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DEVELOPMENT OF A CRITICAL INCIDENT
PERFORMANCE EVALUATION INSTRUMENT FOR A
COURSE IN DIETETICS AND INSTITUTIONAL MANAGEMENT

by

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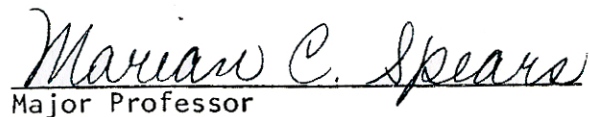
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CHAPTER I

INTRODUCTION

Professionals currently are concerned about the performance of fellow practitioners and this concern is expressed in the goals of professional organizations such as the American Dietetic Association. Attaining professional competency is the ultimate objective of the educational programs monitored by these organizations and has led to the establishment of competency based education.

An inescapable concomitant of the emphasis of professional competency is the necessity of measuring the degree of competence attained by an individual. Competence is the knowledge and actual ability to take correct action in any given situation, based on a set of criteria and level of expectation. Because competence involves much more than an accumulation of knowledge, educational measurements used in the didactic phases of education fail to satisfy the requirements for competency. The cognitive domain permits ready measurement of a student, but it cannot be a reliable indicator of competency in the total practice of a profession. Thus it must be concluded that competence is best judged by observation of a person's behavior when confronted with situations requiring the exercise of the essential skills and judgment of a professional.

The problem of the academician is how to evaluate student development within a competency based educational system. In a coordinated undergraduate program in dietetics, the clinical component provides an opportunity for competency evaluation. The difficulty lies in the measurement of student activity in an environment which simulates the experiences of a practitioner.

The critical incident technique of evaluation for either a student or

practitioner seems well suited for this purpose because it involves observing and recording behavior in actual situations. Further, this technique can be readily applied to the various levels of student development.

This research was addressed to the problem of developing an evaluation instrument using the critical incident technique for one course with a major clinical component in the Department of Dietetics and Institutional Management.

Definition of Terms

Certain terms unique to the critical incident technique were used. The definition of these terms follow:

Incident--any observable human activity that is sufficiently complete in itself.

Critical Incident--activity in which the behavior of the observed is either effective or ineffective.

Behavior--action of the observed person in a particular situation expressed as performance.

Critical Behavior--performance in an activity which is significant either in a positive or negative direction from the expected behavior. (Performance is classified as either good or bad.)

Effective Behavior--critical behavior with positive and beneficial results.

Ineffective Behavior--critical behavior with negative and detrimental results.

CHAPTER II

REVIEW OF LITERATURE

Since the objective of this research was to develop a means of effectively evaluating student performance in a specific course in a dietetics curriculum, the review of literature began with general methods of evaluation. During the literature search, it became evident that the critical incident technique was held in extremely high regard by many specialists in personnel evaluation and especially so in the education of health care professionals. Therefore, the cited literature is predominately related to the critical incident technique.

Evaluation in Dietetic Education

Identification of Needs

In 1971, Light (1) stated that in dietetic education there was too wide a gap between the academic and the real work situation and that too often the indications of the diploma and job competence were not constant. Educational achievement and competence are not necessarily synonymous.

Ricks (2) compared evaluation and measurement and stated that evaluation is not merely simple facts, knowledges, and skills. Although these concepts support the total evaluation process, they must be reviewed, revised, and reconstructed in view of the total personality to be developed. He concluded his discussion by saying evaluation will lead to the improvement of the quality of education.

Ross (3) predicted there would be a need for dietitians with more training, better education and more highly developed skills. In 1974, Bogle (4) cited an American Dietetic Association Committee report which stated that

the desired objectives of the profession could best be met by education for excellence, not only in the primary development of dietitians, but also for the continuing competency of all dietetic practitioners. Competency based education, exemplified in Plan IV for attaining membership in the American Dietetic Association, became a part of dietetic education in 1972 replacing the former academic requirements of specific courses and credit hours (5).

With the advent of credentialing, Pennell (6) in 1973 asserted that adequate methods for measuring competence should be devised and incorporated into the credentialing process. Credentialing is the recognition of professional or technical competence and may include registration, certification, licensure, membership in professional organizations, or attainment of a degree in a field. Certification and licensure determine quality of personnel by providing standards for evaluating competence and defining the scope of functions and methods for using personnel.

Vaden (7) said if professional competence is defined as the knowledge, skills and judgment which a student will demonstrate at a predetermined level, it is equivalent to accountability. Only by defining competence, developing objectives, learning experiences, and evaluation based on the components of competence can accountability be achieved.

Hallahan (8) emphasized the need for development of tools for the assessment of competency, equivalency requirements, performance evaluation, and standards for practice. She further stressed that it was a professional responsibility to develop standards to assure the consumer the accountability and reliability of services.

Hart (9) questioned credentialing itself as a guarantee for high standards of performance. She said credentials should be required to obtain a position, to perform, to keep the position, or to re-enter the job market. If credentialing

means proof of successful completion of an accredited academic program or equivalent experience and proof of competence in the profession, then to meet the objectives, equivalency and proficiency exams would be necessary.

Studies of Performance

Ashe and Lewis (10) in 1965 described the evaluation process used in the Coordinated Undergraduate Program in Dietetics at The Ohio State University which consisted of two phases. In the first phase, the eligibility of prospective students for the program was assessed and in the second, progress of the student in the program was evaluated.

Wenberg and Ingersoll (11) in a study of evaluation procedures for students in the Coordinated Undergraduate Program in Dietetics at The Ohio State University selected the following factors as essential: communicative skills, problem-solving ability, personal-social adjustment, and interest in scientific areas. Standardized test instruments were used to measure these attributes at the beginning of the program. Students were rated by teachers on a five-point scale which was developed from anecdotal records of students' performance in the clinical areas. Behaviors on the rating scale were: work performance, organization of work, work with others, communications, application of knowledge, personal appearance, personal development, management, and teaching ability. Although additional data were needed before generalizations could be stated, a positive correlation was shown between the test scores, rating on the evaluation tool, and grade point average. This indicated the possible use of the test battery as a selective and guidance tool.

Wenberg et al. (12) used the same test battery in selecting behavioral qualities of dietetic interns. The objective of the study was the identification of changes in desired behavioral qualities of the dietetic intern

between the beginning and the end of the internship. Accordingly, standardized test batteries to measure communication skill, problem-solving ability, personal social adjustment, and interest in scientific areas were administered at the beginning and repeated during the final month. Three independent raters completed a rating scale consisting of the following performance items: desire to achieve, working with people, and intellectual quality. Each item had a five-point scale describing the range of behavior which complemented the test score data. In general the tests showed minimal behavioral quality change. There were positive relationships between some of the criteria in the test batteries and those of the faculty ratings. The conclusion from the tests indicated little change of the attributes measured after one year of internship.

Bedford's study (13) in 1975 identified competencies in the affective domain, as designated by Krathwohl et al. (14), of the entry level dietitian and established criteria for measurement of these competencies. The study was divided into three stages. First, a list of affective competency statements for minimal performance at entry level into the profession were generated using the Delphi technique, in which nineteen members of The American Dietetic Association constituted a panel. Second, dietetic practitioners and faculty identified, in measurable terms, a set of behaviors to go with each of the competency statements developed by the panel. In the third stage, thirteen members of the Delphi panel analyzed and selected those behavior statements which were most descriptive of the affective competency statements. The panel related the behaviors to five competency categories--human, technical, conceptual, personal, and professional.

Tower and Vosburgh (15) in 1976 developed a rating scale for appraisal of student learning in an introductory clinical course in dietetics. The

method involved the analysis of course objectives to determine the areas of learning which were appropriate and valid to measure in the clinical environment, specification of observable and one-dimensional behaviors seen as components of the overall objectives, and concise definition of the rating continuum for each behavioral component. The specificity of the instrument was related to its emphasis on formative, as well as summative evaluation. Individuals with experience in clinical dietetics and teaching used the instrument in a simulation exercise and affirmed the validity of the general content, its behavioral components, and the practicality of the tool.

Vosburgh et al. (16) tested the same rating scale instrument under actual conditions of a clinical course. Students were observed and rated on the five-point scale by two raters independently. The conclusion was that the instrument was practical to use but that the raters needed training in using the scale. The formative properties of the instrument were of value in student counseling and its objectivity seemed sufficient for the summative grading of students.

Performance Rating Methods

Flanagan (17) in 1949 stated the following shortcomings of performance scales: failure to discriminate between individuals, the halo effect, unreliability, lack of standards of raters, and lack of validity. Possible solutions to these inadequacies have been to add more rating points, construct scales to prevent one rating from being in the same column each time, set standards for the number of ratings expected at each level, use more raters and use forced choices. Flanagan believed that these solutions treat the symptoms rather than the sources of the inadequacies. Defining the job in terms of precise behavior, observing actual work performance, and classifying

and recording observations frequently are ways of alleviating the inadequacies.

MacKinney (18) advocated rating performance rather than personal traits. The major advantage is that more than one person can agree to what is being rated. When traits are used for evaluation the rater must first, decide what behaviors make-up the trait; second, observe the behaviors and make reliable generalizations from the sample to the total behavior; third, decide the degree which the behaviors make-up the trait.

