal Cookies Tangy Rhubarb Fresh Fruit
Assorted Fresh Fruits	Nov. 8						
Rice and Raisins with Cream Bacon Slices Sliced Ham Sausage Links		Meat Loaf	French Fries	Mixed Vegetables	Bing Cherry Mold	Hot Rolls	Cream Puffs Apricot Halves
Hot Biscuits with Honey Butter							
Orange Juice Assorted Cold Cereals Fried Egg, Bacon Slice Sweet Roll or Toast	Sun.	Glazed Baked Ham	Rissole	Cinnamon Apple Slices	Tossed Greens	Hot Rolls	Peach Refrigerator Dessert
	Nov. 9						74

CENTRAL STATE RESIDENCE HALL FOOD SERVICE MENU

Breakfast	Date	Entrée	Potato	Vegetable	Salad	Bread	Dessert
Orange Juice	Mon.	Salmon Salad with Chips or Weiners with Baked Beans	Potato	Wilted Lettuce or Limeade	Cari-Fruit Salad		Baked Custard Drumstick Fresh Fruit
Assorted Cold Cereals Farina	Nov. 10	Baked Pork Chops	Oven- Browned	Frozen Peas	Waldorf Salad Tossed Salad	Sour Cream Muffins	Devils Food Cake with Chocolate Icing Royal Anne Cherries
French Toast Sausage Link Raisin Toast							
Toast, Jelly, Beverage							
Grape Juice	Tues.	Beef-Tomato Casserole or Cheese Balls on Pineapple Ring		Broccoli Spears Wax Beans	Blushed Pear Half Hearts of Romaine with Blue Cheese		Peanut Butter Cookies Fresh Fruit
Assorted Cold Cereals Pettijohns	Nov. 11	Country Fried Chicken	Whipped with Gravy	Whole Kernel Corn	Pineapple Cube Salad Chinese Salad	Hot Rolls	Cherry Crisp with Topping Grapefruit Sections
Fried Egg Bacon Slice French Coffee Cake							
Toast, Jelly, Beverage							
Tomato Juice	Wed.	Creamed Chipped Beef on Baked Potato or Reuben Sandwich		Beef Rice Soup Chilled Apple Juice	Peach Half Salad Lettuce Wedge		Baked Date Pudding Fudgesicle Fresh Fruit
Assorted Cold Cereals Oatmeal	Nov. 12	Baked Steak-au- Jus	Franconia	Buttered Asparagus Fordhook Lima Beans	Shimmering Salad Relish Plate	Crescent Rolls	Lemon Angel Food Dessert Frozen Red Raspberries
Baked Egg Ham Slice Sweet Roll							
Toast, Jelly, Beverage							

CRANE FOOD CENTER
EMPLOYEE SCHEDULE

HOURS	NAME	DEPARTMENT	Week I							Week II						
			Sun.	M.	T.	W.	Th.	F.	Sat.	Sun.	M.	T.	W.	Th.	F.	Sat.
6:30-3:00	Hoff	Cooks	x				x					x				x
5:30-2:00	Pleck	Cooks			x				x					x		
5:30-2:00	Tutt	Cooks	x	x							x					x
5:30-2:00	Thompson	Cooks	x					x					x			x
5:30-2:00	Kennedy	Cooks				x			x						x	
10:30-7:00	Gras	Cooks	x				x						x			x
10:30-7:00	Hall	Cooks				x			x						x	
10:30-7:00	Conner	Cooks	x				x				x					x
10:30-7:00	Miller	Cooks			x				x					x		
6:30-3:00	Burr	Salad	x								x					
7:00-3:30	Effie	Bakery			x				x							
5:30-2:00	Cobb	Bakery	x													
10:30-7:00	Meld	Bakery	x					x					x			x
9:00-5:30	Bart	Bakery	x				x									
10:00-6:30	Rand	Cafe	x	x							x					x
5:30-2:00	Haus	Cafe	x					x					x			
10:30-7:00	Ford	Cafe				x										
5:30-2:00	Benz	Receiving	x						x						x	
6:30-3:00	Lee	Dishroom	x				x									
11:00-7:30	Jones	Janitor	x	x								x				
7:30-4:30	Myers	Maintenance	x						x							x
8:00-5:00	Hill	Clerk-Typist	x						x							x

TELEPHONE NUMBERS

Administrative Assistant, Business Operation, Jeff Wiley	2-6005
Administrative Assistant, Personnel, Edna Bott	2-6003
Administrative Assistant, Production and Service, Judy Regg	2-6006
Administrative Assistant, Purchasing, Paul Coy	2-6004
City Meat Company	6-5812
Crane Food Center	2-6621
Denny Residence Hall	8-5311
Director of Food Service, Ruth Giggs	2-6002
Director of Housing, Hugh Ward	2-6001
Director of Physical Plant, Ralph Brake	2-6675
East Complex	2-6391
Graves Bakery	6-8765
Ice and Cold Storage Company	6-5665
Laughlin Residence Hall	8-3235
Maintenance Shop	2-6247
State Rehabilitation Center	AC-903-216-4444
West Food Center	2-6559

DECISIONS AND REASONS

On the "Decision and Reasons" form you will write your decision or action taken (what you did) and explain the reason why you made the decision or took the action.

In the first column is space to list the number of each in-basket item. (Each item in your in-basket is numbered at the top of the page.) In the corner of each block in the first column you will notice a little box, in which you are to indicate priorities. Write 1, 2, 3, 4, 5, or 6 in each box according to the following code:

- 1 = Highest priority; the item must be dealt with in the hour.
- 2 = Higher priority; this item must be dealt with today.
- 3 = High priority; it would be best to deal with this item today if at all possible.
- 4 = Medium priority; this item need not be dealt with today but in the next day or two.
- 5 = Low priority; this item can wait a week or so if necessary.
- 6 = Lowest priority; this item can wait a month or more.

Column two is headed "My Decision". Here you are to state briefly the central meaning of what you did. You might write, for example, "Refer the problem to Miss Watts", "Write a letter", "Set up an appointment", or "Call a meeting".

In column three, headed "Reason", write why you made your decision (the reason may not be clear from the decision itself). For example, if in column two you wrote "Call a meeting", you might write in column three "Want more information and facts regarding how the problem happened". In column three you have an opportunity to make clear your motives for doing what you did.

DECISIONS AND REASONS

In-Basket Item Number	My Decision	Reason

After reporting for work and changing into uniform, you take a quick look at the cafeteria line while the employees are being served. You notice that the cream of potato soup appears curdled.

ITEM NO. 2

Saturday
morning

Mrs. Bee

The frozen peaches were not pulled from the freezer yesterday. I realized this when I began to prepare the peach refrigerator dessert for Sunday. The recipe states the peaches are to be thawed. What shall I do?

Mrs. Cobb

You are interrupted by a phone call at 11:00 a.m. from
Sally Neff, social chairman, Laughlin Hall.

Mrs. Bee: "Good morning, Mrs. Bee speaking."

Sally: "The Central State University Association of Residence
Halls is having a dance in the field house on Monday,
November 10, 1969, at 7:00 p.m. Since Laughlin Hall
is hosting the event, I would like to know if Crane
could furnish punch for 1,000 people."

Mrs. Bee must make a decision.

ITEM NO. 4

November 8, 1969

Mrs. Bee:

Yesterday we made 700 servings of Bing Cherry Mold according to the recipe. The can of bing cherries were labeled "pitted". Today I tasted the gelatin and the cherries are not pitted.

What is your recommendation?

Mrs. Burr

Mrs. Thompson, an early cook, comes into the office. The time is 11:15 a.m.

Mrs. Bee: "Can I help you Mrs. Thompson?"

Mrs. Thompson: "Yes, almost all residents are choosing the grilled cheese sandwich for lunch and I feel we will run out."

Mrs. Bee: "It must be the cold weather."

Mrs. Thompson: "What do you want me to do for a back-up?"

ITEM NO. 6

Mrs. Bee

11/8

The ice machine is low on ice
and I don't feel it will last over
the noon hour.

Mrs. Rand

ITEM NO. 7

RESIDENCE HALL FOOD SERVICE
WORK ORDERDate 11-8-69Time 8:25a.m.Area Dish RoomFood Center CRANEAttention MRS. BEE

Work Requested

THE SOILED DISHBELT CONVEYOR ON THE WEST
SIDE OF THE BUILDING STOPPED WORKING THIS
MORNING DURING THE LAST FIVE MINUTES OF
BREAKFAST. WE RACKED THE DIRTY TRAYS
OF DISHES ON REFRIGERATOR RACKS TO
FINISH THE MEAL. WHAT SHOULD WE DO FOR
LUNCH SERVICE?

Thos. Lee
Signature

ITE. 13.

Saturday
Morning

Mrs. Bee

We made two batches
of cream puffs following
the recipe. The first batch
made yesterday is beautiful.
The second batch made
this A.M. is only 1" high
and looks half the size
of the first batch. Please
give me a decision when
you come in.

Mrs. Cobb

ITEM NO. 9

RESIDENCE HALL FOOD SERVICE
CENTRAL STATE UNIVERSITYTO Mrs. BuDATE Nov. 8 TIME 6:30 am

WHILE YOU WERE OUT

Mrs Hoffof Cooks Dept.

Phone _____

Telephoned...☒... Please Call....

Called to see you..... Will call again.

Wants to see you..... Urgent.....

Message she is ill today
with the flu.Mrs. Thompson
Signature

ITEM NO. 10

CENTRAL STATE UNIVERSITY
Residence Hall Food Service

To: S. Bee Date: November 7, 1969

From: M. Watts

Attached is letter received today from student living in Laughlin Hall. Please handle this since it is your area.

Laughlin Hall
Central, Kansas
November 6, 1969

Dear Dietitian,

My roommate and I have been rather disappointed in the selection of cold cereals at breakfast. Last year Post's Grape Nuts were offered quite a bit, and seemed to be very popular with the girls. Could you possibly offer it again? Another cereal that is a favorite among many of the girls is Post's Raisin Bran. We would like to see more of it, too.

For the most part, I think the meals have been very good this year. I have especially liked the variety of breads and rolls at dinner.

My only other complaint is that I am getting hungry for French toast.

I hope that these comments will help you in your job as a dietitian.

Sincerely yours,

Ellen Vonderschmide

Ellen Vonderschmide

CENTRAL STATE UNIVERSITY
RESIDENCE HALL FOOD SERVICE

MEMORANDUM

TO: S. Bee

DATE: November 7, 1969

FROM: E. Bott

The civil service rating form for Mrs. Kennedy was delayed by the State and it arrived only yesterday. It must be completed and signed and in my office by Monday.

STATE PERSONNEL DIVISION
STATE CAPITOL BUILDING

EMPLOYEE EVALUATION

Name Mrs. KennedyRating Period 11/68-11/69Position Cook IAgency Central State

	Out- standing	Above Average	Average	Below Average	Unsa- fact.
1. <u>QUALITY OF WORK</u> - Interest taken in doing things right.					
2. <u>QUANTITY OF WORK</u> - Ability to work rapidly, accurately and efficiently.					
3. <u>DEPENDABILITY</u> - Follows instructions, punctuality, attendance, reliable, etc.					
4. <u>ATTITUDES</u> - Cooperativeness, getting along with others, cheerfulness, willingness to take directions, etc.					
5. <u>INITIATIVE</u> - Willingness to do more than required without being told. Looking for ways to improve methods and procedures.					
6. <u>JOB KNOWLEDGE</u> - Knowledge of duties and responsibilities of the job and ability to perform them.					
7. <u>JUDGMENT</u> - Ability to reach sound decisions through logical reasoning. Ability to anticipate problems and take steps to solve them.					
8. <u>FLEXIBILITY</u> - Ability to adjust to sudden changes, duties, different surroundings; and emotionally stable, etc.					
9. <u>HOUSEKEEPING AND APPEARANCE</u> - Grooming, cleanliness, regard for sanitation, orderliness, etc.					

