DEVELOPMENT AND EVALUATION OF A SELF INSTRUCTIONAL MODULE ON THE USE OF THE CRITICAL INCIDENT TECHNIQUE

by

JULIEANNE DAMERON

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Approved by:

Marian C. Spears
Major Professor

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TABLE OF CONTENTS

Page

Page

LIST OF TABLES

INTRODUCTION

Attaining professional competency is the goal of educational programs such as coordinated undergraduate programs in dietetics. Competency is the knowledge and ability to perform appropriately in a given situation, based on a set of criteria and level of expectation. In this context, competency is best judged by the observation of a person's behavior when confronted with situations requiring the exercise of the essential skills and judgment of a professional (1).

The academician is faced with the problem of how to evaluate student development in a competency based educational system. In a coordinated undergraduate program in dietetics, the clinical component provides an opportunity for competency evaluation. Measurement of a student's activity in an environment which simulates the experiences of a practitioner, however, is difficult. The critical incident technique of evaluation seems well suited for this purpose because it involves observing and recording behavior in actual situations (1).

In 1976, Ingalsbe (1) developed a method for evaluation of student performances in the junior level Foodservice Systems course at Kansas State University. The instructor, clinical instructors, dietitians, and supervisors observed and recorded student behavior in clinical situations. Also, the twenty-six students in the course recorded observations on themselves and other students.

Ingalsbe (1) concluded that the critical incident technique appeared to have more objectivity than other methods of performance evaluations and was an efficient method for determining performance effectiveness. She also concluded that before using this method of evaluation, specific training for those using it would be essential. Any explanation of the evaluation instrument should include definitions of the behavioral activity categories and the specific behaviors.

In the Foodservice Systems course, several clinical instructors and supervisors work with students in different facilities. There is a need, therefore, to clarify the behavioral activity categories to assure consistency in the placement of behaviors within the critical incidents. Also, the development of a strong emphasis on self evaluation in the curriculum makes it essential that students understand the process of categorizing behaviors.

An obvious need exists for instructing persons in the use of the Critical Incident Performance Evaluation Instrument. Meeting this need with a self instructional module would relieve faculty from the presentation of this material outside of class hours and allow students to master the technique during unscheduled time. A module also would be useful for instructors not well versed in the use of the technique. The production of such a module is in accordance with the policy of the Department of Dietetics, Restaurant, and Institutional Management to provide self instructional units for any repetitive material.

The purpose of this study was to develop a self instructional module on the use of the Critical Incident Performance Evaluation Instrument. This module contained an explanation of the critical incident technique and the behavioral activity categories. Also, there was a section for

practice in classifying critical behaviors into appropriate categories. The efficacy of the module was tested by comparing the scores of one group using the module with another receiving instruction by traditional methods.

Definition of Terms

Certain terms unique to the critical incident were used (1). 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.

REVIEW OF LITERATURE

A review of literature reveals that there is a need for performance evaluation in dietetic education and that any performance evaluation method could be improved by training the raters who use it.

Need for Performance Evaluation in Dietetic Education

In 1973, Vaden (2) equated professional competency to accountability. She defined competency as the knowledge, skills, and judgment which a student will demonstrate at a predetermined level. She also stated that accountability can be achieved only by defining competency, developing objectives, providing learning experiences, and accomplishing evaluation. Vaden noted that although progress has been made in the field of dietetics in defining competencies, further delineation is needed. Needs exist for better definition of performance requirements for an entry level dietitian and development of effective evaluation instruments.

Hart (3) in 1976 stated that in competency based education a student is exposed to a number of essential competencies and that acceptable performance indicates readiness to practice. One of the distinguishing factors of competency based education is consideration of the learner's performance, rather than only knowledge, as an indicator of ability to practice dietetics. Watson (4) stressed clinical experience as the most vital part of any type of education.

Tower and Vosburgh (5) in 1976 developed a five-point rating scale for appraisal of student learning in an introductory clinical course in dietetics. Vosburgh et al. (6) tested this scale under actual conditions of a clinical course. The conclusion was that the instrument was practical but the raters required training in using the scale.

Goals of Performance Evaluation

McGregor (7) stated formal performance evaluation plans are designed to meet three needs, one for the organization and two for the individual. The one for organization yields bases for organizational judgments such as salary increases, promotions, transfers, and demotions or termination. The two needs for the individual are first to measure job performance and suggested changes in behavior and second to serve as a basis for counseling by the individual's superior. McGregor (7) attributed resistance toward the use of performance evaluation to aversion to criticizing a subordinate, lack of skill in interviewing, dislike of a new procedure, and mistrust of the validity of the evaluation instrument.