Odiorne (19) in 1965 discussed two flaws in performance appraisal systems. The first was known as the halo effect which was the tendency of the rater to over-rate a subordinate. The reverse of the halo effect was called the hypocritical or "horns" effect and was the tendency of the rater to be influenced by conditions such as past performance of the individual, compatibility with the rater, outward impression of the individual, and the raters own expectations.

The management by objective approach to performance appraisal as promulgated by Odiorne (19) has the subordinate establish objectives and complete a self-evaluation under guidance of the superior. Odiorne discussed management appraisal as one of the sub-systems within a larger system of goal-oriented management. He stressed the importance of continuous feedback and that self-measurement against predetermined standards is more effective than a superior's measurement of results. Odiorne defended the management by objectives appraisal system because other methods lack the well defined performance standards or the personality traits necessary for effective management. He said disadvantages of the management by objective appraisal are: it deals only with performance on the present job; appraisal of potential must be done separately; it assumes the manager and subordinate will establish suitable standards; it stresses results only and does not provide a method for

achieving them.

According to Oberg (20) the graphic rating scale was the most widely used for performance appraisal. It consisted of a hedonic rating scale on particular traits or value characteristics critical to the job. Oberg recommended using the essay appraisal for selection purposes only because it is inconsistent in length and content and it is difficult to use for comparison purposes.

Kavanagh (21) stated that the forced choice rating was developed to reduce rater biases and establish standards of comparison between individuals. The rater completes the form by choosing from groups of statements, those which are most or least like the individual being rated. The statements are then scored or weighted. Raters often fear they are not being trusted and try to beat the system, the forms are difficult and expensive to develop, and the completed evaluation is of little value and tends to have a negative effect in the performance appraisal interviews.

Thompson (22) identified performance appraisal as one of the most emotional activities in a business organization which has a great impact on the individual's self-esteem and subsequent performance. He recommended an objective-focused appraisal system because it is future oriented, it is open and allows some positive changes when being compared to self-objectives, and it is flexible.

McGregor (23) advocated an approach of performance appraisal in which the subordinate establishes personal short-term goals and evaluates his performance himself. The manager guides the subordinate by helping him relate his self-appraisal to his plans. McGregor believed this approach stimulates the development of the subordinate, increases motivation, and eliminates resistance by the manager for having to take the responsibility of judging the

worth of a fellow man.

Lahti (24) proposed a management appraisal system of evaluating managerial performance against previously agreed upon goals. This system measures how complete the managers objectives are in relation to the effectiveness of the organization and how effectively performance of these objectives is achieved. He said the advantages of this process are: both the manager and the subordinate agree in advance on a standard of performance; it is based on a manager-subordinate relationship and should strengthen this relationship; it has self-correcting, personal-growth characteristics; it points out individual development needs; and most importantly, it forces the manager to look at the record of managerial successes rather than a subordinate's personality. Lahti stated the major limitation is the need for trained managers and mature personalities.

Keaveny (25) in 1975 evaluated effectiveness of behavioral anchored scales in reducing leniency and halo errors and increasing discriminant validity. He believed this type of scale would provide a more uniform illustration of the meaning of the numbers on the scale. Keaveny concluded that when key decisions are to be made, the extra effort in behavioral anchored scales may be justified.

Borman (26) expressed the opinion that by collecting critical incidents about job performance and using them to define dimensions and to anchor different levels of performance on each dimension, the ambiguities present in most performance rating systems would decrease. He compared three different formats: anchored scales containing the *behavioral description scales* with different levels of performance; nonanchored scales containing the same dimension titles and definition, but no behavioral anchors to define the different levels of performance; trait scales consisting of a series of performance and

personal characteristics. The results did not show a statistically significant difference for ranking one format as superior to the others. Borman concluded that despite the disproportionate time and effort in developing behavior-based formats, they do show more information about job performance and indicate a modest superiority over the others in reducing the usual errors.

The Critical Incident Technique

Studies during World War II by the Aviation Psychology Program of the United States Army Air Force led to the initial development of the critical incident technique of evaluation (27). The first of these studies dealt with the reasons or facts for failure of student pilots. Later studies by the Army Air Force dealt with the collection of specific incidents with effective and ineffective behavior in a designated activity and led to the establishment of categories known as "critical requirements" for combat leadership. Critical requirements of a task were described by Flanagan in 1947 (28), as those activities which make the difference between success and failure in performing important parts of jobs in a significant number of cases. It was believed that these critical requirements which were obtained through systematic observation were most beneficial in selecting, classifying or training individuals for specific jobs than were lists of desirable traits of human beings.

Flanagan (29) emphasized the need to observe a job in terms of behavior in order to obtain the primary data for job requirements. He indicated that one of the greatest problems in determining effective performance is the lack of a definition of the job itself. This job definition provides an almost complete statement of an adequate criterion measure of effectiveness on the job. He stressed that no criterion should omit any part of the job definition.

The general procedure for obtaining critical requirements is: 1) eliminate

all job requirements which are not critical to success or failure of the job; b) conduct a preliminary study of the job and job situation in order to determine most appropriate procedures, type of observers and samples for observations; c) devise suitable procedures for collecting observational data as to past or future observations, who will observe, recording of observations, and types of judgments required of observers; d) collect and analyze data such as grouping similar behaviors together to reveal critical requirements in terms of behavior and select areas and subareas.

Wagner (30) in 1950 used the critical incident technique to improve the selection, training, and evaluation procedures for dentists. Incidents were collected from patients, dentists, and clinical instructors. The patients were asked to recall the incidents which made them refer their dentist to a friend or to change dentists. The dentists described incidents which caused them to either gain or lose patients, or which resulted in a great deal of personal satisfaction, or made them feel they would perform more effectively if given a second opportunity. The clinical instructors reported incidents of either effective or ineffective behavior. A total of 781 behaviors were obtained and then classified into areas such as technical proficiency, patient relationship, and professional and personal responsibility. Under each area the proportion of behaviors from each group was determined. A significant difference was found since patients reported only a few behaviors in the areas of technical proficiency or professional responsibility while instructors reported only a small proportion of incidents in the area of patient relationships.

Jensen (31) formulated a set of critical behaviors which contributed to the effectiveness and ineffectiveness of teaching competency. Teachers, administrator, and teacher-in-training were asked to describe what some teacher

did in a specific situation and at a specific time--something that was significantly effective or ineffective. After determining the usable critical incidents and transferring to separate record cards, the cards were sorted and the incidents classified. Similar behaviors were grouped together. Classification led to the development of three categories believed to be non-overlapping and distinct in concept. The major categories were Personal Qualities which included references to emotional stability, honesty, fairness, and objectivity; Professional Qualities which included classroom practices of the teacher as related specifically to the learning process; and Social Qualities which included the ability to understand and appreciate the feelings of others. Jensen concluded that the critical incident technique might be used in developing valid bases for teacher evaluation.

Collins (32) developed a standardized method of communicating pertinent information from a merit-rating form in an industrial setting. Collins believed ratings that report actual observations were more likely to have the same meaning to different people. Generalizations or conclusions of what was observed were subjective and therefore have different meanings to different people. Collins expressed that it was neither possible or desirable to eliminate all subjectivity and it may be beneficial to have both kinds of information. A checklist was developed using the critical incident technique. In using the evaluation tool, individuals are rated on the checklist then on a general evaluation five-point rating scale which contained three broad generalizations--impression made when meeting others, present performance, and future success.

Weislogel (33) used critical incidents to find information that might improve selection, training, and evaluation of life insurance agency heads. Through the group interview method, individuals were asked to describe the

incidents. These were divided into areas and subareas and then analyzed with respect to the type of incident and characteristics of the individuals supplying the incident. Weislogel concluded that critical incidents provided a preliminary basis for evaluating effective performance.

The improvement of teaching in general psychology courses was the objective of a study by Smit (34). Critical incidents were supplied by students, instructors teaching the course, and psychology staff. Instructors recorded both self-critical incidents in their class and critical incidents from other psychology classes. 2,342 behaviors were obtained from 1,597 incidents. These were divided into three main areas with several subareas and classes within each subarea. Since classifying the behaviors was subjective a reliability study was made which indicated a high degree of agreement between independent classifiers. Analysis involved determining the distribution of behaviors in terms of observer group, sex of observer, year in school or rank, school of observer, month during semester when incident occurred, and month in which incident was collected.

Flanagan et al. (35) in 1956 collected 1,180 incidents from instructor's records of student nurse performance. The categorization led to the development of a performance record consisting of twelve behavior areas dealing with work habits and personal characteristics. The final Clinical Experience Record for Nursing Students provided a systematic, simplified, less time consuming procedure and presented a graphic account of behavior trends on which to base a program for improvement and development. It is objective and can be used with other important information to evaluate students. Flanagan said it takes effort to observe objectively and not permit personal feelings and prejudices to influence observations. Also one must not let temporary moods influence what is observed. He recommended recording observations immediately.

The critical incident technique has been used in the area of salesmanship. Kirchner (36) collected critical incidents from sales managers on salesmen. Of the 135 critical incidents reported, ninety-six were usable and were grouped into broader more meaningful categories. Kirchner believed a rating scale could be developed from these critical incidents. Bridgman (37) developed an objective job description and a performance checklist for salesmen by obtaining critical incidents from sales managers through a written questionnaire.