10. WHAT ARE THE BEST QUALITIES OF THIS EMPLOYEE?

11. IN WHAT WAY CAN THIS EMPLOYEE IMPROVE?

EMPLOYEE'S SIGNATURE

RATER'S SIGNATURE

DATE

ITEM NO. 12

CENTRAL STATE UNIVERSITY
Residence Hall Food Service
Memorandum

Date: November 7, 1969

To: S. Bee

From: J. Smith

Last night during the dinner hour the meat slicer stopped. The cooks had to cut the roast by hand and larger portions resulted. We used 50 pounds of the ground beef for the meat loaf and made hamburger steaks to make our count.

ITEM NO. 13

CENTRAL STATE UNIVERSITY
Residence Hall Food Service
Memorandum

Date: November 7, 1969

To: Mrs. Bee

From: Mrs. Hill

While checking time cards I found Mrs. Effie, bakery supervisor, is working over her scheduled hours. Some days she checks in early and some days she checks out late. I understand she even works after checking out in the afternoon.

ITEM NO. 14

CENTRAL STATE UNIVERSITY
Residence Hall Service
Memorandum

Date: Friday

To: Mrs. Bee

From: Mrs. Hill

Mrs. Scott from the State Rehabilitation Center was in this morning to talk with you regarding present employees and any openings you may have for people from the state center.

She would like to see you sometime soon. I said you would contact her in the near future.

"Routing Slip"
Residence Hall Food Service

From:

R. Giggs

Date:

11/7/69

To:

☐ H. Ward
☐ R. Giggs
☐ E. Bott
☐ P. Coy
☐ J. Wiley
☐ J. Regg
☒ Crane Food Center
☐ West Food Center
☐ East Complex

For:

☐ Circulation
☐ Filing
☒ Information
☐ Return
☐ Comments

ITEM No. 15

CENTRAL STATE UNIVERSITY CENTRAL, KANSAS

Physical Plant Department

November 6, 1969

Miss Ruth Giggs
 Director, Residence Hall Food Service
 Pitt Building
 Campus

Dear Miss Giggs:

Due to a emergency repair needed in the steam line on the campus,
 the steam service to Crane Food Center will be turned off between 2:00-
 4:00 p.m. Saturday, November 8, 1969.

Sincerely yours,

Ralph Brake
 Ralph Brake
 Director, Physical Plant

CENTRAL STATE UNIVERSITY
Residence Hall Food Service
Memorandum

Date: November 7, 1969

To: S.Bee

From: M.Watts

Mrs. Bart, bakery dept., resigned effective next Tuesday. Her husband had last minute change of military orders and she will leave with him Tuesday.

Mrs. Bott's office is preparing resignation papers which she needs to sign. Please make the necessary decisions regarding food production in the bakery while the position is vacant.

Meat, Poultry, Fish Order

96

Food Center CraneDelivery Date Fri 11/7/69

Item	Specification	Date, Meal to be used	Amount Ordered	Amount Received	Difference
Ground Beef	mech. grind	11/8/8	200 lbs	200 lbs	0
Sliced Bacon	18 slice/lb.	11/9/8	10 lbs	15 lbs	+5 lbs
Boneless Bar & Hom	9-10/lb ea	11/9/8	175 lbs	182 lbs	+7 lbs
Sausage Links	16/lb	11/10/8	45 lbs	45 lbs	0
Weiners	10/lb	11/10/8	200 lbs	200 lbs	0
Bacon Ends + Pieces		11/10/8	20 lbs	20 lbs	0
Center Pork Chops	6oz ea	11/10/8	^{1200 portions} 450 lbs	390 lbs	-60 lbs
Sliced Bacon	18 slice/lb.	11/11/8	40 lbs	45 lbs	+5 lbs
Ground Beef	Chili Grind	11/11/8	180 lbs	180 lbs	0

Mr. Coy sent word with the driver regarding this delivery. Bacon comes in 15 lb. boxes. He was short 160 pork chops and wanted to know what to do.

Mr. Benz

APPENDIX B

Post-test

INSTRUCTIONS FOR FOOD PRODUCTION MANAGEMENT IN-BASKET TEST

For 50 minutes you will work as an individual on some problems of the type that are normally dealt with by food production dietitians in any residence hall food service operation.

You are to assume the role of Mrs. Sarah Bee, food production dietitian of Crane Food Center, Central State University, Central, Kansas. You are 22 years old, a college graduate, and this is your first job. You have been employed since September and this is your third weekend on duty as the only professional person. Picture yourself on the job, Saturday, January 17, 1970. It is now 10:30 a.m. Your day off duty was Friday and you are the only dietitian on duty for the weekend. Assembled in this packet are the notes, messages, letters, and reports from the in-basket on your desk. You are interrupted by a phone call and an employee which are included in the in-basket packet.

In your role as food production dietitian you must act on the separate items by making or deferring decisions, delegating responsibilities, and by seeking additional information or advice. Refer to the provided background material as often as necessary. Make decisions on the items from the available information but avoid any assumptions that are not supported by the background material.

Indicate your specific decision on the "Decisions and Reasons" forms provided. Everything you decide or do must be written down. You may write on the pieces of correspondence in the in-basket. Please try to put yourself in Mrs. Bee's role for this test. When signing all correspondence, use Mrs. Bee's name and not your own.

CENTRAL STATE RESIDENCE HALL FOOD SERVICE

CENTRAL, KANSAS

Central, located in the Kansas Flint Hills, is a typical midwestern college town. The community (15,000) is very pleasant, and Central is a fine place to live. The city lacks industry, and the majority of the population is associated with the university. Central State is a land grant school, and the enrollment has reached 13,000. One-third of the students live in residence halls.

There are five dining rooms in the residence hall system, all co-educational. Each resident pays \$1.65 per day by semester contract for food service. From the \$1.65, \$0.83 is budgeted for raw food with the remaining \$0.82 budgeted for all other operating expenses. The entire budget for the food service department is supported from residents' payments. Twenty meals are served each week, cafeteria style. The largest unit serves 2,000, and the smallest unit serves 150.

The residence hall food service department is administered by a director, four administrative assistants, three unit dietitians, three production dietitians, two service dietitians, and three relief dietitians. The professional staff are faculty members. The director of food service is directly responsible to the director of housing. The administrative assistants are staff positions and have the following responsibilities: personnel, purchasing, business operation, and production and service. The administration offices, located in Pitt Building, are opened daily except for the weekends. Any of the dietitians are free to discuss and decide material with the administrative people in regard to

(2)

their area of responsibility. The unit dietitians are responsible and accountable for the operation of their specific food centers. The production dietitians are responsible for food production in the food center--the planning for food, ordering, preparation, and delivery to the cafeteria line. The service dietitians are responsible for cafeteria service, sanitation operations, and resident contact and relations. The relief dietitians substitute for the production and service dietitians on their days off.

Within the residence hall food service department there are over 200 non-professional employees, all of whom are State Civil Service appointees. The department has a personnel dietitian who maintains employees records, recruits new employees upon food center requests, conducts screening interviews, and processes all personnel records. The dietitian in the food center has the final decision in selection.

The department works with the State Rehabilitation Center for the mentally retarded and physically handicapped. Capable people from the center are hired in positions as institutional workers. After a person is hired, the social worker from the rehabilitation center consults every other week with the dietitian in whose area the employee is working.

Each employee works 40 hours per week on a two week schedule. Sunday begins each work week, and an employee usually has one weekend and two week-days off during the two week cycle. There is no paid overtime; and in case of emergencies, compensating time is given for approved overtime hours. When an employee is absent,

(3)

that person's work must be divided among those who are working in the unit. Today is Saturday of week I.

The residence hall food service department has a central purchasing facility which receives and processes all requisitions for food and supplies. Central purchasing has staple storage, extensive freezer space, and a meat processing section. Delivery is daily except Saturday and Sunday. The individual food centers request items up to two weeks in advance of use. Central purchasing orders quarterly and is under state contract and bid. When food or supplies are needed under emergency conditions, the food production dietitian may call a vendor direct. The administrative assistant in charge of purchasing must be informed of purchases that do not go through central purchasing prior to use.

A central business office in Pitt Building maintains all financial records for the department and for each food center. A weekly food cost is figured for each food center. Monthly reports which include itemized monthly expenditures, cumulative expenditures for the year, and relation of expenditures to the budget are sent to each food center.

The production and service administrative assistant is responsible for menu making, coordinating the individual food centers for uniformity, and operating the test kitchen. She works very closely with central purchasing.

Crane Food Center serves 1200 students. Residents from two residence halls of equal size, one for men (Denny Hall) and one for women (Laughlin Hall), dine at Crane. The food center has a compact

(4)

central kitchen consisting of salad area, cooks area, and bakery area. Two sets of two cafeteria lines are divided by a central dishroom. The production area, service area, dishwashing area, and dining room area are all located on one floor. On weekdays four cafeteria lines and two soiled dish return belts operate. On weekends, when absenteeism ranges from 30-60 percent, two cafeteria lines and one soiled dish return belt operate. Only one dietitian is on duty for the weekend; the work hours are 10:30 a.m.-7:30 p.m.

Each food center has a maintenance man. In case of equipment breakdown or emergency repair, the maintenance shop can be called when the maintenance man is off duty.

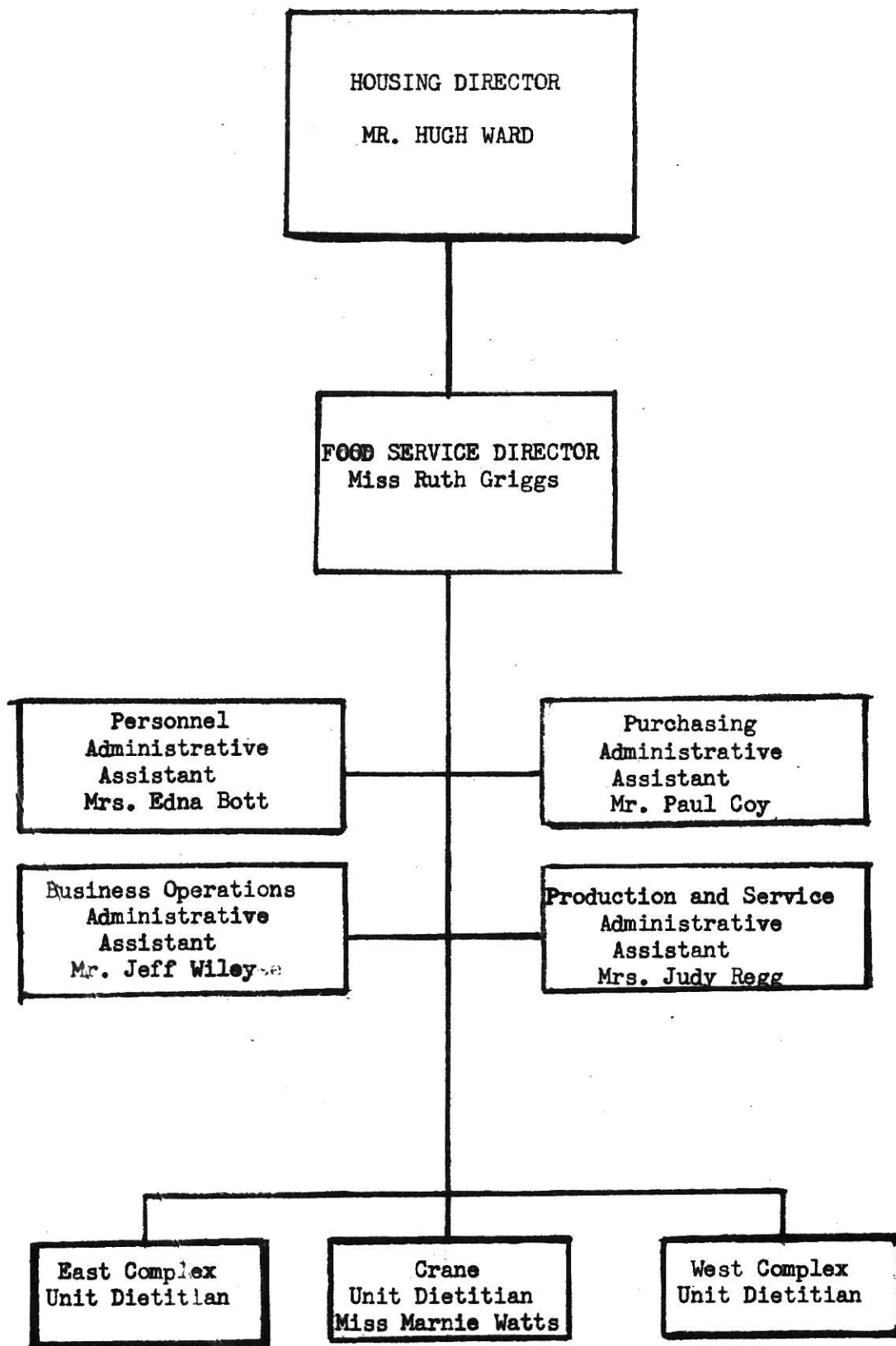
In addition to regular meal service, Crane Food Center furnishes food and supplies to either Denny or Laughlin Hall for special functions when requested. When functions involve activities outside the Crane Food Center, the director of food service must approve any catering service.