Lefton et al. (8) concluded that effective performance evaluation is rare in many organizations because it usually involves confrontation which superiors prefer to avoid. A number of superiors resent the time required to process evaluation. They also concluded that an appreciable number of superiors realize the lack of skills in evaluating subordinates.

Performance Evaluation Methods

Oberg (9) discussed the importance of choosing the proper evaluation technique consistent with the objective. He outlined nine types of performance evaluations among which was the critical incident technique.

MacKinney (10) advocated confining evaluative ratings to on-the-job performance. MacKinney further stated the job must be described precisely in terms of what is actually done. Dunnette (11) stated that the most direct approach to defining jobs behaviorally was Flanagan's critical incident technique.

Levinson (12) argued for a performance evaluation system that accounts for behavior as well as results or outcomes of behavior. Such a system would require job descriptions that are behavior as well as results oriented, and a critical incident program in which managers report regularly on the behavior of their employees.

The Critical Incident Technique

Flanagan (13) developed the critical incident technique of studying behavioral activities for the Aviation Psychology Program of the Army Air Forces in World War II. He defined the critical incident technique as consisting essentially of the collection of reports of behaviors in a job situation. The incident is acceptable as a critical one only if in the observer's judgment it relates to an important aspect of the work and includes behavior which is outstandingly effective or ineffective with respect to the specific situation. The critical incident technique is characterized by reference to actual behavior in a specific situation rather than assumptions or inferences by the observer.

In 1949, Flanagan (13) stated that the critical incident technique was quite flexible and that the principles underlying it had many applications. Among the various applications cited were measures of typical performance and motivation and leadership.

Jensen (14) used the critical incident technique to identify critical elements for teacher competency. Kirchner and Dunnette (15) utilized the critical incident technique in the measurement of salesmanship. They stated the major advantage of the critical incident method was its adaptability to any situation. Bridgman et al. (16) used critical sales incidents to prepare a performance checklist for use in salesmanship.

In 1956, Flanagan et al. (17) collected 1,180 incidents from instructors' records of student nurse performance. The categorization of these incidents led to the development of a performance record consisting of twelve behavioral activity areas related to work habits and personal characteristics. The final Clinical Experience Record for Nursing Students constituted a systematic, simplified data base for a program of improvement and development.

Ingalsbe (1) adapted the critical incident technique for a junior level class entitled Foodservice Systems in the Department of Dietetics, Restaurant, and Institutional Management at Kansas State University. She developed observation forms and the critical incident performance evaluation instrument. Clinical instructors in various facilities recorded and categorized behaviors of students in accordance with the evaluation instrument.

Types of Errors in Rating

The halo effect was cited as an error by many authors (11, 18-22). Two other errors commonly cited by several authors were central tendency (11, 18, 20) and leniency (11, 18, 22). Other errors listed were hypercritical or "horns" effect (19), personal bias (20), logical error (18, 20), similarity (21), first impression (21), and contrast (18, 21).

Dunnette (11) stated the most pervasive source of error in job behavior ratings and the one most frequently ignored by persons designing rating instruments is the effect of the observer's lack of knowledge, understanding, or rapport. The one most often asked to observe and record job behavior is the immediate supervisor. The observer alone must consider the job behavior description form as understandable, relevant, practical, and acceptable. If the supervisor does not understand the form or resents the concept of evaluation, his or her ratings may show a central tendency, leniency, halo effect, or other flaws.

Performance Raters

Haynes (23) expressed the opinion that an evaluator must have the opportunity to observe and the ability to judge. She also stated the functional position in the organization of an evaluator helps determine the opportunity to observe, ability to judge, and appropriateness of the point of view.

Lawler (24) reported the rating should be done by persons familiar with the performance aspects of the individual being rated. The most appropriate rater for a particular individual would be his or her superior, peers, subordinates, and him or herself.

Supervisor Evaluations

According to Lawler (24), traditionally a supervisor's viewpoint has been considered the best for rating a subordinate's value to a company. He also stated that supervisors ought to have the special experience, knowledge, and ability to determine how well the subordinate contributes to the achievement of the company goals.

Peer Ratings

Lawler (24) contended that peer ratings have a place in evaluations. The peer is in a position to observe the ratee when the supervisor is not around and can judge how well the ratee is concerned for the company goals. Haynes (23) stated, however, peer evaluations have been used mainly for research purposes and the validity of peer ratings have not yet been proven.