The major purpose of a study by Gorham (38) in 1962 was to establish a more explicit definition of the current role of the general staff nurse. Other purposes were to develop more objective procedures for evaluating performance of nurses and a predictive measure for selection of students suited to nursing. By questionnaires, specific incidents involving the general staff nurse were sought which the immediate station supervisor, physicians, and patients had observed. The general staff nurses completed both a self-report and one involving other nurses. A total of 2,065 incidents were collected from which 169 had to be eliminated because of insufficient information. These were then typed on separate cards and given to several members of the research staff to categorize. The categorization was based on the behaviors described in the incidents. Incidents involving similar behaviors were grouped together in sub-categories and the subcategories grouped into larger, more inclusive areas of behavior. Reliability was checked by two judges. The final classification consisted of fifteen categories of behavior, grouped into five major areas. The key behavioral statement was taken from each incident and abstracted by selecting statements representative of the groups of statements. This analysis yielded 320 general statements. Further analysis was completed

to determine the degree to which each statement described effective nursing performance and differentiated between the various levels of nursing.

Oberg (20) said the critical incident technique forces management to evaluate performance, not personality. It is ideal for making supervisors observe more closely and the supervisor will gain more knowledge of his/her own performance standards. It is one of the most effective methods for communicating appraisals to subordinates.

Fivars and Gosnell (39) summarized uses of the critical incident technique. It has been used to develop measures of proficiency (evaluation), establish training requirements (teaching), establish selection and classification requirements (screening), design jobs, establish operating procedures, develop equipment design, motivate people to do a better job, and counsel students. They concluded critical incidents provide verifiable, predictive information about performance in contrast to performance ratings which include opinions and personal judgment rather than direct observations of behavior.

CHAPTER III

METHODOLOGY

The purpose of this research was to develop a method for evaluating performance of students enrolled in a junior level course, Foodservice Systems. The evaluation approach was based on the Critical Incident Technique developed by Flanagan (27). In this technique, student behavior in critical activities was observed and recorded. Observations were recorded on individual student behaviors in the clinical, classroom, and independent study settings for one semester. The evaluation instrument consisted of classification of activities into ten major categories. For each category of activity, three to five behaviors of varying degrees of performance effectiveness were identified.

Population

The population for this study consisted of twenty-six dietetic and restaurant management students enrolled in the junior level course, Foodservice Systems, at Kansas State University in the spring semester, 1976. Twenty-four of the students were in the Coordinated Undergraduate Program in Dietetics and two in the Restaurant Management Curriculum.

Foodservice Systems is a six credit hour course consisting of two credit hours of lecture and four of clinical practice. Approximately 30 per cent of the final grade was based on performance in the course. Students were assigned to approximately sixteen hours a week in clinical facilities. For the dietetic students, these facilities were university residence halls, community hospitals, student union and school foodservices. Clinical facilities for the restaurant management students were residence halls, student union,

and commercial foodservices. In addition to the clinical experiences, students also were observed during the three weeks of independent study.

Preparation for Observation

As a first step in this study, guidelines were developed for the observation of critical behaviors including the essential definitions (Appendix A, pg. 41). The profusion of terminology in the available literature made it necessary to establish firm definitions and rules of observation. These guidelines were given to the students and those staff members who would be observers.

Orientation of Participants

The participants who contributed observations of critical incidents were the instructor as a team leader, six clinical instructors for the course, and the dietitians and supervisors in the clinical facilities. Students also recorded observations of performance on themselves and other students.

For both observers and students, several discussion periods were devoted to exegesis of the basic concepts and the modes of observation. During these discussions, it was indicated to the observers that routine activities become critical when performed incorrectly and should be recorded as ineffective behavior.

The researcher, who was also the course instructor, developed detailed objectives for the course. A copy of these was given to the students and clinical instructors and were subject to review during the semester. Observations were to be recorded on student's behavior in the clinical, classroom, and independent study settings based on the course objectives. The clinical instructors were familiar with course objectives and reported incidents to the course instructor. The clinical instructors worked closely with the dietitians and supervisors to verify whether the incidents reported

were truly critical.

Actual observed activities demonstrating critical behavior, not generalizations or opinions about the student, were to be recorded. The descriptions of observations were to be specific and include circumstances leading up to the behavior or consequences of the behavior providing these were relevant. There was no required number of observations of critical incidents because they were to be recorded as they occurred. However, to ensure adequate data, an approximate number of observations per week was suggested in the guidelines.

Forms for Observation

Two forms were developed for recording the critical incidents (Appendix A, pg. 44). In order to expedite analysis, a pink form was used for the recording of the effective behaviors and a green form for the ineffective. Each form included space for identification of the student observed, a check list to identify the observer, an exact description of the incident, the name of the evaluator, and the date. The evaluator was the staff member who was responsible for assigning a final course grade to the student. The name of the student was on the form to aid the evaluating faculty member in developmental conferences with the student. These evaluations constituted an important part of the formulation for a course grade.

Student Attitude Survey

To determine student acceptability of this method of performance evaluation, an attitude survey was distributed to the population of the study (Appendix B, pg. 46). Questions in the survey concerned the amount of beneficial feedback received from reviewing the behaviors with the observer, the fairness of the evaluation, acceptability of this method of performance

evaluation in comparison with others, and whether the student would like this method to be used in other clinical courses.

Development of an Instrument

The incidents reported were reviewed first to determine whether each met the criteria for criticalness. The second phase was the grouping of the observations by activities. The collected observations were divided into groups with similar activities. It was apparent early that there was strong correlation between the possible categories of activities for these students and that used by Flanagan et al. (35) in the Clinical Performance Record for student nurses. Using this record as a model, the following ten categories of behavioral activities were evolved:

1. Planning and Organizing
2. Observing, Reporting and Documenting
3. Checking
4. Applying Scientific Principles to Foodservice Management
5. Adapting to New or Stressful Situations
6. Using Creativity
7. Relating to Instructors, Managers, Employees, Peers and Clientele
8. Judging Professional Values
9. Using Learning Opportunities
10. Accepting Professional Responsibility

For each activity, two sections were devised, one listing behaviors to be encouraged and the other giving suggestions for improvement. The behaviors were arrayed in sequential order from minimal to optimal performance within the categories. For each of these effective behaviors, a suggestion for improvement was listed. Ineffective behaviors might have been listed as such,

however it was deemed better to use the positive suggestions for improvement. A copy of the draft instrument is in Appendix B, pg. 47.

Validation of the Instrument

A group of twelve individuals consisting of faculty and clinical instructors in the Department of Institutional Management and practitioners in foodservice management validated the categories by classifying a sample set of behaviors collected on one student throughout the semester (Appendix B, pg. 48). An explanation of the scheme of classification was not given because all these persons had read the guidelines and it was desired to test the clarity of the draft instrument on the validation panel. Each individual was asked to complete the questionnaire which included the following items: the degree of familiarity with the course objectives, the areas which were the most difficult to interpret, the most desirable order of the behavioral activities on the evaluation form, the interest in using this instrument for student performance evaluation, and any suggestions for improving the instrument (Appendix B, pg. 53).

The final instrument was developed with consideration of the comments from these individuals (Appendix C, pg. 56).

CHAPTER IV

DISCUSSION OF FINDINGS

Critical Incidents

A total of 850 critical incidents were collected by observing twenty six students enrolled in the course, Foodservice Systems; 709 effective behaviors and 281 ineffective behaviors were observed in these incidents. The percentage of behaviors reported by each group of observers is shown in Table 1. As was anticipated, the greatest percentages of behaviors were reported by the clinical instructors since they had the closest association with the students during the clinical experiences. The relatively small percentage of behaviors reported by the students is in part due to their instruction in use of the critical incident technique a few weeks later when the instructors had become comfortable in its use.

Table 1: Percentage of effective and ineffective behaviors reported by each group of observers

observers	effective behaviors (n = 709)	ineffective behaviors (n = 281)
	%	%
1 course instructor	13.7	17.4
4 clinical instructors	63.5	56.6
5 dietitians	1.8	1.4
15 supervisors	2.1	1.1
26 peer	3.5	4.3
26 self	15.4	19.2
total	100.0	100.0

The percentage distribution of the 990 observed behaviors among the categories of behavioral activities is shown in Table 2. The categories of behavioral activities in this table are arranged in descending rank from the maximum percentage of observed behaviors. The highest percentage of observed behaviors was in the category of Planning and Organizing and the lowest was in Judging Professional Values. The low percentage of observations in Judging Professional Values was not unexpected because the students in the class were just beginning the professional course series and have little basis for judgment in this category.

Table 2: Percentage distribution of observed behaviors among categories of behavioral activities ranked

categories of behavioral activities	observed behaviors
	%
planning and organizing	21.8
using learning opportunities	16.4
observing, reporting and documenting	14.6
applying scientific principles to foodservice management	14.5
relating to instructors, managers, employees, clientele and peers	12.0
accepting professional responsibility	6.9
checking	6.2
adapting to new and stressful situations	5.7
using creativity	1.1
judging professional values	0.8
total	100.0

N = 990

Of the total behaviors observed, the percentage distribution of effective and ineffective in each activity category is shown in Figure 1. Each category had more effective than ineffective behaviors; 71.5 per cent of the total behaviors recorded were effective.

The greatest disparity between effective and ineffective behavior was in the category, Using Creativity. This was in part due to the lack of opportunity for creativity and also the difficulty of observing negative creativity.