Food service policies are well established by the director of food service. Procedures and guidelines have been developed over the years and are located in a procedure manual. A sample is listed below.

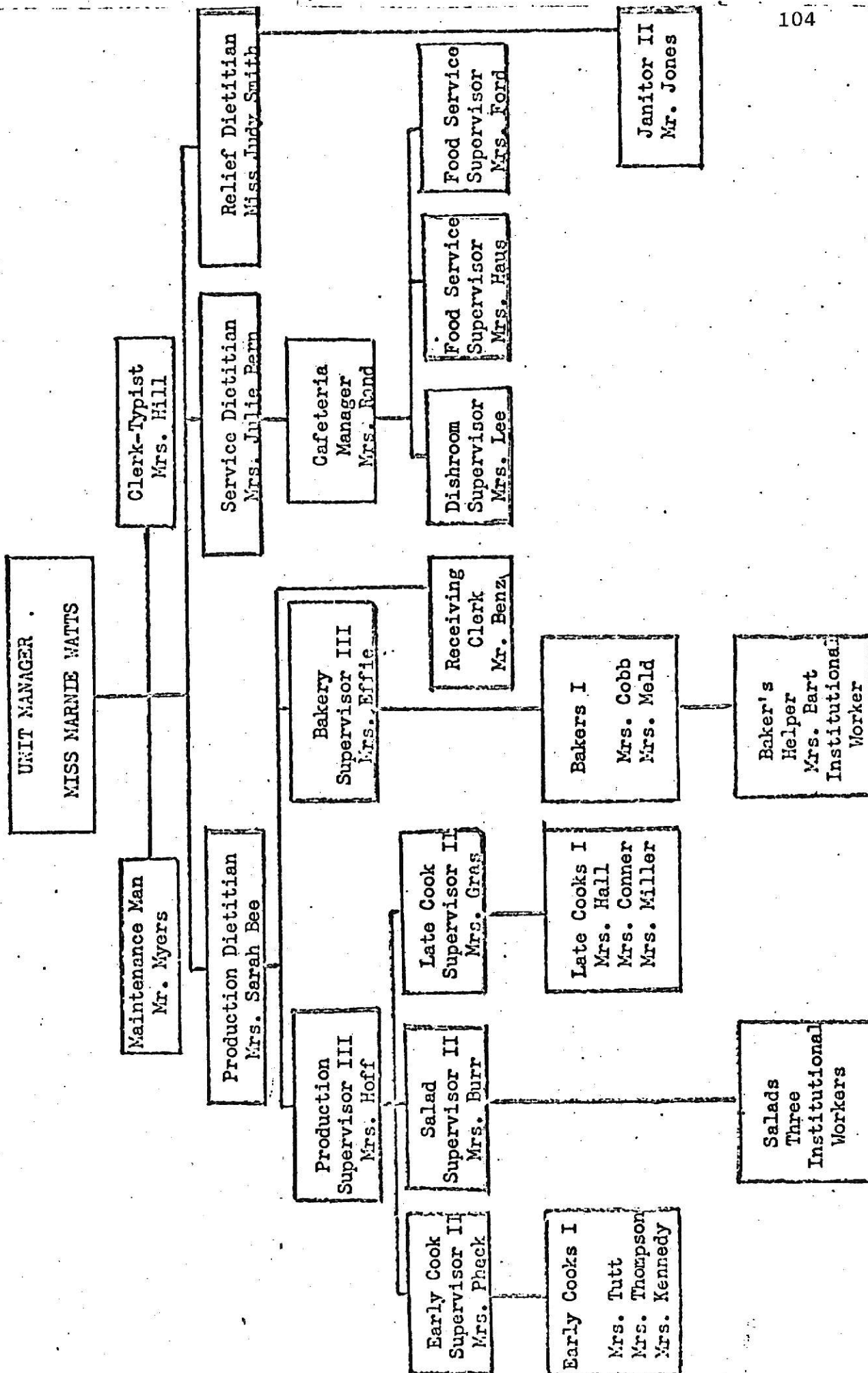
All items on the menu are expected to be available throughout the meal period. When a substitution is made, it should be as popular as the item it replaces. The last person through the cafeteria line pays the same amount as the first customer.

CENTRAL STATE UNIVERSITY
FOOD SERVICE ORGANIZATIONAL CHART

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CRANE FOOD CENTER
ORGANIZATIONAL CHART



CENTRAL STATE RESIDENCE HALL FOOD SERVICE MENU

Meal Hours: Breakfast: 6:30-8:15 Lunch: 10:45-12:45 Dinner: 4:50-6:15

Breakfast	Date	LUNCH	Entree	Potato	Vegetable	Salad	Bread	Dessert
Blended Juice Assorted Cold Cereals Oatmeal Pancakes with Syrup Hard or Soft Cooked Egg Bacon Slice Toast, Jelly, Beverage	Thurs. Jan. 15	LUNCH	Corned Beef Sandwich on Rye or Beef Noodle Casserole		Cream Style Corn	Cottage Cheese Tossed Greens		Glazed Doughnuts Fresh Fruit
Apple Juice Assorted Cold Cereals Pettijohns Scrambled Eggs Canadian Bacon Cinnamon Coffee Cake Toast, Jelly, Beverage	Fri. Jan. 16	LUNCH	Barbequed Chicken.	Parsley Buttered	Canned Peas	Peach Pinwheel Lettuce Cubes	Hot Rolls	Cherry Pie Frozen Strawberries
		LUNCH	Hamburgers on Bun		Vegetable Soup Fruit Punch	Sliced Tomato Salad or Pear Half with Grated Cheese		Gingerbread Popsicle Fresh Fruit
		DINNER	Roast Beef	Whipped with Gravy	Succotash Carrot Coins	Blue Plum Salad Tossed Salad	Texas Toast	Chocolate Ice Cream Slice Frozen Mixed Fruit
Buffet Breakfast Assorted Fresh Fruits Rice and Raisins Bacon Slices Sliced Ham Sausage Links Hot Biscuits	Sat. Jan. 17	LUNCH	Chef's Salad Bowl or Grilled Cheese Sandwich		Cut Green Beans Potato Soup	Tokay Grape Salad Deviled Egg Halves		Oatmeal Cookies Tangy Rhubarb Fresh Fruit
		DINNER	Meat Loaf	French Fries	Mixed Vegetables	Bing Cherry Mold	Hot Rolls	Cream Puffs Apricot Halves
Orange Juice Assorted Cold Cereals Fried Egg, Bacon Slice Sweet Roll or Toast, Beverage Jelly	Sun. Jan. 18	DINNER	Glazed Baked Ham	Rissole	Cinnamon Apple Slices	Tossed Greens	Hot Rolls	Peach Refrigerator Dessert

CENTRAL STATE RESIDENCE HALL FOOD SERVICE MENU

Breakfast	Date	Entree	Potato	Vegetable	Salad	Bread	Dessert
Orange Juice Assorted Cold Cereals Farina	Mon. Jan. 19	Salmon Salad with Chips or Weiners with Baked Beans	Potato	Wilted Lettuce or Limeade	Cari-Fruit Salad Pickled Beets		Baked Custard Drumstick Fresh Fruit
French Toast Sausage Link Raisin Toast Toast, Jelly, Beverage		Baked Pork Chops	Oven- Browned	Frozen Peas	Waldorf Salad Tossed Salad	Sour Cream Muffins	Devils Food Cake with Chocolate Icing Royal Anne Cherrie
Grape Juice Assorted Cold Cereals Pettijohns	Tues. Jan. 20	Beef-Tomato Casserole or Cheese Balls on Pineapple Ring		Broccoli Spears Wax Beans	Blushed Pear Half Hearts of Romaine with Bleu Cheese	Peanut Butter Cookies Fresh Fruit	
Fried Egg Bacon Slice French Coffee Cake Toast, Jelly, Beverage		Country Fried Chicken	Whipped with Gravy	Whole Kernel Corn	Pineapple Cube Salad Chinese Salad	Hot Rolls	Cherry Crisp with Whipped Topping Grapefruit Section
Tomato Juice Assorted Cold Cereals Oatmeal	Wed. Jan. 21	Creamed Chipped Beef on Baked Potato or Reuben Sandwich		Beef Rice Soup Chilled Apple Juice	Peach Half Salad Lettuce Wedge		Baked Date Pudding Fudgesicle Fresh Fruit
Baked Egg Ham Slice Sweet Roll Toast, Jelly, Beverage		Baked Steak-au- Jus	Franconia	Buttered Asparagus Fordhook Lima Beans	Shimmering Salad Relish Plate	Crescent Rolls	Lemon Angel Food Dessert Frozen Red Raspber

CRANE FOOD CENTER

EMPLOYEE SCHEDULE

HOURS	NAME	DEPARTMENT	Week I							Week II						
			Sun.	M.	T.	W.	Th.	F.	Sat.	Sun.	M.	T.	W.	Th.	F.	Sat.
6:30-3:00	Hoff	Cooks	x				x					x				x
5:30-2:00	Pleck	Cooks			x				x					x		
5:30-2:00	Tutt	Cooks	x	x						x		x				x
5:30-2:00	Thompson	Cooks	x					x					x			x
5:30-2:00	Kennedy	Cooks				x			x						x	
10:30-7:00	Gras	Cooks	x				x						x			x
10:30-7:00	Hall	Cooks				x			x						x	
10:30-7:00	Conner	Cooks	x				x									x
10:30-7:00	Miller	Cooks			x				x							
6:30-3:00	Burr	Salad	x							x						
7:00-3:30	Effie	Bakery		x					x							
5:30-2:00	Cobb	Bakery	x		x				x							
10:30-7:00	Meld	Bakery	x			x			x				x			x
9:00-5:30	Bart	Bakery	x				x									x
10:00-6:30	Rand	Cafe	x	x						x						
5:30-2:00	Haus	Cafe	x										x			x
10:30-7:00	Ford	Cafe				x										
5:30-2:00	Benz	Receiving	x						x							x
6:30-3:00	Lee	Dishroom	x				x					x				x
11:00-7:30	Jones	Janitor	x	x												
7:30-4:30	Myers	Maintenance	x						x							x
8:00-5:00	Hill	Clerk-Typist	x						x							x

TELEPHONE NUMBERS

Administrative Assistant, Business Operation, Jeff Wiley	2-6005
Administrative Assistant, Personnel, Edna Bott	2-6003
Administrative Assistant, Production and Service, Judy Regg	2-6006
Administrative Assistant, Purchasing, Paul Coy	2-6004
City Meat Company	6-5812
Crane Food Center	2-6621
Denny Residence Hall	8-5311
Director of Food Service, Ruth Giggs	2-6002
Director of Housing, Hugh Ward	2-6001
Director of Physical Plant, Ralph Brake	2-6675
East Complex	2-6391
Graves Bakery	6-8765
Ice and Cold Storage Company	6-5665
Laughlin Residence Hall	8-3235
Maintenance Shop	2-6247
State Rehabilitation Center	AC-903-216-4444
West Food Center	2-6559

DECISIONS AND REASONS

On the "Decision and Reasons" form you will write your decision or action taken (what you did) and explain the reason why you made the decision or took the action.