The least difference between the percentages of effective and ineffective behaviors was in the category, Planning and Organizing. This difference was foreseeable because of the inexperience of the students in the clinical situation.

Student Attitudes

To determine student acceptance of the critical incident technique of performance evaluation, all except four of the students completed an attitude survey at the conclusion of the course. Twenty-one of these were in the Coordinated Undergraduate Program in Dietetics and one was in the Restaurant Management curriculum.

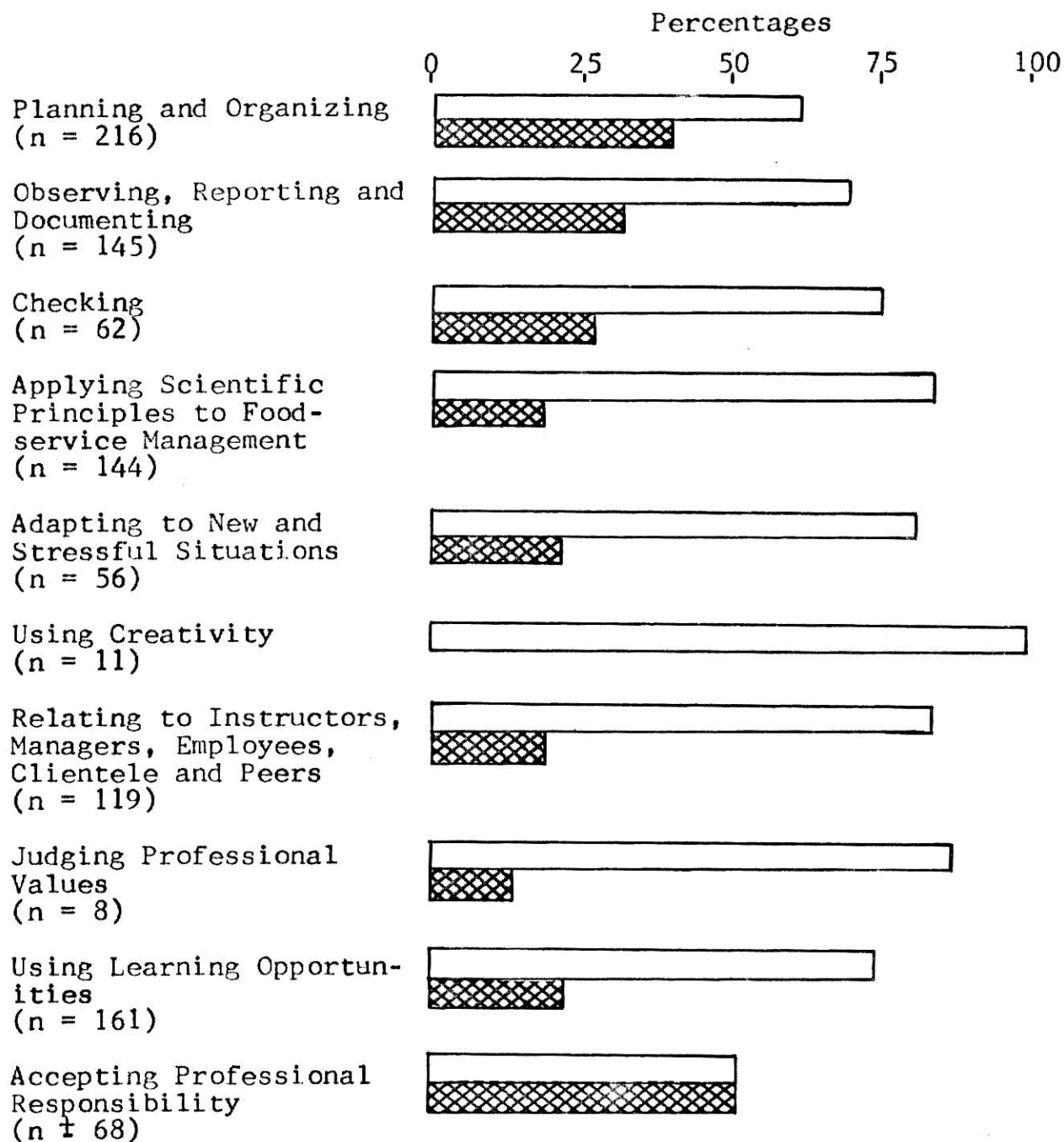
Of the students completing the questionnaire, nineteen were classified as juniors and three as seniors. Fifteen students indicated they had never been evaluated on performance before and seven had been in one other course. Student grade expectations were ten for "A" and twelve for "B".



The last two statements on the attitude survey required rating on a five-point scale from "definitely false" to "definitely true". The student responses to the statement "Describe your attitude toward this course" are shown in Table 3. The responses indicated no extreme bias for or against

Figure 1: Percentage distribution of observed effective and ineffective behaviors in each category of behavioral activity

Categories of Behavior Activities

Distribution of Effective and Ineffective Behaviors



 = Effective
 = Ineffective

taking the course. This course was the first of those with a strong emphasis on clinical experience for these students. It was noted that all twenty-two were in agreement that they had worked harder in this course than in any previous one. The responses to the statement "I preferred the evaluation on exams and written projects rather than on my performance" were definitely skewed toward evaluation on performance.

Table 3: Student responses to "describe your attitude toward this course"

statements	definitely false	more false than true	in between	more true than false	definitely true
I had a strong desire to take this course	4.5	9.1	54.6	31.8	
I worked harder in this course than in most other courses I have taken					100.0
I preferred the evaluation on exams and written projects rather on my performance	36.3	45.5	18.2		

N = 22

Each student rated nine statements regarding the evaluation procedure. These results are shown in Table 4. Students responded that the performance evaluation method helped them to improve their performance and that the evaluation was fair. The results indicated students preferred this method of performance evaluation and would like to have this method used in other clinical courses. It was notable that the responses indicated strong student

Table 4: Percentage distribution of responses to the statement "describe your attitude toward the critical incident technique for evaluating performance"

statements	%			
	definitely false	more false than true	in between	more true than false
I was given sufficient feedback on my performance	4.5	22.8	31.8	31.8
I always understood clearly the expected performance	9.1	36.3	31.8	22.8
I was informed of my behavior soon after I had performed effectively	4.5	18.2	27.3	50.0
I was informed of my behavior soon after I had performed ineffectively	4.5	22.8	40.9	27.3
Reviewing the critical behaviors helped to improve my performance		4.5	22.8	36.3
I feel my performance evaluation was fair		9.1	9.1	59.0
I feel my performance evaluation was based more on actual situations than on feelings about me by the instructors		4.5	9.1	72.8
I prefer this method of evaluation for performance to other methods	9.1	9.1	27.3	50.0
I would like to have my performance evaluated by this method in other clinical courses	9.1	13.6	27.3	45.5

N = 22

appreciation of the objectivity in this method of evaluation.

Validation of the Draft Instrument

Categorizing Behaviors

To validate the draft evaluation instrument (Appendix B, pg. 47) a group of twelve individuals, consisting of five instructors and four clinical instructors in the Department of Institutional Management and three practitioners in foodservice management were requested to classify a sample set of behaviors collected on one student throughout the semester (Appendix B, pg. 48). Analysis of the categorization of fifty-five sample behaviors disclosed that the twelve validators were in essential agreement on the placement of all the behaviors except one. This one exception to majority agreement was caused in part by the inexplicit description of the behavior in the incident. The results of this exercise were deemed sufficient to justify use of the original draft instrument categories in the final Clinical Performance Evaluation instrument.

Evaluation Questionnaire

A questionnaire was submitted to the validators for determination of attitudes toward the evaluation procedure (Appendix B, pg. 53). The results indicated that the clinical instructors were "very familiar" with course objectives while both instructors and practitioners had a "general idea". The clinical instructors responded that identifying the major areas and subareas varied from "easy" to "quite easy". The responses of others were from "easy" to "difficult". Most found it easier to identify the major areas than the subareas (Appendix B, pg. 54).

The major areas mentioned as being more difficult to interpret were

Using Creativity, Adapting to New or Stressful Situations and Applying Scientific Principles. Some individuals found it impossible to classify a few behaviors because the given information was deemed insufficient. Others were concerned that an incident may contain both effective and ineffective behaviors.

It was suggested that "behaviors to be encouraged" be stated in the present tense. It was also suggested that the "behaviors suggesting improvement" have different identification systems.

These twelve individuals were instructed to rank the behavioral activity categories in the order they should appear on the form. One individual commented that ranking was probably not important and if there is a specific rank it should be in terms of whether one activity must precede another. The ten behavioral activity categories are listed below based on the mean ranking of the sample by ten individuals:

Planning and Organizing

Observing, Reporting and Documenting

Applying Scientific Principles to Foodservice Management

Checking

Relating to Instructors, Managers, Employees, Clientele and Peers

Adapting to New and Stressful Situations

Using Learning Opportunities

Using Creativity

Accepting Professional Responsibility

Judging Professional Values

In response to the question, "would you be interested in using this instrument for student performance evaluation?", seven replied "yes", three

"possibly", and one "no".

The Final Instrument

Following consideration of the various comments and evaluation of the draft instrument, the final Clinical Performance Evaluation instrument was developed (Appendix C, pg. 56). It consisted of parallel columns for "behaviors to be encouraged" and suggestions for improvement" as did the draft instrument. These columns were separated by writing space for the date and a brief description of the behavior, separately for the two columns, aligned with the sub-areas. Space was provided at the top of the form for the name of the student and at the bottom of the form for the date of the review and the signatures of student and evaluator.

A form was developed for recording a description of effective and ineffective behaviors as they occur (Appendix C, pg. 59). This form is headed by space for the name of the student, the observer and the date. It contained a check list for identification of the behavioral categories, space for recording a precise description of the incident and space for a summary identification of the behavior as effective or ineffective. These observation forms were designed for collection of the essential information to be transferred to the Clinical Performance Evaluation instrument for the formal student evaluation.

Chapter V

SUMMARY AND CONCLUSIONS

Summary

The purpose of this research was to develop a method for effective evaluation of student performance in a specific course in a dietetics and restaurant management curriculum with both didactic and clinical components. Evaluation for didactic components has become fairly well established, but little has been accomplished on the perfection of evaluation techniques for clinical experiences. Some development of performance evaluation procedures has occurred in other disciplines, but little has been accomplished in dietetics education. Compared to other methods of performance evaluation, the critical incident technique appeared to have more objectivity and to be an efficient method for determining performance effectiveness. The critical incident technique for this study involved observing and recording student behavior in critical activities.

The population for the study consisted of twenty-six dietetic and restaurant management students enrolled in the junior level course Foodservice Systems, at Kansas State University. Foodservice Systems is a six credit hour course consisting of two hours lecture and four hours clinical practice. Approximately 30 per cent of the final grade is based on performance.

Student performances were observed and recorded by the instructor as the team leader, six clinical instructors, and the dietitians and supervisors in the clinical facility. Students also recorded observations on other students and themselves. Actual observed activities demonstrating critical behavior were recorded on students in the clinical, classroom, and independent study settings, all with reference to the course objectives.

The reported incidents were reviewed to determine whether each met the criteria for criticalness and then were divided into groups with similar activities. Using the Clinical Performance Record for student nurses developed by Flanagan et al. (35) as a model, ten categories of behavioral activities were devised. The crux of the critical incident technique is the determination of effective or ineffective behavior. For each activity parallel listings were developed, one listing behaviors to be encouraged (effective) and the other giving suggestions for improvement (ineffective). The behaviors were arrayed in sequential order from minimal to optimal performance within the activity categories.

To determine student acceptability of this method of performance evaluation, an attitude survey was distributed to the population of the study. The survey revealed a favorable attitude by the students in part because of the objectivity and continuity of evaluation.

A group of twelve individuals consisting of instructional team leaders and clinical instructors in Institutional Management and practitioners in foodservice management validated the categories on the draft evaluation instrument by classifying a sample set of behaviors collected on one student throughout the semester. Analysis of the categorization disclosed there was essential agreement on the placement of all the behaviors except one. Because this one exception was due in part to the inexplicit description of the behavior in the incident, the consensus was that the use of the original draft instrument categories in the final Clinical Performance Evaluation instrument was justified. In a questionnaire, the validators identified the categories most difficult to interpret and suggested a rank order for the categories. The clinical instructors who were more familiar with the course objectives responded that the categorization was easier than did those

individuals who only had a general idea of the course objectives.

The final Clinical Performance Evaluation instrument consisted of parallel columns for "behaviors to be encouraged" and "suggestions for improvement". These columns were separated by writing space for the date and a brief description of the behaviors, separately for the two columns, aligned with the sub-areas. Space for date of review and identification by signatures of the student and evaluator were included.

A form was developed for recording a description of effective and ineffective behaviors as they occur. It contained a check list for identification of the behavioral categories, space for recording a precise description of the incident and space for a summary identification of the behavior as effective or ineffective. These observation forms were designed for collection of the essential information to be transferred to the Clinical Performance Evaluation instrument for the formal student evaluation.

Conclusions and Recommendations

This instrument was developed for evaluating student performance in one specific course, but with additional research could be made applicable for evaluating performance of dietetic and restaurant management students in other courses. It could also be adapted for the evaluation of practitioners.

The critical incident technique of performance evaluation provides objectivity because it is based on actual observed behaviors in critical activities. Objectivity is enhanced by the frequent recording and classification of behaviors.

It was obvious that before using this method of evaluation, specific training for those using it would be essential. Further, course objectives need to identify clearly the expected level of performance. Any explanation

of the evaluation instrument should include definitions of the behavioral categories and the specific behaviors. With adequate training and familiarity with the procedure, it is expected that the time involved in this evaluation process of student performance will not exceed that of other methods presently used.

The Clinical Performance Evaluation instrument will provide a complete and informative record of student performance. For the purpose of summative evaluation, it would be necessary to devise a numerical weighting system for the behaviors and behavioral categories.

In addition to formative and summative evaluation of student performance, this evaluation procedure can be used by the course instructor to structure course content. By comparing the effective and ineffective behaviors more emphasis could be given to those behavioral categories with a preponderance of ineffective behaviors.

A valuable attribute of this evaluation procedure was the opportunity for immediate feedback to students. This fact and the decisive nature of the evaluation technique elicited a most favorable response from the students. From the student responses and the reactions of the using team members, it was concluded that the final Clinical Performance Evaluation instrument was effective for its purpose and that its adaptation for use in other courses would be justified.

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CITED REFERENCES

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APPENDIX A

Department of Institutional Management
College of Home Economics, Kansas State University

GUIDELINES

Observation of Critical Behaviors

Throughout the semester, each of you will be participating in a research project designed to obtain information that will be useful in evaluating students in the courses Fundamentals of Quantity Food Production and Food-service Systems. The approach being used is known as the Critical Incident Technique which consists of the observation and recording of behavior in critical activities. In using this technique, instructors and supervisors will record their observations of student behavior in various activities. Students will make similar observations of performance on themselves and other students.

Definitions

Incident--any observable human activity that is sufficiently complete in itself

Critical Incident--activity in which the behavior of the observed is either effective or ineffective

Behavior--action of the observed person in a particular situation expressed as performance

Critical Behavior--performance in an activity which is significant either in a positive or negative direction from the expected behavior.
(Performance is classified as either good or bad.)

Effective Behavior--critical behavior with positive and beneficial results

Ineffective Behavior--critical behavior with negative and detrimental results

Distinctions of Critical Behavior

Rarely will critical behavior other than ineffective be displayed in a routine activity. Behaviors such as attending lecture regularly, meeting time schedules for appointments and assignments, and maintaining dress standards are routine and therefore are not critical. However, when these activities are performed incorrectly, such as missing several classes, not keeping an appointment or not notifying in advance that an appointment must be cancelled or violating dress standards, they become critical behaviors.

A critical behavior is an actual observed performance in an activity and is not a generalization or an opinion of the observer. The following observed performances are NOT critical behaviors:

"The student seemed bored." or "The student gets along well with peers."
To classify as critical behaviors, these performances would have to be recorded in the following way:

"The student sat during group discussion looking out the window and did not participate in the discussion."

"The student was chosen by the other students in the class to be their representative at the dietetic convention."

Observation and Catagorization of Critical Behaviors

Observing critical behaviors requires that you be aware of actual observed activities rather than opinions about the student. Considerations of these questions may aid in making observation

1) For Instructors, Dietitians and Supervisors observing Students:

Has the observed behavior been especially effective or especially ineffective?

Is the behavior sufficiently unusual that you would ordinarily mention it to the student either in praise or reprimand?

2) For students observing their peers

Did my peer perform as I would have?

3) For students observing selves

Did my actions make me feel especially satisfied or comfortable with myself?

It is important that you at least jot down notes on the behavior when it happens in order that you do not forget some important details. Then later in the day you can complete the recording of the behavior.

Recording the Critical Behaviors

Record the critical behaviors on the forms provided. Be specific in describing exactly what occurred. It is important that you include any circumstances leading up to the behavior, or consequences of the behavior, providing these are relevant. Do not include your opinions or judgments, just ACTUAL OBSERVATIONS.

For research purposes, the name of the student in the critical behavior is not necessary. However, since these are to be used in evaluating students this semester, it is necessary for Instructors, Dietitians and Supervisors to record the name of the student. For students recording self and peer critical behaviors, it is not mandatory to use the name of those observed. But, since self-evaluation is important to self-development, it is suggested you identify yourself in the critical behaviors to enable instructors to give you guidance in self-improvement. This information will be strictly confidential between the instructors and the student.

Number of Critical Behaviors to Record

There is no fixed number of behaviors to record since they are observed and recorded as they happen. You might use the following as a guide:

Clinical Instructors may strive to record one or two behaviors on each student each week.

Course Instructors may strive to obtain one or two behaviors from each classroom situation.

Clinical Dietitians and Supervisors may be able to record one or two behaviors during the times they work most closely with the students.

Students may be able to obtain one behavior per week on a peer or themselves.

Collection of Critical Behaviors

The recorded critical behaviors will be collected weekly by the researcher. They will be returned to the Clinical Instructors for use in evaluation of the students this semester.