In the first column is space to list the number of each in-basket item. (Each item in your in-basket is numbered at the top of the page.) In the corner of each block in the first column you will notice a little box, in which you are to indicate priorities. Write 1, 2, 3, 4, 5, or 6 in each box according to the following code:

- 1 = Highest priority; the item must be dealt with in the hour.
- 2 = Higher priority; this item must be dealt with today.
- 3 = High priority; it would be best to deal with this item today if at all possible.
- 4 = Medium priority; this item need not be dealt with today but in the next day or two.
- 5 = Low priority; this item can wait a week or so if necessary.
- 6 = Lowest priority; this item can wait a month or more.

Column two is headed "My Decision". Here you are to state briefly the central meaning of what you did. You might write, for example, "Refer the problem to Miss Watts", "Write a letter", "Set up an appointment", or "Call a meeting".

In column three, headed "Reason", write why you made your decision (the reason may not be clear from the decision itself). For example, if in column two you wrote "Call a meeting", you might write in column three "Want more information and facts regarding how the problem happened". In column three you have an opportunity to make clear your motives for doing what you did.

ITEM NO. 1

After reporting for work and changing into uniform, you take a quick look at the cafeteria line while the employees are being served. You notice that the cream of potato soup appears curdled.

ITEM NO. 2

Saturday
morning

Mrs. Bee

The frozen peaches were not pulled from the freezer yesterday. I realized this when I began to prepare the peach refrigerator dessert for Sunday. The recipe states the peaches are to be thawed. What shall I do?

Mrs. Cobb

ITEM NO. 3

You are interrupted by a phone call at 11:00 a.m. from
Sally Neff, social chairman, Laughlin Hall.

Mrs. Bee: "Good morning, Mrs. Bee speaking."

Sally: "The Central State University Association of Residence
Halls is having a dance in the field house on Monday,
January 19, 1970, at 7:00 p.m. Since Laughlin Hall is
hosting the event, I would like to know if Crane
could furnish punch for 1,000 people."

Mrs. Bee must make a decision.

January 17, 1969

Mrs. Bee,

Yesterday we made 700 servings of Bing Cherry Malt according to the recipe. The cans of Bing Cherries were labeled "pitted". Today I tasted the gelatin and the cherries are not pitted.

What is your recommendation?

Mrs. Burk

Mrs. Thompson, an early cook, comes into the office. The time is 11:15 a.m.

Mrs. Bee: "Can I help you Mrs. Thompson?"

Mrs. Thompson: "Yes, almost all residents are choosing the
grilled cheese sandwich for lunch and I feel
we will run out."

Mrs. Bee: "It must be the cold weather."

Mrs. Thompson: "What do you want me to do for a back-up?"

Mrs. Bee,

1/17

The ice machine is low on ice
and I don't feel it will last over
the noon hour

Mrs. Rand;

RESIDENCE HALL FOOD SERVICE
WORK ORDERDate 1/17/70Time 8:25 a.m.Area DishroomFood Center CRAWAttention MRS. BEE

Work Requested

THE SOILED DISHBENT CONVEYOR ON THE
WEST SIDE OF THE BUILDING STOPPED
WORKING THIS MORNING DURING BREAK-
EAST. WE RACKED THE DIRTY DISHES
ON REFRIGERATOR RACKS TO FINISH
THE MEAL. WHAT SHOULD WE DO
FOR LUNCH SERVICE?

MRS. BEE
Signature

ITEM NO. 3

Saturday
Morning

Mrs. Bee

We made two batches
of cream puffs following
the recipe. The first batch
made yesterday is beautiful.
The second batch made
this A.M. is only 1" high
and looks half the size
of the first batch. Please
give me a decision when
you come in.

Mrs. Bell

RESIDENCE HALL FOOD SERVICE
CENTRAL STATE UNIVERSITYTO Mrs. Bee
DATE Jan. 17 TIME 6:30 am

WHILE YOU WERE OUT

Mrs. Hoff
of Cook's Dept.

Phone _____

Telephoned...☒ Please Call....

Called to see you..... Will call again.

Wants to see you..... Urgent.....

Message She is ill todaywith the fluMrs. Thompson
Signature

ITEM NO. 10

CENTRAL STATE UNIVERSITY
Residence Hall Food Service

To: S. Bee Date: January 16, 1970

From: M. Watts

Attached is letter received today from student living in Laughlin Hall. Please handle this since it is your area.

Laughlin Hall
Central, Kansas
January 15, 1970

Dear Dietitian,

My roommate and I have been rather disappointed in the selection of cold cereals at breakfast. Last year Post's Grape Nuts were offered quite a bit, and seemed to be very popular with the girls. Could you possibly offer it again? Another cereal that is a favorite among many of the girls is Post's Raisin Bran. We would like to see more of it, too.

For the most part, I think the meals have been very good this year. I have especially liked the variety of breads and rolls at dinner.

My only other complaint is that I am getting hungry for French toast.

I hope that these comments will help you in your job as a dietitian.

Sincerely yours,

Ellen Vonderschneider

Ellen Vonderschneider

CENTRAL STATE UNIVERSITY
RESIDENCE HALL FOOD SERVICE

MEMORANDUM

TO: S. Bee

DATE: January 16, 1970

FROM: E. Bott

The civil service rating form for Mrs. Kennedy was delayed by the State and it arrived only yesterday. It must be completed and signed and in my office by Monday.

ITEM NO. 11

STATE PERSONNEL DIVISION
STATE CAPITOL BUILDING

EMPLOYEE EVALUATION

Name Mrs. KennedyRating Period 1/69-1/70Position Cook IAgency Central State

	Out- standing	Above Average	Average	Below Average	Unsatis- factory
1. <u>QUALITY OF WORK</u> - Interest taken in doing things right.					
2. <u>QUANTITY OF WORK</u> - Ability to work rapidly, accurately and efficiently.					
3. <u>DEPENDABILITY</u> - Follows instructions, punctuality, attendance, reliable, etc.					
4. <u>ATTITUDES</u> - Cooperativeness, getting along with others, cheerfulness, willingness to take directions, etc.					
5. <u>INITIATIVE</u> - Willingness to do more than required without being told. Looking for ways to improve methods and procedures.					
6. <u>JOB KNOWLEDGE</u> - Knowledge of duties and responsibilities of the job and ability to perform them.					
7. <u>JUDGMENT</u> - Ability to reach sound decisions through logical reasoning. Ability to anticipate problems and take steps to solve them.					
8. <u>FLEXIBILITY</u> - Ability to adjust to sudden changes, duties, different surroundings; and emotionally stable, etc.					
9. <u>HOUSEKEEPING AND APPEARANCE</u> - Grooming, cleanliness, regard for sanitation, orderliness, etc.					

10. WHAT ARE THE BEST QUALITIES OF THIS EMPLOYEE?

11. IN WHAT WAY CAN THIS EMPLOYEE IMPROVE?

EMPLOYEE'S SIGNATURE

RATER'S SIGNATURE

DATE

ITEM NO. 12

CENTRAL STATE UNIVERSITY
Residence Hall Food Service
Memorandum

Date: January 16, 1970

To: S. Bee

From: J. Smith

Last night during the dinner hour the meat slicer stopped. The cooks had to cut the roast by hand and larger portions resulted. We used 50 pounds of the ground beef for the meat loaf and made hamburger steaks to make our count.

ITEM NO. 13

CENTRAL STATE UNIVERSITY
Residence Hall Food Service
Memorandum

Date: January 16, 1970

To: Mrs. Bee

From: Mrs. Hill

While checking time cards I found Mrs. Effie, bakery supervisor, is working over her scheduled hours. Some days she checks in early and some days she checks out late. I understand she even works after checking out in the afternoon.

ITEM NO. 14

CENTRAL STATE UNIVERSITY
Residence Hall Service
Memorandum

Date: Friday

To: Mrs. Bee

From: Mrs. Hill

Mrs. Scott from the State Rehabilitation Center was in this morning to talk with you regarding present employees and any openings you may have for people from the state center.

She would like to see you sometime soon. I said you would contact her in the near future.

"Routing Slip"
Residence Hall Food Service

From: R. Giggs Date: 1/16/70

To:	For:
☐ H. Ward	☐ Circulation
☐ R. Giggs	☐ Filing
☐ E. Bott	☒ Information
☐ P. Coy	☐ Return
☐ J. Wiley	☐ Comments
☐ J. Regg	
☒ Crane Food Center	
☐ West Food Center	
☐ East Complex	

ITEM NO. 15

CENTRAL STATE UNIVERSITY CENTRAL, KANSAS

Physical Plant Department

January 15, 1970

Miss Ruth Giggs
Director, Residence Hall
Food Service
Pitt Building
Campus

Dear Miss Giggs:

Due to a emergency repair needed in the steam line on the campus,
the steam service to Crane Food Center will be turned off between 2:00 -
4:00 p.m. Saturday, January 17, 1970.

Sincerely yours,

Ralph Brake

Ralph Brake
Director, Physical Plant

RB/sc

ITEM NO. 16

CENTRAL STATE UNIVERSITY
Residence Hall Food Service
Memorandum

Date: January 16, 1970

To: S. Bee

From: M. Watts

Mrs. Bart, bakery dept., resigned effective next Tuesday. Her husband had last minute change of military orders and she will leave with him Tuesday.

Mrs. Bott's office is preparing resignation papers which she needs to sign. Please make the necessary decisions regarding food production in the bakery while the position is vacant.

Meat, Poultry, Fish Order

126

Food Center CraneDelivery Date Friday 1/16/70

Item	Specification	Date, Meal to be used	Amount Ordered	Amount Received	Difference
Ground Beef	Med grind	1/17/8	200 lbs	200 lbs	0
Sliced Bacon	18 slices/lb.	1/18/8	10 lbs	15 lbs	+ 5 lbs.
Borderless Bar & Home	9-10/lbs ea.	1/18/8	175 lbs	182 lbs	+ 7 lbs.
Sausage Links	16/lb	1/19/8	45 lbs	45 lbs	0
Weiners	10/lb	1/19/8	200 lbs	200 lbs	0
Bacon Ends & Pieces		1/19/8	20 lbs	20 lbs	0
Center Pork Chops	6 oz. ea	1/19/8	^{1200 portions} 450 lbs	390 lbs	- 60 lbs.
Sliced Bacon	18 slices/lb.	1/20/8	40 lbs	45 lbs	+ 5 lbs.
Ground Beef	Chili grind	1/20/8	180 lbs	180 lbs	0

Mr. Coy sent word with the driver regarding this delivery. Bacon comes in 15 lb. boxes. He was short 160 pork chops and wanted to know what to do.

Mr. Berg

APPENDIX C

Criteria	:	X	:	XI	:	XII	:	XIII	:	XIV	:	XV	:	XVI	:	XVII
Suitability	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Involvement	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Simplicity	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

Overall Rating: List the items in order as being the most representative of the wide variety of tasks encountered by you in your position as a residence hall food production dietitian.

FOOD PRODUCTION MANAGEMENT

NAME _____ DATE _____

Area of work you plan to enter _____

Evaluation comments:

Quality control begins with which of the following?

- A. Well trained cooks
- B. Good raw products
- C. Adequate personnel
- D. Adequate plant facilities
- E. Portion size

The preliminary preparation of any food item to be served raw has the greatest effect on which of the following?

- A. Nutritive value
- B. Type of labor needed
- C. Type of equipment needed
- D. Final appearance

When food being prepared is not up to quality incorrect methods of preparation can sometimes be overcome by:

- A. Adding the correct seasonings
- B. Reworking it into a different product
- C. Adding something else to the menu
- D. Throwing it out and starting over

In ordering choice cut outside round beef roast for dinner, your cooking and other losses will amount to what per cent of the total weight?

- A. 35%
- B. 10%
- C. 5%
- D. 50%
- E. 12%

When a food item being prepared for service is below quality you should:

- A. Serve it with a garnish
- B. Provide an acceptable substitute
- C. Discard the recipe or timing chart
- D. Explain to the customer that it is below quality
- E. Call a cooks meeting immediately

The best references for forecasting future needs of food is:

- A. Consulting the customer
- B. Inventorying to see what has been used
- C. Consulting past consumption records
- D. Consulting cooks

If actual costs show a wide deviation from the predicted budget what would you do first to find the reasons?