Department of Institutional Management
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EFFECTIVE BEHAVIOR

Student Observed _____

Observed by:

(Check one)

Course Instructor _____

Clinical Instructor _____

Clinical Dietitian _____

Peer _____

Self _____

Supervisor _____

DESCRIBE EXACTLY WHAT HAPPENED

(Pink)

Evaluator _____

Date _____

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College of Home Economics, Kansas State University

INEFFECTIVE BEHAVIOR

Student Observed _____

Observed by:

(Check one)

Course Instructor _____

Clinical Instructor _____

Clinical Dietitian _____

Peer _____

Self _____

Supervisor _____

DESCRIBE EXACTLY WHAT HAPPENED

(green)

Evaluator _____

Date _____

APPENDIX B

Department of Institutional Management
College of Home Economics, Kansas State University

ATTITUDE SURVEY FOR CRITICAL INCIDENT TECHNIQUE OF EVALUATION

- | | | | | | |
|---|---|----------------------------|----------------------------|----------------------------|----------------------------|
| <p>1. In what curriculum are you enrolled:</p> <p><input type="checkbox"/> Coordinated Undergraduate</p> <p><input type="checkbox"/> Program in Dietetics</p> <p><input type="checkbox"/> Dietetics</p> <p><input type="checkbox"/> Restaurant Management</p> | <p>2. What is your classification?</p> <p><input type="checkbox"/> Junior</p> <p><input type="checkbox"/> Senior</p> | | | | |
| <p>3. Prior to this semester, in how many courses have you been evaluated on your performance?</p> <p><input type="checkbox"/> Never</p> <p><input type="checkbox"/> 1 course</p> <p><input type="checkbox"/> 2 courses</p> <p><input type="checkbox"/> Or more</p> | <p>4. What final grade do you expect to receive in this course, Systems?</p> <table border="0" style="width: 100%;"> <tr> <td style="text-align: center;"><input type="checkbox"/> A</td> <td style="text-align: center;"><input type="checkbox"/> C</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/> B</td> <td style="text-align: center;"><input type="checkbox"/> D</td> </tr> </table> | <input type="checkbox"/> A | <input type="checkbox"/> C | <input type="checkbox"/> B | <input type="checkbox"/> D |
| <input type="checkbox"/> A | <input type="checkbox"/> C | | | | |
| <input type="checkbox"/> B | <input type="checkbox"/> D | | | | |

Use the following code for the remainder of the questionnaire:

- | | |
|--|--|
| <p>1--Definitely False</p> <p>2--More False than True</p> <p>3--In Between</p> | <p>4--More True than False</p> <p>5--Definitely True</p> |
|--|--|

5. Describe your attitude toward this course.
- ☐ I had a strong desire to take this course
- ☐ I worked harder in this course than in most other courses I have taken
- ☐ I preferred the evaluation on exams and written projects rather than on my performance
6. Describe your attitude toward the Critical Incident Technique for evaluating your performance in this course.
- ☐ I was given sufficient feedback on my performance
- ☐ I always understood clearly the expected performance
- ☐ I was informed of my behavior soon after I had performed effectively
- ☐ I was informed of my behavior soon after I had performed ineffectively
- ☐ Reviewing the critical behaviors with the instructor helped me to improve my performance
- ☐ I feel my performance evaluation was fair
- ☐ I feel my performance evaluation was based more on actual situations than feelings about me by the instructors
- ☐ I prefer this method of evaluation for performance to other methods
- ☐ I would like to have my performance evaluated by this method in other clinical courses

**THIS BOOK
CONTAINS
NUMEROUS PAGES
WITH THE ORIGINAL
PRINTING BEING
SKEWED
DIFFERENTLY FROM
THE TOP OF THE
PAGE TO THE
BOTTOM.**

**THIS IS AS RECEIVED
FROM THE
CUSTOMER.**

Department of Institutional Management
College of Home Economics, Kansas State University

CLINICAL PERFORMANCE EVALUATION

Behaviors to be encouraged	Suggestions for improvement
1. PLANNING AND ORGANIZING a. Developed attainable personal objectives b. Scheduled time to achieve objectives c. Correlated course and personal objectives with experiences in the clinical facility d. Utilized resources pertinent to objective attainment e. Adhered to personally scheduled time in attaining course and personal objectives	1. PLANNING AND ORGANIZING a. Should write challenging personal objectives and review course objectives before beginning an assignment b. Should appreciate the time required for objective attainment c. Should discuss objectives and schedule with instructor and manager of clinical facility d. Should prepare for assignments by utilizing available resource material and personnel e. Should achieve personal and course objectives, as planned
2. OBSERVING, REPORTING AND DOCUMENTING a. Listed observations b. Related observations to prerequisite knowledge c. Reported and documented observations considered significant d. Explained reasons for a situation occurrence e. Related elements of the actual system to the foodservice systems model	2. OBSERVING, REPORTING AND DOCUMENTING a. Should use observation check list b. Should restudy class material c. Should report significant observations to the manager or supervisor d. Should analyze the situation e. Should use systems model to interrelate elements in the system
3. CHECKING a. Checked goals, policies, procedures and management tools of the foodservice system b. Checked adequacy of food quantities c. Checked adequacy of supplies d. Checked adequacy of staff on duty e. Checked food quality and portion size f. Checked operating condition of equipment and utilities in the facility g. Checked for adherence to the policies and procedures pertinent to the goals of the foodservice	3. CHECKING a. Should seek pertinent information from menu, recipe, schedules and other management tools b. Should check food inventory, orders and quantities prepared c. Should check supply inventory and order d. Should compare number of employees on duty with schedule e. Should compare quality of food and portion size to established standards f. Should consult procedure manuals for equipment operations g. Should make continuous checks during preparation and service
4. APPLYING SCIENTIFIC PRINCIPLES TO FOODSERVICE MANAGEMENT a. Suggested remedial measures for situations considered incorrect b. Compared advantages and limitations of alternatives c. Selected most suitable alternative d. Predicted future effect of selected alternative e. Assumes responsibility for corrective action, if permitted	4. APPLYING SCIENTIFIC PRINCIPLES TO FOODSERVICE MANAGEMENT a. Should identify situations violating scientific principles b. Should recognize advantages and limitations for each alternative c. Should cite principles involved in the selection d. Should support prediction by reference to literature e. Should be encouraged to make decisions
5. ADAPTABILITY TO NEW OR STRESSFUL SITUATIONS a. Required minimum guidance in adjusting to a new situation b. Recognized situation requiring emergency action c. Took immediate and appropriate action in emergencies	5. ADAPTABILITY TO NEW OR STRESSFUL SITUATIONS a. Should recognize new situations and not wait for guidance b. Should distinguish between normal and emergency situations c. Should recognize the necessity of calm, appropriate action in emergency situations
6. USING CREATIVITY a. Used creativity and imagination in completing assignments b. Suggested new approaches to attainment of an objective	6. USING CREATIVITY a. Should not unthinkingly adhere to custom b. Should be innovative
7. RELATIONS WITH INSTRUCTORS, MANAGERS, EMPLOYEES, PEERS AND CLIENTELE a. Integrated self into the organization b. Willingly assisted peers, employees and clientele as needed c. Tactfully expressed opinions, concerns and frustrations d. Assisted in supervision of employees	7. RELATIONS WITH INSTRUCTORS, MANAGERS, EMPLOYEES, PEERS AND CLIENTELE a. Should cooperate with instructors, managers, employees and peers b. Should recognize need of others for appropriate assistance c. Should have appropriate discussions with instructors and others d. Should assist in supervision within limits of granted authority
8. JUDGMENT REGARDING PROFESSIONAL VALUES a. Called attention to own error that was otherwise unnoticed b. Reported situation accurately despite reflection on self c. Maintained ethical standards under all circumstances	8. JUDGMENT REGARDING PROFESSIONAL VALUES a. Should not avoid responsibility for a personal error b. Should keep information confidential despite pressure to divulge it c. Should adhere to the Code of Professional Practice
9. USE OF LEARNING OPPORTUNITIES a. Made significant contribution to class activities b. Was enthusiastic and appreciative of learning opportunities c. Expended extra effort to learn d. Accepted suggestions for improvement graciously e. Participated in non-required extra-curricular activities and class functions	9. USE OF LEARNING OPPORTUNITIES a. Should be encouraged to participate in group discussion b. Should understand the advantages of a learning situation c. Should extend learning efforts beyond scheduled opportunities d. Should acknowledge educational contributions of others e. Should appreciate the value of professional activities in a career
10. ACCEPTANCE OF PROFESSIONAL RESPONSIBILITY a. Voluntarily assumed extra duties within limits of responsibility b. Willingly cooperated with assignment or schedule change c. Assumed leadership or management responsibilities	10. ACCEPTANCE OF PROFESSIONAL RESPONSIBILITY a. Should recognize professional concern for the functioning of the organization b. Should be adaptable to change c. Should exhibit leadership qualities expected of a professional

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Categorization of Critical Behaviors

What is your performance role with the students in Food Service Systems?

Instructor _____ Practitioner _____ Clinical Instructor _____ None _____

Instructions:

1. Underline the behavior or behaviors in each incident.
2. Using the Clinical Performance Evaluation, classify each behavior into the Major Area and Subarea by drawing a line from the behavior and writing in the corresponding number and letter.

Example:

The student in the cafeteria observed the hot well temperature at incorrect setting for the food being served. She reported this to the cafeteria line supervisor and turned it down.