- A. Re-evaluate the menu costs
- B. Take a physical inventory
- C. Check the kitchen operation
- D. Consult the records

Which of the items listed below is the largest controllable item of expenditure?

- A. Food
- B. Labor
- C. Customers
- D. Equipment replacements
- E. Utilities

A perpetual inventory gives immediate information concerning the date of purchase, vendor, brand, price paid, the issues and the amount on hand after the last issue. Its greatest value is:

- A. To keep storerooms and refrigerators in order
- B. To keep the buyer informed of goods needed
- C. To help the cooks find shelf items
- D. To insure the using of old items first

To establish cost control, which of the following is most important in purchasing food items?

- A. Quality of items received
- B. Price paid per unit
- C. Methods of receiving and storing
- D. Methods of using

Planning an all-over labor budget to prevent labor waste means:

- A. Planning the menu so that everyone is busy all the time
- B. Utilizing labor between departments to meet production
- C. Letting employees help plan production schedules
- D. Hiring enough people to cover all possible needs

A cook and a supervisor are discussing the assembling of a casserole for the next day. Which of the following steps should they consider first?

- A. Assembling of ingredients
- B. Assembling of equipment
- C. Determining who would prepare it
- D. Reading the recipe

The baker has always restricted her production to baked goods and refused to help with assembling other dessert items. Which of the following would be the best way to approach re-establishing responsibility?

- A. Stress the importance of doing your own work
- B. Re-evaluate the area in conference with the baker
- C. Insist that she do things your way
- D. Write new job descriptions including all items she is to prepare

To enhance relationships and keep control, a good supervisor will do which of the following?

- A. Stay at her desk and take care of her own work
- B. Wait for employees to come to her with problems
- C. Spend as much time as possible on the floor
- D. Discourage employees from telling her their problems

The training of a new employee in a small operation is better handled by which of the following:

- A. Another employee of equal rank
- B. Another employee of less rank
- C. Let her work things out by herself
- D. Do the initial training yourself

Batch cooking means:

- A. Cooking the total amount in one batch
- B. Cooking in a steam kettle
- C. A process referring only to certain food items
- D. Continuous cooking to the demands of service

An advantage of cooking to the line in cafeteria service is:

- A. You never run out
- B. Greater palatability and nutritive value
- C. The cook has more time for other things
- D. No one has to wait in line

On cafeteria lines service is more satisfactory from all aspects if:

- A. All food is prepared when the line opens
- B. No food is ready until the line opens
- C. Food is prepared on request
- D. Preparation is timed to the demands of service

To make oil stay in suspension when making salad dressings it should be added to the emulsion in which of the following ways?

- A. Very slowly
- B. Very rapidly
- C. All at once
- D. Just before serving time

The proportion of gelatin dessert to liquid for plain gelatin is:

- A. 1/2 cup per gallon liquid
- B. 1/2 cup per quart liquid
- C. 1/2 cup per pint of liquid
- D. 1 cup per pint of liquid
- E. 1 cup per gallon of liquid

Which of the following fruits (fresh or frozen) contains an enzyme that will destroy the setting power of gelatin?

- A. Apple
- B. Raspberry
- C. Plums
- D. Grapefruit
- E. Pineapple

Which of the following salads loses quality most rapidly?

- A. Tossed greens
- B. Mixed fruit
- C. Sliced fresh tomatoes
- D. Wilted lettuce salad

If you want to make 100 - 2/3 cup (2 1/2 oz.) servings of tossed green salad, how many pounds of greens (AP) will you order?

- A. 18-20 pounds
- B. 25-28 pounds
- C. 12-15 pounds
- D. 30-32 pounds
- E. 5-10 pounds

The thin liquid used for bases flavored by soluble substances from meat, poultry or fish, vegetables and seasonings is called:

- A. Broth
- B. Stock
- C. Bouillon
- D. Gravy
- E. Soup

A mixture of half fat and half flour by weight used as a thickening agent is called:

- A. Au jus
- B. Sauce
- C. Emulsion
- D. Roux
- E. Broth

The thickening power of starch is lost when the mixture becomes too:

- A. Hot
- B. Dry
- C. Alkaline
- D. Sweet
- E. Acid

Should an emulsion break (curdle) it can usually be re-formed by:

- A. Boiling rapidly
- B. Slowly adding cold milk or water to mixture
- C. Slowly adding mixture to a small amount of hot water
- D. Adding a small amount of thickening agent

The flavor and aroma of ground coffee is maintained for a longer period if stored at:

- A. 98°F
- B. 50°F
- C. 37°F
- D. -4°F
- E. -32°F

For a better flavor, water used for brewing coffee should be cold and freshly drawn because:

- A. It contains more oxygen
- B. It prevents discoloration
- C. It makes particles stay in suspension better
- D. It prevents oils from coagulating

If two gallons of water and one pound of coffee are used in a coffee urn you can expect to get which of the following amounts of brew?

- A. 3 gallons
- B. 2 1/2 gallons
- C. 2 gallons
- D. 1 3/4 gallons
- E. 1 gallon

When substituting cocoa for chocolate the major difference to remember is:

- A. Color pigment
- B. Fat content
- C. Mineral content
- D. Acidity
- E. Caffeine content

When making cocoas and chocolates for drinking the temperature of the mixture should rise to 200°F to insure which of the following?

- A. To prevent the formation of milk scum on top
- B. To make sure the starch is completely cooked
- C. To insure the correct temperature for customer acceptance
- D. To decrease the possibility of curdling
- E. To gelatinize the starch to more stable solution

Which of the following is not a reason for cream curdling when added to coffee?

- A. Water used in making coffee is too soft
- B. Water used in coffee making is too hard
- C. Cream is too old
- D. Temperature of coffee is too hot
- E. Coffee is high in tannins and acids

Heating milk at below scorching temperatures for a prolonged period of time may do which of the following?

- A. Separate solids from liquid
- B. The emulsification of fat and protein breaks down
- C. Fat globules rise to the top
- D. Darkens and changes the flavor
- E. Enhances color and flavor

Adding soda to acid base milk products is not recommended because:

- A. It will increase chances of curdling
- B. The properties of both are lost through alkaline reaction
- C. Danger of more rapid spoiling of the product
- D. As temperature rises separation begins
- E. Flavor changes and vitamin losses

A more stable product results from dry milk if it is:

- A. Mixed to a thin solution
- B. Mixed and let stand up to two hours
- C. Mixed to a thick solution
- D. Mixed just before using

Fresh food left standing at room temperature for no longer than an hour or two will do which of the following?

- A. Quickly recover if put under proper refrigeration
- B. Quickly recover if put in cold water
- C. Cannot be restored to its original quality
- D. Will not lose any of its original quality

Foods that have been frozen then completely thawed can be re-frozen provided which of the following takes place?

- A. They are cooked first
- B. They are properly wrapped
- C. They have not completely spoiled
- D. They are cooled by refrigeration first
- E. They are put in the right kind of container

Frozen meat items if properly handled may be held in the freezer safely for:

- A. 2 - 3 weeks
- B. 6 - 8 months
- C. 2 - 3 years
- D. 1 - 2 months
- E. 2 - 3 months

Most pathogens can be destroyed by moist heat at 145°F for 30 minutes or 161°F for 15 seconds. This process is called:

- A. Steaming
- B. Sterilizing
- C. Pasteurizing
- D. Boiling

Which type of food media resists bacterial growth best?

- A. Neutral foods
- B. Acid foods
- C. Alkaline foods
- D. All are the same

Cooked foods, still hot but ready for storage should be:

- A. Refrigerated immediately in a shallow pan
- B. Left standing until they reach room temperature
- C. Left standing until partially cooled then refrigerated
- D. Cooled in front of a fan first

Which of the following does not affect portion sizes?

- A. Type of food
- B. Type of meal
- C. Type of patron
- D. Cost of food
- E. Number of employees
- F. Portion appearance

Portion sizes must first be established when?

- A. On the cafeteria line
- B. Before making out production sheets
- C. Before pulling recipes
- D. Before making the menu
- E. Before ordering is done

A written description which tells everything one wants to know concerning the qualifications of a person required for the job and the requirements of the job is called which of the following?

- A. Job qualification
- B. Job analysis
- C. Job identification
- D. Job specification
- E. Complexity of job

A written description of a job containing detailed instructions and timing for the purpose of obtaining better performance and a more standardized output is called:

- A. A work sheet
- B. Work simplification
- C. Job specification
- D. Job analysis
- E. Menu

Studies have shown that a worker in quantity food production produces what percent of the time?

- A. 25%
- B. 45%
- C. 80%
- D. 60%

Planning the manpower hours available at any one time limits which of the following?

- A. Need for employee scheduling
- B. Budget
- C. Type of equipment
- D. Need for employee training
- E. Choice and combination of foods

In dishwashing machines, a solution with high wetting properties helps:

- A. Sterilize
- B. Induce friction
- C. Eliminate spotting
- D. Keep the water clean

Which of the following is the best all-purpose cleaning solution for stainless steel?

- A. Scouring powder
- B. Silver cleaner
- C. Diluted bleach
- D. Soap and water

The U. S. Public Health code recommends that the temperature for wash water in automatic dish machines be:

- A. 140 - 160°F
- B. 100 - 120°F
- C. 200 - 220°F
- D. 98 - 100°F

According to the above question how hot should the final rinse be?

- A. 140°F
- B. 160°F
- C. 180°F
- D. 200°F

A dinner meat was not delivered until later than expected, as a result it will no longer be possible to follow the cooking schedule previously decided on. Which of the following solutions is advisable?

- A. Increase temperature of cooking equipment to be used
- B. Cut the meat in smaller pieces
- C. Substitute a back-up item
- D. Put it in the steamer first

One of the most difficult standards to set and maintain in food service is:

- A. Quality control
- B. Portion control
- C. Sanitation
- D. Recipe

Standardizing serving sizes and which of the following are essential in developing quantity control:

- A. Cooking in batches
- B. Careful employees
- C. Proper forecasting
- D. Good equipment

To insure a satisfactory product made with whipping cream you should:

- A. Be sure that it is as fresh as possible
- B. Age at least 48 hours to insure maximum stability
- C. Be sure it contains at least 50% butter fat
- D. Be sure it has been homogenized
- E. Warm cream and utensils to room temperature before whipping

Which of the following cheeses incorporate more easily with cooked foods and sauces?

- A. Unaged cheese
- B. Aged cheese
- C. Ripened processed cheese
- D. Mold bearing cheese
- E. Medium curd cheese

Vegetables with a high moisture content are best in quality if:

- A. They are soaked in salt water before cooking
- B. Cooking is started in cold water
- C. They are left covered with water until served
- E. Some slight crispness remains
- F. Seasonings are added before cooking

In quantity cookery, vegetables are divided into four categories and each group is cooked by the method that best suits it. The factors determining these categories are:

- A. Intensity of flavor, moisture and starch content
- B. Color, shape and intensity of flavor
- C. Cooking time required
- D. Amount of doneness required
- E. Amount of acidity, color and flavor

Cooking time for vegetables is in direct relationship to the content of which of these?

- A. Vitamins
- B. Starch
- C. Calcium chloride
- D. Cellulose
- E. Sugar

Cooking time and appearance acceptability of a vegetable are both lessened by the action of:

- A. A sugar
- B. An acid
- C. An alkali
- D. A starch

A brownish or muddy color will result for red vegetables or fruit juice if mixed in which of these types of pans?

- A. Copper
- B. Iron
- C. Steel
- D. Teflon

Potatoes high in starch and low in sugar content are best used for which of the following purposes?

- A. Salads
- B. Creamed
- C. Hash brown
- D. French fries
- E. Boiled

The drained weight of a standard grade canned vegetable will be what percent of the total can weight?

- A. 60 - 65%
- B. 50 - 55%
- C. 90 - 95%
- D. 75 - 80%

In meat fiber which of the following is not changed by cooking and must be broken up to make it tender?

- A. Muscle
- B. Collagen
- C. Connective tissue
- D. Fat

Ripening of meat for at least 7 days after slaughter held at 35 - 40°F is desirable because:

- A. It becomes more tender and moist
- B. Color and appearance are improved
- C. It becomes firmer
- D. Fat penetrates other cells better
- E. It increases cost

If meatballs are fully cooked yet remained red in color which of the following would be the reason:

- A. Improper aging
- B. Traces of some kind of preservative
- C. Frozen eggs
- D. Traces of curing salts

In roasting beef, the thermometer should be placed:

- A. In the fattie part of the roast
- B. In the thick part of the muscle
- C. In the roasting pan
- D. Next to the bone

The best oven temperature for roasting beef is:

- A. 150 - 200°F
- B. 200 - 225°F
- C. 250 - 300°F
- D. 300 - 325°F
- E. 350 - 400°F
- F. 400 °F or above

Fat used in fryers will smoke and break down rapidly if heated above:

- A. 325°F
- B. 350°F
- C. 400°F
- D. Good fat will not break down

Breading is one of the most common coatings used for food. It consists of:

- A. Flouring and battering
- B. Seasoning and flouring
- C. Flouring, moistening and crumbing
- D. Seasoning, flouring and battering

The difference between soft flour and hard flour is due to the amount of which of the following:

- A. Fat
- B. Minerals
- C. Sugar
- D. Protein

Soft wheat flour is best used for:

- A. Bread
- B. Cake
- C. Pastry
- D. Eclair pastes

Keeping dough mixtures refrigerated affects it which of the following ways?

- A. Kills undesirable bacteria
- B. Causes fat to stay in suspension
- C. Gives it a smooth finish
- D. Eliminates need for kneading
- E. Retards gluten development

If a cake falls, a pie crust or cookie crumbles too easily then there is probably too much of which of the following ingredients?

- A. Flour
- B. Salt
- C. Leavening agent
- D. Egg
- E. Shortening

In which of the following products is it desirable to have a large porous interior with strong structural walls?

- A. Yeast bread
- B. Cake
- C. Popover
- D. Biscuit
- E. Pie crust

A cake with an overly dark crust and a high cracked center will result from which of the following?

- A. Incorrect baking temperature
- B. Over mixing
- C. Too much liquid
- D. Too much shortening
- E. Incorrect pan size

Proofing temperatures for bread dough should be:

- A. 50°F
- B. 70°F
- C. 90°F
- D. 110°F
- E. 120°F

Muffin batter, after mixing should appear:

- A. Smooth and silky
- B. Rough and pebbly
- C. Well mixed
- D. Clear and thin

In a butter cake the ingredient of greatest weight is:

- A. Flour
- B. Liquid
- C. Eggs
- D. Shortening
- E. Sugar

In mixing cakes, when fat is creamed, sugar is added, then eggs, the method is called:

- A. Blending
- B. Dumping
- C. Muffin
- D. Conventional
- E. Sponge

The greenish color found in cooked eggs is caused by the combining of sulfur and iron in cooking. This can be avoided by:

- A. Giving the egg mixture a more alkaline base
- B. Cooking at lower temperatures and cooling rapidly
- C. Lengthening the cooking time
- D. Using steam heat instead of boiling water
- E. Using eggs with more aging

Egg whites cannot be beaten if which of the following is present?

- A. Salt
- B. Cream of tartar
- C. Fat
- D. Sugar

Pasteurized milk sours into a bitter-tasting product if left to sour alone but sour milk can be obtained by which of the following methods?

- A. Adding soda to fresh milk
- B. Adding salt to fresh milk
- C. Adding an alkaline product
- D. Adding an acid product
- E. It must be bought already soured from the dairy

Which of the following types of milk is more stable in constitution and will sour less easily?

- A. Reconstituted dry milk
- B. Evaporated milk
- C. Fresh milk
- D. All are the same

In merchandising food, more food items will be sold if:

- A. Garnishes and dishes are elaborate
- B. Elaborate decorations or displays accompany the food
- C. Garnishes and dishes are complimentary to food items
- D. Garnishes and dishes hold the center of attention

MULTIPLE CHOICE

Mark one best answer

What percent of the total cost of a meal is allowed for the potato and vegetable when figuring menu costs?

- A. 50 - 55%
- B. 25 - 30%
- C. 10 - 15%
- D. 5%

The control factor having the greatest influence on a successful food service is:

- A. The budget
- B. The menu
- C. Employees schedules
- D. Job specifications

In balancing work loads a good manager will list (a) capacities of equipment (b) knowledge of skills of workers and which of the following?

- A. Type of service
- B. Production time
- C. Kitchen lay-out
- D. Number of employees

The menu planner's responsibility is completed when he has done three of the following things; which statement is not applicable:

- A. The things that did not get done have been accounted for
- B. The food has been served
- C. The relationship of raw food and labor cost to selling price analyzed
- D. The reaction of the customer has been noted

Menu planning is geared to fit which of the following first?

- A. Available facilities
- B. Needs of the guests
- C. Available employees
- D. Budget
- E. Who the manager is

When food is brought to the table in platters or dishes and served by the host to the guests the service is called:

- A. Russian
- B. French
- C. English
- D. American

If correct temperatures are maintained, cooked foods can be held without nutritive value and appearance loss for approximately:

- A. One hour
- B. Two hours
- C. Four hours
- D. 40 minutes
- E. 20 minutes

In merchandising food the important factor most often overlooked is:

- A. Arrangement of food on line
- B. Smiling well groomed personnel
- C. Clean dishes and ware
- D. Appropriate garnishes

In making service arrangements for a banquet, the single most important service factor is:

- A. That the atmosphere be correct
- B. That the table arrangements and decorations are attractive
- C. All guests must be served the same course at the same time
- D. That the workers have suitable uniforms

The most common cause of failure to maintain good quality food is:

- A. Poor employees
- B. Inadequate facilities
- C. Careless purchasing
- D. Low standards

The most important factor in maintaining uniform quality of food is:

- A. Good cooks
- B. Standardized recipes and methods
- C. Efficient kitchen layout and equipment
- D. Good purchasing practices

The determining factor in establishing proper food portions should be:

- A. Customer needs and desires
- B. Cost per unit to produce
- C. Daily budget allowance
- D. Advice of cafeteria workers

The word standardization as related to recipes implies:

- A. A recipe that has been extended to the correct amount
- B. Each unit has its own set of recipes
- C. Recipes have been corrected to fit available equipment
- D. Deviations from set standards have been corrected

Acceptable recipes can be obtained from any reliable source and extended to large quantities by:

- A. Simple multiplication
- B. Emphasizing correct methods in order of preparation
- C. Using the correct recipe form so it is easily read
- D. Extending each ingredient in correct proportion

You are running a restaurant with adequate plant facilities in the mid-west. Which of the following factors is the most important in deciding to order a fresh or frozen vegetable?

- A. Shipping
- B. Seasonability
- C. Vendor
- D. Equipment
- E. Nutritive value

If you were running a restaurant in Nome, Alaska under the above conditions which of the following would be the most important to consider in making the same decision?

- A. Shipping
- B. Seasonability
- C. Vendor
- D. Equipment
- E. Nutritive value

Which of these items would you schedule to begin cooking first on a production sheet?

- A. Fried chicken
- B. Baked potato
- C. Green beans
- D. Gravy
- E. Coffee

To insure that you receive satisfactory goods for the price paid you must:

- A. Develop written specifications
- B. Check all deliveries received
- C. Use wise buying procedures
- D. Buy brand names

Form 3. Questionnaire for Student Interview

IN-BASKET INTERVIEW

Background

Did you feel this was a real or hypothetical organization?

Did you feel that adequate background material was provided?

What additional background material would you like to see included?

While taking the test, did you think about and use the decision-making steps discussed in class?

Did you feel that adequate time was allowed to study and become familiar with the background material?

In-Basket Items

How did you face the problems?

Sort items?

Priorities?

Go item by item?

Consult background material?

Did you feel any of the items were real?
If so, which ones?

Did any of the items in the in-basket relate to your on-the-job work experience at Kramer Food Center?

If so, which items?

In-Basket Interview page 2

Review of Specific Items

You took such and such action on item 17. Would you explain your decision in more detail.

You took such and such action on item 5. Would you explain your decision in more detail?

You took such and such action on item 9. Would you explain your decision in detail?

Overall

What did you think of the In-Basket?

Did you learn anything by a test of this type?

If you had to take the test again, would you do anything differently?

Perception About the Job

Did you like the organization?

If you were offered a residence hall food production position, at a suitable salary scale, would you take it?

APPENDIX D

Table 12. Dietitians' and instructors' decisions and reasons.

In-basket: item No. : Priority :		Decision	Reason
1	1	Remove Cream of Potato Soup from the Cafeteria line.	Food quality must be maintained. Green beans popular enough.
2	1	Substitute menu item or substitute canned peaches.	Consult menu, check recipe, and keep menu as planned.
2	2	Run cans of frozen peaches through dish machine to thaw.	Follow standardized recipe and keep menu the same.
3	1	Have student call Miss Griggs on Monday.	Decision rests with Miss Griggs. Guidelines stated in background material.
3	3	Call Miss Griggs on Monday for a decision and inform student on Monday.	Decision rests with Miss Griggs. Guidelines stated in background material.
4	2	Do not serve and make menu substitute.	Student might bite into a cherry pit.
4	1	Make a menu change. Melt down gelatin, remove cherries and pit.	Student might bite into a cherry pit. Food cost involved.
5	1	Make more cheese sandwiches. Evening cooks can help out.	Keep menu the same.
5	1	If assumption was made--out of cheese in building--make a grilled meat sandwich.	Easy to make more of a similar type sandwich.
6	1	Call ice company and order more ice. Check with Mrs. Rand first on amount needed.	Need ice for iced tea.

Table 12 (cont.).

In-basket: item No.:	Priority :	Decision	Reason
7	1	Use other dish belt.	Don't need this belt until Monday noon.
4		Have maintenance repair on Monday.	
7	1	Use other dish belt for lunch. Call maintenance shop to see if it can be repaired over the week-end.	Better service to the students.
8	1	Try and determine fault of second batch and prepare another batch.	Keep menu the same.
8	2	Change menu item completely. Freeze first batch.	Have one item on the menu that will last entire meal period.
8	2	Serve first batch and add another choice to menu.	Use cream puffs and follow menu as posted.
9	2	Dietitian take over responsibility and supervise more. Divide work and check production.	When supervisor is off--dietitian takes up the slack and assumes her responsibilities.
10	5	Check with purchasing department to see if raisin bran is available.	Satisfying students and variety of breakfast cereals.
	5	Check with Mrs. Regg to see if French toast can be added to the menu.	Same as above.
	5	Mrs. Bee answer the student's letter.	Public relations.

Table 12 (cont.).

In-basket: item No. :	Priority :	Decision	Reason
11	4	Fill out rating on Monday, talk with Mrs. Kennedy and send rating to Mrs. Bott on Monday.	Rating due in Mrs. Bott's office Monday.
12	3	Fill out rating on Saturday and give it to Mrs. Kennedy Monday A. M. and send to Mrs. Bott.	Rating due in Mrs. Bott's office Monday.
12	2	Call maintenance man to come in and fix slicer.	Need slicer for Ham, Sunday dinner.
12	4	Use 50 pounds ground beef, scheduled for Tuesday lunch, for the meat loaf.	Ground beef is on hand and keep the menu as posted.
12	4	If ground beef for Tuesday is frozen, add a popular second choice.	Meat loaf and a popular second choice should keep students satisfied.
13	4	Since Mrs. Bee is a new staff member, have Miss Watts talk with Mrs. Effie.	Employee policy stated in background material.
14	4 or 5	Mrs. Bee discuss with Mrs. Effie why she is staying over her scheduled hours.	Employee policy stated in background material.
		Have Mrs. Bott contact Mrs. Scott to discuss employment opportunities.	Background material indicates this is Mrs. Bott's responsibility.

Table 12 (concl.).