3g

2c

4e

3. Coincide Effective Behaviors with "Behaviors to be encouraged" and Ineffective Behaviors with "Suggestions for improvement".

EFFECTIVE BEHAVIOR 2/3/76

This was the student's first clinical experience and she had written her personal objectives before coming to the orientation meeting. They related to the course objectives for systems, rather than the more technical quantity foods level.

INEFFECTIVE BEHAVIOR 2/11/76

In the portion control paper, the student left out two important parts asked for in the course objectives: 1) management's responsibility, and 2) how portion control fits into the system model.

INEFFECTIVE BEHAVIOR 2/11/76

Not all of the student's personal objectives were stated in her personal log so I had no way of knowing from the log if they were met and how they were met.

EFFECTIVE BEHAVIOR 2/11/76

Student talked to the manager about the low dishmachine temperature she had observed.

EFFECTIVE BEHAVIOR 2/13/76

Student volunteered to deliver Meals On Wheels on Sunday with the dietitian. This is not a required assignment.

EFFECTIVE BEHAVIOR 2/20/76

Students attended the can cutting by salesmen which the dietitian invited all students, but was not a required assignment.

INEFFECTIVE BEHAVIOR 2/25/76

I asked the food service supervisor what the wages were for two ladies working in the kitchen in order to figure production costs. She replied, rather upset, that this information can't be given out.

EFFECTIVE BEHAVIOR 2/26/76

In doing clientele acceptance at the hospital, I asked one elderly patient to score her soup and seeing that she was puzzled, I offered to come back later and help her fill out the form.

EFFECTIVE BEHAVIOR 2/23/76

Conference with Course Instructor---Student scheduled for Independent Study--- Student came prepared with objectives for the Study and a general plan of action. Student didn't have to ask a lot of questions about what to do or how to go about it, just needed a few guidelines.

INEFFECTIVE BEHAVIOR 3/3/76

I saw a friend I hadn't seen since last year sitting in the dining room eating. I knew the time was past the time I had written on the schedule, so thinking I was off, I went and talked to this friend for 15 minutes. It was after this time I realized I had not checked my time card out.

EFFECTIVE BEHAVIOR 3/9/76

On the second day of this experience, student had personal objectives ready for clinical instructor.

EFFECTIVE BEHAVIOR 3/9/76

Within one week of the clinical experience, student turned in quality food assessment assignment.

EFFECTIVE BEHAVIOR 3/9/76

Student scheduled in salad unit. When questioned in group discussion, student knew what was on the luncheon menu and the portion of gelatin.

INEFFECTIVE BEHAVIOR 3/9/76

Salad supervisor was alone in unit. Student spent day in salad unit. Supervisor reported that student had many questions which she felt she was too busy to answer. Supervisor finally told student she was too busy to write out her job outline for the student.

INEFFECTIVE BEHAVIOR 3/10/76

When extending recipes for meat order, student asked clinical instructor what #10 cans of tomato puree, tomatoes and kidney beans weighed. Student should have gone to storeroom to check for herself.

INEFFECTIVE BEHAVIOR 3/11/76

Two days after Taco dinner, student was asked what happened in her production unit that evening. Student did not know. Asked student to find out and give report to another student who was writing up the report of the special dinner.

EFFECTIVE BEHAVIOR 3/11/76

Student found out what happened the evening of the Taco dinner in her production unit and gave clinical instructor paper asking, "Is this what you want?" Notes included the amount produced, run-out time and recommendations for next time.

EFFECTIVE BEHAVIOR 3/26/76

In the past, when doing orders, this student became upset when recipes were not there. Today student reported that she could not find the Chicken Alphabet soup recipe so she used the Turkey Alphabet soup recipe.

EFFECTIVE BEHAVIOR 3/30/76

Student asked Clinical Instructor if she had any ideas for another objective for this clinical facility. I suggested to the student that she may want to tackle problem solving and decision making the last two weeks of the experience. Student said this was a weak area and would consider it.

EFFECTIVE BEHAVIOR 3/26/76

Asked students what they thought they deserved an "A" for today. Student said she helped a new student employee understand the dials on the back of the milk machine. When the employee first asked her about this, she didn't know but went to the other milk runner and asked him. She then reported back to the new milk runner.

EFFECTIVE BEHAVIOR 4/2/76

Student's self-evaluation differed from instructors evaluation in many areas, though total points were about the same. Student accepted ineffective critical incidents quite well and used them as a learning experience. Said she would be more aware of employee's work load and would listen to verbal cues from people. Student was concerned with verbal communication skills and wanted to know if she should be more vocal in group discussion.

EFFECTIVE BEHAVIOR 4/2/76

Student reported that the lines did not have thermometers to check food temps. She wanted to know how employees were to get them.

EFFECTIVE BEHAVIOR 4/2/76

Student concerned about cauliflower being thrown out and no leftovers being recorded on the production sheet. She stated that this would affect the forecasting procedure the next time this item was on the menu. She said the dietitian would assume that the forecasted 250 serv. this time was totally used and that she would increase forecast next time.

EFFECTIVE BEHAVIOR 4/2/76

Student followed up on an answer to roux. (In previous group discussion, student did not know cooking principles.)

EFFECTIVE BEHAVIOR 4/5/76

All but one assignment completed ten days before the end of the clinical experience.

EFFECTIVE BEHAVIOR 4/5/76

Student asked Clinical Instructor if she would be in the clinical facility this afternoon. Clinical Instructor said no, but would ask the Clinical Dietitian if she would be there. When the Clinical Dietitian wasn't able to be there, the student asked questions of Clinical Instructor and said she could ask the Service Dietitian, if the Service Dietitian had time.

EFFECTIVE BEHAVIOR 4/8/76

Student completed all orders alone and met all deadlines. Observed student trying to figure out recipe extension until she thoroughly understood it.

EFFECTIVE BEHAVIOR 4/10/76

Student volunteered to help fellow student with objectives for presentation when she couldn't get them in proper words.

EFFECTIVE BEHAVIOR 4/13/76

Student reported that she made several decisions on the weekend, but always checked with the dietitian before putting decisions into action.

EFFECTIVE BEHAVIOR 4/23/76

I had to go through several people and pathways to get a fire extinguisher for employee training.

EFFECTIVE BEHAVIOR 4/23/76

Student was doing employee training on fire extinguisher. She had difficulty finding one to use, but took the initiative to check with the local fire dept., the physical plant and student health to find one.

EFFECTIVE BEHAVIOR 5/12/76

Student had all assignments completed one week before the deadline.

EFFECTIVE BEHAVIOR 5/76

I checked out the School Food Service Packet all night in order to study the material more completely and so I could include information in my personal log and relate what I had seen in the facilities.

EFFECTIVE BEHAVIOR 5/2/76

When asked if she learned anything from the experience the student replied, "Oh, yes, I can always learn from something new."

EFFECTIVE BEHAVIOR 5/2/76

I spoke up quite often in discussion today. I looked at this as an improvement on my oral communication skill.

INEFFECTIVE BEHAVIOR 5/76

I did not turn in very many critical behaviors on myself or peers.

EFFECTIVE BEHAVIOR 5/76

Another student and I wanted to do an energy control study on the oven. We worked together on it.

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Evaluation of Instrument

1. What is your classification?
☐ Instructor
☐ Practitioner
☐ Clinical Instructor
☐ Graduate Student
2. How familiar are you with the course objectives for Foodservice System?
☐ Not at all
☐ General idea
☐ Very familiar
3. How easy was it to identify the Major Area for each behavior?
☐ Very easy
☐ Quite easy
☐ Easy
☐ Difficult
4. Identify the Major Areas you had the most difficulty interpreting.
5. How easy was it to identify the Subarea for each behavior?
☐ Very easy
☐ Quite easy
☐ Easy
☐ Difficult
6. Identify the Subareas you had the most difficulty interpreting.
7. Were there any behaviors you could not classify? (Please specify)
8. Rank the Major Areas in the order you think they should appear on the form.
☐ Creativity
☐ Checking
☐ Acceptance of Professional Responsibility
☐ Observing, Reporting and Documenting
☐ Relations with Instructors, Managers, Clientele and Peers
☐ Judgment Regarding Professional Values
☐ Planning and Organizing
☐ Use of Learning Opportunities
☐ Applying Scientific Principles in Foodservice Management
☐ Adaptability to New and Stressful Situations
9. After this instrument is refined, would you be interested in using it for student performance evaluation?