In-basket: item No. :	Priority :	Decision	Reason
15	2	Check menu. Comes at a down time for bakery and cook production and the vegetable is only item cooked using steam. Notify bakers and cooks.	Keep menu as posted and keep employees informed.
16	4	Work schedule covered until Wednesday. Order emergency bakery items if needed. After Wednesday, change menu if needed. Inform Miss Watts of Mrs. Bart's resignation and call Mrs. Bott to have position filled.	Need to keep bakery production at a level to meet the students' needs.
17	3 or 4	Call Mr. Coy on Monday for a replacement	Must feed students in a satisfactory way.
	3 or 4	Add a second entree choice and run it from the beginning of the meal period.	Must feed students in a satisfactory way.

Table 13. Tabulations from in-basket test, category decision making.

In-basket item No.	Student number												
	1	2	3	4	5	6	7	8	9	10	11	12	13
	Pre- and post-test scores ^a												
1	2-5	4-4	3-2	n-4	2-2	2-5	3-3	2-4	4-2	3-4	3-3	2-3	3-3
2	n-5	2-4	5-3	4-4	4-3	4-3	4-4	3-4	3-4	3-3	3-4	3-4	1-3
3	2-2	2-2	4-3	4-3	n-4	1-4	1-4	4-3	2-2	3-2	n-2	3-3	n-2
4	2-5	3-4	4-3	4-4	3-4	3-4	2-4	2-4	n-3	2-4	3-3	2-3	n-2
5	2-3	4-5	n-4	4-4	2-4	4-5	n-2	2-4	3-3	2-2	5-2	2-2	2-2
6	4-3	4-5	4-2	4-3	5-4	5-4	3-4	2-4	3-4	2-2	5-3	3-3	n-3
7	n-3	3-4	4-3	4-4	3-3	3-2	4-4	3-4	4-4	3-3	4-4	3-4	3-3
8	n-4	3-4	n-3	4-4	4-4	n-3	3-4	4-4	4-3	3-3	4-4	2-4	n-2
9	3-n	2-2	2-3	2-3	2-3	3-3	3-4	4-5	2-4	2-n	n-3	2-2	3-3
10	3-2	n-3	3-4	3-3	n-4	4-2	2-3	3-3	2-3	3-4	n-3	2-2	3-3
11	3-5	2-4	2-3	4-2	n-3	n-2	n-4	2-2	2-2	2-3	2-3	2-3	1-4
12	n-4	2-3	n-5	4-3	n-4	n-4	n-4	2-4	2-2	2-3	2-3	2-4	n-4
13	3-4	3-4	n-4	4-3	n-3	n-3	n-3	2-3	3-3	3-3	n-4	2-3	2-3
14	3-2	n-3	n-3	3-2	n-3	n-2	n-3	5-3	2-3	3-3	n-2	2-2	4-4
15	2-n	4-4	n-4	2-4	4-4	4-4	4-4	3-3	4-3	n-2	4-4	3-3	3-4
16	3-3	4-4	n-4	3-3	n-3	n-4	n-n	2-3	2-3	n-3	3-3	3-3	3-3
17	3-4	2-4	n-2	n-4	3-4	n-3	3-n	2-3	n-4	n-3	3-4	2-4	n-3

^aScale 1 to 5.ⁿItem not attempted.

Table 14. Tabulations from in-basket test, category planning and organizing.

In-basket item No.	Student number												
	1	2	3	4	5	6	7	8	9	10	11	12	13
	Pre- and post-test scores ^a												
1	4-4	4-4	4-4	n-5	4-3	2-5	4-4	2-4	4-4	4-4	4-4	3-4	4-4
2	n-4	2-4	5-4	4-4	2-4	3-4	4-4	4-4	4-4	2-4	3-4	2-4	3-4
3	2-2	1-1	4-2	3-3	n-4	3-5	3-5	4-4	1-2	1-2	n-2	3-3	n-2
4	4-4	2-4	n-3	4-4	4-4	4-5	3-4	3-3	n-4	2-4	2-2	2-3	n-4
5	4-2	5-5	5-5	4-4	4-4	3-5	n-2	4-4	3-4	1-2	4-3	2-2	2-3
6	4-5	5-5	3-2	4-3	4-5	5-3	2-4	1-4	4-3	4-2	5-3	2-3	n-2
7	2-4	2-4	2-2	3-4	3-3	4-3	3-4	4-4	3-4	3-3	2-4	2-4	4-4
8	n-4	3-4	n-3	4-4	3-4	n-3	4-4	5-4	4-4	3-3	4-4	4-4	n-3
9	n-n	1-1	2-2	3-2	1-4	2-3	4-5	3-3	3-5	2-n	n-3	3-2	3-3
10	4-3	n-3	3-4	3-3	n-3	4-3	3-4	4-4	2-4	3-4	n-3	3-4	3-3
11	4-4	3-4	3-3	3-2	n-4	n-4	n-3	2-2	3-2	2-2	3-3	3-4	3-3
12	n-4	2-3	n-4	3-3	n-3	n-4	n-4	3-3	3-3	2-3	2-5	2-4	n-4
13	4-4	4-3	n-3	3-4	n-4	n-3	n-4	4-4	3-4	3-4	n-3	3-3	3-4
14	3-3	n-2	n-3	3-2	n-3	n-3	n-3	5-3	3-3	2-3	n-2	3-3	5-3
15	2-n	4-4	n-3	2-3	2-4	4-3	4-3	4-3	3-3	n-2	4-4	2-3	3-3
16	4-3	4-3	n-3	3-4	n-3	n-5	n-n	3-4	3-4	n-3	3-3	4-3	4-3
17	4-3	3-4	n-2	n-4	2-3	n-4	2-n	3-4	n-3	n-3	2-2	4-4	n-3

^aScale 1 to 5.

nItem not attempted.

Table 15. Tabulations from in-basket test, category written communications.

In-basket item No.	Student number													Pre- and post-test scores ^a
	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	3-4	5-4	2-2	n-4	3-2	2-3	3-4	2-3	4-3	3-3	3-3	1-3	2-3	
2	n-3	2-4	4-4	3-4	4-4	3-4	4-4	3-3	3-3	2-4	3-4	3-4	1-3	
3	3-3	3-3	3-2	4-3	n-4	1-5	1-3	4-3	2-2	1-3	4-2	1-3	n-2	
4	3-3	3-4	n-3	4-4	3-4	3-4	3-3	2-4	n-3	2-3	2-4	1-3	n-3	
5	2-3	4-4	3-4	3-4	3-3	3-5	n-2	2-3	3-3	2-2	3-3	1-2	1-3	
6	3-4	5-4	4-2	4-3	5-4	4-3	3-3	2-4	3-3	3-3	4-3	1-2	n-1	
7	n-3	5-5	4-3	5-4	4-3	3-2	4-4	3-3	4-4	2-3	3-4	3-3	3-3	
8	n-3	3-4	n-4	4-4	3-4	n-3	3-3	4-3	4-3	3-4	3-4	2-3	n-2	
9	3-n	4-2	3-3	3-2	3-3	2-3	2-4	4-4	3-4	2-n	n-3	2-2	3-3	
10	2-2	n-2	3-3	3-3	n-3	4-3	2-3	3-3	1-4	3-4	n-3	1-3	3-2	
11	3-3	3-4	2-3	4-2	n-4	n-3	n-3	2-2	2-2	2-3	3-3	1-3	1-3	
12	n-3	2-2	n-4	4-3	n-3	n-4	n-3	2-2	3-2	2-3	2-4	3-3	n-4	
13	3-4	3-3	n-3	3-3	n-4	n-3	n-3	3-4	3-4	3-4	n-4	2-3	2-4	
14	3-3	n-2	n-3	4-2	n-3	n-3	n-3	4-3	2-3	2-3	n-2	2-2	4-3	
15	2-n	4-5	n-3	2-3	3-4	3-3	3-3	3-3	3-3	n-2	3-4	3-3	4-3	
16	3-2	3-4	n-3	3-3	n-4	n-5	n-n	2-3	3-4	n-2	2-2	3-3	3-3	
17	3-4	3-3	n-2	n-4	3-3	n-5	3-n	2-3	n-2	n-3	3-3	2-4	n-3	

^aScale 1 to 5.ⁿItem not attempted.

Table 16. Tabulations from in-basket test, category productivity.

In-basket item No.	Student number												
	1	2	3	4	5	6	7	8	9	10	11	12	13
	Pre- and post-test scores ^a												
1	3-4	5-4	4-2	0-4	3-2	2-4	3-3	3-2	4-2	3-2	3-2	1-3	2-3
2	0-4	2-4	5-3	3-4	4-4	4-3	3-3	3-3	3-3	2-2	3-3	2-4	2-3
3	3-2	4-4	5-3	4-4	0-4	2-5	1-2	5-3	3-3	3-2	0-2	3-3	0-2
4	3-4	3-4	0-4	5-3	3-4	4-4	3-3	3-3	0-3	2-3	3-3	1-4	0-2
5	2-3	4-5	5-5	3-3	4-3	3-4	0-2	3-3	4-2	2-2	5-3	2-2	1-2
6	3-3	5-4	5-3	5-3	5-5	5-3	3-3	2-3	4-2	2-3	5-2	2-2	0-2
7	0-3	4-5	5-3	5-4	5-4	3-4	4-3	3-3	4-3	3-3	2-4	3-4	3-3
8	0-2	3-4	0-4	4-3	4-4	0-3	3-3	5-3	4-3	3-4	3-3	3-3	0-2
9	4-0	2-2	3-3	3-3	3-4	3-4	3-4	4-4	3-3	2-0	0-2	2-2	3-3
10	3-2	0-2	3-3	4-4	0-4	4-3	3-2	4-3	2-3	3-3	0-3	1-3	3-3
11	4-3	3-4	2-3	4-2	0-4	0-2	0-3	3-2	3-2	2-3	3-3	1-2	1-3
12	0-4	3-2	0-4	4-3	0-4	0-4	0-3	3-3	3-3	2-3	0-3	2-3	0-3
13	3-3	3-4	0-4	5-4	0-3	0-2	0-4	3-3	4-4	3-3	2-4	2-3	3-3
14	3-3	0-2	0-3	4-3	0-3	0-2	0-3	5-3	2-3	2-3	0-2	2-2	4-3
15	3-0	3-4	0-3	3-3	5-4	4-4	3-3	4-4	4-3	0-2	3-3	2-2	4-3
16	4-2	4-4	0-5	4-3	0-4	0-4	0-0	2-3	3-3	0-3	3-2	3-3	3-3
17	3-4	3-3	0-3	0-4	5-4	0-5	4-0	2-3	0-3	0-3	3-3	2-4	0-2

^aScale 0 to 5.

Table 17. Tabulations from in-basket test, category subjective judgment.

In-basket item No.	Student number												
	1	2	3	4	5	6	7	8	9	10	11	12	13
	Pre- and post-test scores ^a												
1	3-4	5-4	3-2	n-4	4-3	2-4	4-4	1-3	5-2	4-2	5-3	3-3	3-3
2	n-4	2-3	5-4	4-3	3-3	4-4	4-4	4-4	4-4	2-2	3-3	2-3	2-3
3	2-2	1-2	5-3	4-4	n-5	1-5	1-4	5-3	1-1	1-1	n-2	3-3	n-2
4	2-4	1-5	n-2	4-4	3-4	4-4	2-4	1-3	n-4	1-3	1-3	2-2	n-2
5	3-2	5-4	5-5	3-4	3-4	2-5	n-1	2-4	4-4	1-1	5-3	2-1	1-2
6	3-3	5-4	4-k	4-3	4-5	5-4	2-4	2-3	4-4	3-2	4-2	1-2	n-2
7	n-2	2-4	5-4	5-3	3-3	2-2	5-4	5-4	3-4	2-3	3-3	5-3	3-2
8	n-3	3-3	n-4	4-3	4-4	n-2	3-2	5-3	5-2	2-3	4-3	3-3	n-2
9	3-n	1-1	1-2	1-2	1-3	3-2	3-3	3-5	3-4	2-n	n-3	2-2	3-3
10	3-2	n-3	4-3	5-3	n-3	5-3	2-2	4-3	2-3	3-3	n-3	2-3	4-3
11	4-4	2-4	3-3	3-2	n-4	n-2	n-4	2-2	3-1	2-3	4-3	2-2	3-4
12	n-3	2-3	n-4	2-3	n-3	n-3	n-3	2-2	2-3	2-3	2-3	2-3	n-4
13	3-4	3-5	n-4	4-4	n-4	n-3	n-4	3-3	4-4	4-4	n-4	3-4	4-4
14	4-2	n-3	n-3	4-2	n-3	n-3	n-3	5-3	3-3	2-3	n-2	2-2	5-3
15	4-n	4-5	n-4	2-4	4-4	4-4	4-3	4-3	4-3	n-2	4-4	4-3	3-4
16	3-3	5-5	n-5	3-4	n-3	n-4	n-n	3-2	3-3	n-3	3-2	4-3	4-3
17	4-3	2-3	n-2	n-5	2-3	n-5	3-n	2-3	n-2	n-3	2-3	4-4	n-2

^aScale 1 to 5.ⁿItem not attempted.

Table 18. Tabulations from in-basket test, category dietitians' decisions.

In-basket item No.	Student number												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Pre- and post-test scores ^a													
1	3-5	5-5	4-4	n-5	3-4	1-5	5-3	2-2	5-3	5-4	4-4	1-3	2-2
2	n-5	2-4	4-4	4-4	4-4	3-4	4-4	3-4	3-4	2-2	3-3	1-4	2-3
3	2-2	1-1	3-2	5-4	n-4	1-5	1-4	5-4	1-1	1-1	n-1	2-3	n-2
4	3-5	1-5	n-2	5-4	2-5	5-4	3-3	1-3	n-4	1-4	1-2	1-2	n-2
5	3-4	5-5	5-4	1-3	4-3	1-5	n-k	2-4	3-4	1-k	3-3	1-1	1-2
6	4-4	5-5	3-3	5-3	5-5	5-3	3-4	2-4	4-4	3-1	4-3	1-2	n-2
7	n-2	3-5	4-3	4-4	2-3	3-2	4-4	3-4	4-4	2-3	2-4	3-4	3-2
8	n-4	3-3	n-5	4-4	4-5	n-2	2-2	3-2	4-2	2-3	1-3	2-3	n-2
9	4-n	2-1	1-3	1-3	1-3	2-2	2-2	4-5	2-5	2-n	n-3	2-3	2-3
10	3-2	n-3	3-3	4-4	n-4	4-3	2-3	4-3	2-2	2-3	n-4	2-3	3-3
11	5-4	3-4	2-3	3-2	n-4	n-3	n-4	2-2	3-2	2-3	3-3	2-3	1-3
12	n-5	3-3	n-4	1-3	n-2	n-4	n-3	2-2	3-3	2-3	2-3	2-4	n-4
13	5-4	5-5	n-4	3-4	n-4	n-4	n-4	3-4	4-4	3-4	n-4	2-4	3-4
14	3-3	n-3	n-3	4-2	n-3	n-3	n-3	5-2	2-2	2-2	n-2	2-2	3-2
15	3-n	5-4	n-4	2-4	3-4	4-4	3-4	3-4	4-3	n-3	3-3	2-3	2-4
16	4-3	4-4	n-4	3-4	n-4	n-4	n-n	2-3	3-3	n-3	2-2	3-3	2-3
17	4-3	2-3	n-2	n-5	3-2	n-4	3-n	3-3	n-3	n-4	2-3	3-4	n-2

^aScale 1 to 5.ⁿItem not attempted.

Table 19. Individual student in-basket test score for each scoring category and gain or loss between pre- and post-test.

Scoring categories: pre- and post-test:	1	2	3	4	5	6	7	8	9	10	11	12	13
Decision making ^a	2.69	2.93	3.44	3.53	3.00	3.33	2.99	2.77	2.80	2.57	3.42	2.35	2.54
Decision making ^b	3.60	3.71	3.06	3.23	3.47	3.35	3.60	3.58	3.06	2.94	3.18	3.06	3.00
Gain or (loss)	.91	.78	(.38)	(.30)	.47	.02	.61	.76	.26	.37	(.24)	.71	.46
Plan. & organiz. ^a	3.46	3.00	3.45	3.27	2.90	3.40	3.29	2.51	3.07	2.14	3.16	2.76	3.36
Plan. & organiz. ^b	3.53	3.41	3.06	3.41	3.65	3.82	3.80	3.59	3.53	3.00	3.18	3.35	3.23
Gain or (loss)	.07	(.41)	.39	.14	.75	.42	.53	1.08	.46	.86	.02	.59	(.13)
Written communic. ^a	2.47	3.60	3.11	3.53	2.90	2.80	2.82	2.76	2.86	2.28	2.83	1.88	2.45
Written communic. ^b	3.13	3.47	3.00	3.00	3.47	3.59	3.20	3.12	3.06	2.88	3.23	2.88	2.82
Gain or (loss)	.66	(.13)	(.11)	(.53)	.57	.79	.38	.36	.20	.60	.40	1.00	.37
Productivity ^a	2.41	3.00	2.18	3.53	2.41	2.00	1.94	3.35	2.94	2.00	2.23	2.00	1.70
Productivity ^b	2.70	3.59	3.24	3.35	3.98	3.53	2.59	3.00	2.82	2.59	2.76	2.88	2.64
Gain or (loss)	.31	.59	1.06	(.18)	1.37	1.53	.63	(.35)	(.12)	.59	.53	.88	.94
Subjec. judgment ^a	3.15	2.86	3.89	3.47	3.10	3.20	3.00	2.94	3.33	2.21	3.33	2.71	3.18
Subjec. judgment ^b	3.00	3.59	3.23	3.35	3.58	3.47	3.27	3.12	3.00	2.56	2.88	2.71	2.82
Gain or (loss)	(.15)	.73	(.66)	(.12)	(.48)	.27	.27	.18	(.33)	.35	(.45)	0	(.36)
Average ^a	2.83	3.07	3.21	3.47	2.86	2.95	2.81	2.87	3.00	2.22	2.79	2.34	2.65
Average ^b	3.19	3.45	3.12	3.27	3.59	3.55	3.29	3.27	3.09	2.79	3.05	2.98	2.90
Gain or (loss)	.36	.38	(.09)	(.20)	.73	.60	.48	.40	.09	.57	.26	.64	.25
Dietitians' decis. ^a	3.54	3.27	3.22	3.27	3.10	2.90	2.91	2.88	3.13	2.14	2.50	1.88	2.18
Dietitians' decis. ^b	3.54	3.69	3.35	3.62	3.70	3.58	3.20	3.24	3.12	2.74	2.94	3.00	2.64
Gain or (loss)	0	.42	.13	.35	.60	.68	.29	.36	(.01)	.60	.44	1.12	.46

^apre.^bpost.

Table 20. Average pre- and post-test class score for scoring categories listed by in-basket test item number.

Item No.	: Decision making		: Planning :organizing		: Written communications:		: Productivity		: Subjective judgment		: Average		: Dietitian's decision	
	: pre	: post	: pre	: post	: pre	: post	: pre	: post	: pre	: post	: pre	: post	: pre	: post
1	2.58	3.15	3.58	4.08	2.75	3.15	2.76	2.85	3.50	3.15	3.03	3.28	3.33	3.77
2	3.25	3.79	3.16	4.00	2.92	3.46	2.84	3.31	3.25	3.38	3.09	3.59	2.91	3.77
3	2.60	2.77	2.50	2.85	2.30	2.72	2.54	3.00	2.40	2.85	2.47	2.84	2.20	2.62
4	3.00	3.62	3.00	3.79	2.60	3.46	2.31	3.38	2.10	3.38	2.61	3.53	2.30	3.46
5	2.66	3.23	3.42	3.46	2.50	3.15	2.92	3.00	2.67	3.08	2.83	3.18	2.50	3.08
6	3.66	3.38	3.58	3.38	2.42	3.00	3.54	2.92	3.42	3.00	3.33	3.13	3.66	3.31
7	3.42	3.46	3.08	3.62	3.58	3.38	3.38	3.54	3.58	3.15	3.41	3.44	3.08	3.38
8	3.44	3.54	3.78	3.79	2.22	3.38	2.46	3.15	3.67	2.85	3.11	3.35	2.78	3.08
9	2.50	3.18	2.25	3.27	2.83	3.00	2.69	2.61	2.17	2.72	2.49	2.96	2.08	2.82
10	2.80	3.00	3.20	3.00	2.50	2.69	2.31	2.92	3.46	2.85	2.85	2.89	2.90	3.08
11	2.20	3.08	2.90	3.08	2.30	2.92	2.00	2.77	2.80	2.92	2.44	2.96	2.60	3.08
12	2.28	3.62	2.43	3.62	2.57	2.85	1.54	3.23	2.00	3.08	2.17	3.28	2.14	3.15
13	2.75	3.30	3.13	3.62	2.75	3.54	1.84	3.38	3.50	3.92	2.79	3.49	3.50	4.07
14	3.14	2.69	3.14	2.77	3.00	2.69	1.69	2.69	3.57	2.69	2.91	2.71	3.00	2.48
15	3.36	3.58	3.09	3.17	3.00	3.00	2.92	2.92	3.64	3.58	3.21	3.26	3.09	3.67
16	2.88	3.25	3.50	3.42	3.00	2.92	2.00	3.00	3.50	3.33	2.97	3.38	2.88	3.67
17	2.57	3.50	2.43	3.25	2.71	3.00	1.69	3.15	2.71	3.17	2.42	3.22	2.85	3.16

Table 21. Comparison of the rank order of students between pre- and post-test, as evaluated by the scorer and dietitians.

Scorer's evaluation (average)		Dietitians' evaluation	
Student number		Student number	
Pre-test	Post-test	Pre-test	Post-test
4	5	1	5
3	6	2	2
2	2	4	4
9	7	3	6
6	4	9	1
8	8	5	3
5	1	7	8
1	3	6	7
7	9	8	9
11	11	11	12
13	12	13	11
12	13	10	10
10	10	12	13

A FOOD PRODUCTION MANAGEMENT IN-BASKET TEST

by

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AN ABSTRACT OF A MASTER'S THESIS

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MASTER OF SCIENCE

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Departments of Institution Management in institutions of higher learning are evaluating the education of individuals for effective managerial performance. Because the opportunity for laboratory experience in management development and decision making often is difficult to provide in an academic setting, simulation offers an alternative technique available.

Sophisticated simulation techniques have been developed within the last 20 years to teach management development. The in-basket is a relatively new method that has proved effective for management training, education, and testing. The in-basket presents a participant with a hypothetical work situation in which he is required to submit in writing, action taken on a series of letters, memos, and other material deposited in his in-basket.

The purpose of this study was to develop an in-basket for possible use as a pre- and post-test for Food Production Management, an undergraduate institution management course. Objectives for the test were to: (1) test students' understanding of the decision-making process, (2) learn if realistic food production problems could be acted upon and answered in an improved manner after a seven-week laboratory experience, and (3) learn if in-basket test results correlated with cumulative grade point average, previous food service experience, results of a food production objective examination, and practical final for the course.

A simulated residence hall food center serving 1200 students was the setting for the test which consisted of 17 items typical of problems faced by a food production dietitian.

The pre-test was administered at the beginning of the laboratory to 13 students in Food Production Management and the post-test was given to the same students after the seven-week laboratory unit.

A five-point scale, with "1" indicating very poor performance, "3" average, and "5" outstanding was used by a scorer and by a panel of dietitians to evaluate student actions on test items. Categories of decision making, planning and organizing, written communications, productivity, and subjective judgment were used for evaluation by the scorer. Dietitians evaluated students on the quality of their decisions. Scores were statistically analyzed by analysis of variance, using least squares and correlation of scoring categories to detect significant differences.

In-basket scores showed a significant difference for all scoring categories except subjective judgment between the pre- and post-test. No significant correlation existed between the in-basket and grade point average, objective examination, or practical final. Productivity, subjective judgment, written communications, and the scorer's average (scorer's ratings) correlated significantly with dietitians' decisions.

All students believed the in-basket was a good learning experience and a majority indicated they were better prepared to

take action on the post-test. Enthusiasm on the part of the students, dietitians, and instructors indicated that the in-basket is worthy of inclusion in future institution management courses dealing with management decision making.