Responses to the Evaluation of Instrument by Validators
(n = 12)

1. What is your classification?
5 Instructor
3 Practitioner
4 Clinical Instructor
 Graduate Student
2. How familiar are you with the course objectives for Foodservice Systems?
 Not at all
7 General idea
5 Very familiar
3. How easy was it to identify the Major Area for each behavior?
 Very easy
3 Quite easy
6 Easy
3 Difficult
4. Identify the Major Areas you had the most difficulty interpreting.
 Behaviors to be encouraged--3,4,5,6,7,8,9
 Suggestions for improvement--5,10
 More difficult than subareas
 Behaviors fit into more than one area
5. How easy was it to identify the Subarea for each behavior?
 Very easy
1 Quite easy
8 Easy
3 Difficult
6. Identify the Subareas you had the most difficulty interpreting.
 Behaviors to be encouraged--3,4,5b,5c,6b,7a,8a-c
 Suggestions for improvement--5,10
 Refinement of statements needed
 Fairly clear
 Used the suggestions for improvement as a guide
7. Were there any behaviors you could not classify? (Please specify)
 Some questions
 (4/2, 4/5, 4/23, 2/11 first two, 3/3, 3/10)
 Some were both effective and ineffective
 Behaviors concerning human relations
8. Rank the Major Areas in the order you think they should appear on the form.
6.4 Creativity
4.9 Checking
7.8 Acceptance of Professional Responsibility
3.8 Observing, Reporting and Documenting
5.7 Relations with Instructors, Managers, Clientele and Peers
8.3 Judgment Regarding Professional Values
1.9 Planning and Organizing
6.1 Use of Learning Opportunities
4.2 Applying Scientific Principles in Foodservice Management
5.9 Adaptability to New and Stressful Situations
9. After this instrument is refined, would you be interested in using it for student performance evaluation? (7 yes, 3 possibly, 1 no)

APPENDIX C

Department of Institutional Management
College of Home Economics, Kansas State University

CLINICAL PERFORMANCE EVALUATION

Name of Student _____

Behaviors to be Encouraged

Suggestions for Improvement

Behaviors to be Encouraged		Date	What Happened	Date	What Happened
1. PLANNING AND ORGANIZING					
a.	Developed attainable personal objectives				
b.	Schedules time to achieve objectives				
c.	Correlates course and personal objectives with experiences in the facility				
d.	Utilizes resources pertinent to objective attainment				
e.	Adheres to personally scheduled time in attaining course and personal objectives				
1. PLANNING AND ORGANIZING					
A.	Should write challenging personal objectives and review course objectives before beginning an assignment				
B.	Should schedule the time required for objective attainment				
C.	Should discuss objectives and schedule with instructor and manager of clinical facility				
D.	Should prepare for assignments by utilizing available resource material and personnel				
E.	Should achieve personal and course objectives, as planned				

Behaviors to be Encouraged		Date	What Happened	Date	What Happened
2. OBSERVING, REPORTING AND DOCUMENTING					
a.	Lists observations				
b.	Relates observations to prerequisite knowledge				
c.	Reports and documents observations considered significant				
d.	Explains reasons for a situation occurrence				
e.	Relates elements of the actual system to the foodservice systems model				
2. OBSERVING, REPORTING AND DOCUMENTING					
A.	Should use observation check list				
B.	Should restudy class material				
C.	Should report significant observations to the manager or supervisor				
D.	Should analyze the situation				
E.	Should use systems model to interrelate elements in the system				

Date Reviewed _____

Student's Signature _____

Evaluator's Signature _____

APPLYING SCIENTIFIC PRINCIPLES TO FOODSERVICE MANAGEMENT

- a. Suggests remedial measures for situations considered incorrect
- b. Compares advantages and limitations of alternatives
- c. Selects most suitable alternative
- d. Predicts future effect of selected alternative
- e. Assumes responsibility for corrective action, if permitted

[illegible]

APPLYING SCIENTIFIC PRINCIPLES TO FOOD-SERVICE MANAGEMENT

- A.** Should identify situations violating scientific principles
- B.** Should recognize advantages and limitations for each alternative
- C.** Should cite principles involved in the selection
- D.** Should support prediction by reference to literature
- D.** Should be encouraged to make decisions

CHECKING

- a. Checks goals, policies, procedures and management tools of the foodservice system
- b. Checks adequacy of food quantities
- c. Checks adequacy of supplies
- d. Checks adequacy of staff on duty
- e. Checks food quality and portion size
- f. Checks operating condition of equipment and utilities in the facility
- g. Checks for adherence to the policies and procedures pertinent to the goals of the foodservice

[illegible]

CHECKING

- A. Should seek pertinent information from menu, recipe, schedules and other management tools
- B. Should check food inventory, orders and quantities prepared
- C. Should check supply inventory and order
- D. Should compare number of employees on duty with schedule
- E. Should compare quality of food and portion size to established standards
- F. Should consult procedure manuals for equipment operations
- G. Should make continuous checks during preparation and service

- a. Integrates self into the organization
- b. Willingly assists peers, employees and clientele as needed
- c. Tactfully expresses opinions, concerns and frustrations
- d. Assists in supervision of employees

[illegible]

RELATING TO INSTRUCTORS, MANAGERS, EMPLOYEES,
PEERS AND CLIENTELE

- A. Should cooperate with instructors, managers, employees and peers
- B. Should recognize need of others for appropriate assistance
- C. Should have appropriate discussions with instructors and others
- D. Should assist in supervision within limits of granted authority

6. ADAPTING TO NEW OR STRESSFUL SITUATIONS a. Requires minimum guidance in adjusting to a new situation b. Recognizes situations requiring emergency action c. Takes immediate and appropriate action in emergencies	Date 	What Happened 	Date 	What Happened 	6. ADAPTING TO NEW OR STRESSFUL SITUATIONS A. Should recognize new situations and not wait for guidance B. Should distinguish between normal and emergency situations C. Should recognize the necessity of calm, appropriate action in emergency situation
7. USING LEARNING OPPORTUNITIES a. Makes significant contribution to class activities b. Is enthusiastic and appreciative of learning opportunities c. Expends extra effort to learn d. Accepts suggestions for improvement graciously e. Participates in non-required extra-curricular activities & class functions	Date 	What Happened 	Date 	What Happened 	7. USING LEARNING OPPORTUNITIES A. Should be encouraged to participate in group discussion B. Should understand the advantages of a learning situation C. Should extend learning efforts beyond scheduled opportunities D. Should acknowledge educational contributions of others E. Should appreciate the value of professional activities in a career
8. USING CREATIVITY a. Uses creativity and imagination in completing assignments b. Suggests new approaches to attainment of an objective	Date 	What Happened 	Date 	What Happened 	8. USING CREATIVITY A. Should not unthinkingly adhere to custom B. Should be innovative
9. ACCEPTING PROFESSIONAL RESPONSIBILITY a. Voluntarily assumes extra duties within limits of responsibility b. Willingly cooperates with assignment or schedule change c. Assumes leadership or management responsibilities	Date 	What Happened 	Date 	What Happened 	9. ACCEPTING PROFESSIONAL RESPONSIBILITY A. Should recognize professional concern for the functioning of the organization B. Should be adaptable to change C. Should exhibit leadership qualities expected of a professional
10. JUDGING PROFESSIONAL VALUES a. Calls attention to own error that was otherwise unnoticed b. Reports situation accurately despite reflection on self c. Maintains ethical standards under all circumstances	Date 	What Happened 	Date 	What Happened 	10. JUDGING PROFESSIONAL VALUES A. Should not avoid responsibility for a personal error B. Should keep information confidential despite pressure to divulge it C. Should adhere to the Code of Professional Practice

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Name _____ Observer _____ Date _____

Item	Behavioral Activity Category	Describe exactly what happened
1. _____	PLANNING AND ORGANIZING	
2. _____	OBSERVING, REPORTING AND DOCUMENTING	
3. _____	APPLYING SCIENTIFIC PRINCIPLES TO FOOD-SERVICE MANAGEMENT	
4. _____	CHECKING	
5. _____	RELATING TO INSTRUCTORS, MANAGERS, EMPLOYEES, PEERS AND CLIENTELE	
6. _____	ADAPTING TO NEW OR STRESSFUL SITUATIONS	
7. _____	USING LEARNING OPPORTUNITIES	
8. _____	USING CREATIVITY	
9. _____	ACCEPTING PROFESSIONAL RESPONSIBILITY	
10. _____	JUDGING PROFESSIONAL VALUES	

What _____

was EFFECTIVE

INEFFECTIVE

DEVELOPMENT OF A CRITICAL INCIDENT
PERFORMANCE EVALUATION INSTRUMENT FOR A
COURSE IN DIETETICS AND INSTITUTIONAL MANAGEMENT

by

NOALEEN G. INGALSBE

B.S., Iowa State University, 1969

AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Institutional Management

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1976

The purpose of this study was to develop a method for evaluating student performances in one course of a dietetic and restaurant management curriculum. The critical incident technique of performance evaluation was used. The instructor as a team leader, clinical instructors, dietitians and supervisors observed and recorded student behavior in critical activities. Also the twenty-six students enrolled in the course recorded observations on other students and themselves.

Ten behavioral activity categories were evolved from the reported behaviors. For each activity, two sections were devised, one listing behaviors to be encouraged (effective) and the other giving suggestions for improvement (ineffective). A group of twelve individuals consisting of instructional team leaders and clinical instructors in Institutional Management and practitioners in foodservice management validated the draft instrument by classifying a sample set of behaviors and responding to a questionnaire. These validators approved the construction of the draft instrument, and with minor changes its format was adopted for the final Clinical Performance Evaluation instrument.

To determine student acceptability of this method of performance, evaluation, an attitude survey was completed by the population of the study. Favorable student attitude was revealed in the survey primarily because of the objective and continuity of evaluation.

The final Clinical Performance Evaluation instrument consisted of parallel columns for "behaviors to be encouraged" and "suggestions for improvement." These columns were separated by writing space for the date and a brief description of the behaviors. A form was developed for recording and classifying the effective and ineffective behaviors as they occur. These observation forms were designed for the collection of essential information to be transferred

to the Clinical Performance Evaluation Instrument for the formal student evaluation.