Vaden (2) emphasized peer evaluation must be a part of the educational process. Students need the opportunity to accept criticism and suggestions of peers and to give suggestions and criticisms objectively. Peer review of the practicing dietitian is becoming common in the profession. Students must be prepared to function in such an environment.

Spears (25) reviewed the first year of a coordinated undergraduate program in food systems management. She stated students rate their individual performances in each clinical experience, as do the instructors. She stressed maximum use is made of peer evaluation, because the students must become accustomed to the mechanism by which their subsequent professional stature will be measured.

Self Evaluation

Lawler (24) and also Haynes (23) saw self evaluation as a valid instrument since an individual is in a better position to judge his or her own behavior than anyone else. Haynes (23) believed that in a performance evaluation discussion situation individuals will tend to rate themselves more modestly than if there is to be no discussion. She also stated that

under most circumstances, individuals tend to see themselves as better performers than they are.

Miner (26) reported that approximately 98 per cent of all evaluation forms are designed to be completed by a supervisor. Also, he stated there is ample evidence to indicate that ratings by peers differ considerably from ratings by superiors. Co-workers consider different factors and on the average give higher ratings. Miner pointed out that while various levels of supervision tend to agree on ratings, superior and self ratings seldom agree. He stated that self ratings emphasize getting along with others, while superiors stress initiative and work knowledge. Furthermore, self ratings are generally inflated.

Miner (26) also related that although findings may tend to argue for supervisor ratings, certain facts contradict this conclusion. The most apparent difference is in companies using the management by objectives approach. Subordinates and supervisors set their own goals and determine how successfully these goals are met.

Vaden (2) described self evaluation as an important component of performance evaluation. The graduate of an educational program must be equipped to be self critical, objective concerning his/her own performance, and capable of assessing needs for continued education. With self directed learning and self designed objectives as components of current educational approaches, management by objectives logically becomes a part of the educational process. Such a process includes student developed objectives, review by a faculty member, agreement on the revised objectives, periodic review of progress, and terminal evaluation of performance in relation to the objectives.

A recent study involving the use of self evaluation was done by Cochran (27) in the field of dietetics. She ascertained the degree of agreement between students' self assessment ratings and ratings by instructors in the clinical dietetics phase in a coordinated undergraduate program in general dietetics. The data were collected during the regular use of the critical incident technique for student evaluation as an instructional device. Evaluation summaries were reviewed three times in each of the three semesters of the study. The summaries consisted of numerical placement ratings of students' activities within each of the ten categories of the Critical Incident Performance Evaluation Instrument as developed by Ingalsbe (1). Cochran (27) found that the percentages of agreement increased in all activity categories as the students progressed through the course. The most dramatic increase in agreement occurred in those activities approximating the behavior and decision making of the practicing dietitian. Student self assessment coupled with feedback from instructors appeared to exert a definite influence on student development. This was particularly significant in those categories in which the students initially had the lowest self assessment. Also, the effectiveness of the critical incident technique as an adjunct to instruction was disclosed in this study.

Combination Ratings

A proposal cited by Miner (26) favored a combination evaluation process utilizing superior, peer, and self ratings. He contended that employee knowledge of simultaneous ratings being made by superiors reduces the bias in the peer and self evaluations. The combination capitalizes on the unique observational opportunities from all sources. With self

ratings and peer ratings available for management's study, identification of a ratee's potential is easier.

Training Raters

Blumenfeld (28) stated there are several approaches to rating and all require adequate training of the raters. Guilford (23) reported that the most effective method for improving ratings is to train raters carefully. Training also is helpful in avoiding rating errors because the rater becomes familiar with the different kinds of errors.

Miner (26) pointed out that studies indicate training can serve to increase the agreement between different raters, reduce bias, increase accuracy generally, prevent inflation of scores, and spread out the rating distribution. To be effective, these training sessions should be conducted by an instructor well qualified in the type of rating scale to be used. There should be an opportunity for considerable discussion and some practice with the rating forms. Various sources of error and bias, as well as factors that make the ratings most useful, need primary attention during the training sessions.

According to Haynes (29), despite the favorable evidence, a great many companies have not built training procedures into their evaluation systems. In fact, a lack of adequate training is the major problem of most programs. There is reason to believe that many programs which have succumbed to managerial resistance could have survived had they been introduced with adequate training. Group sessions may be supplemented with some individual assistance at the time the ratings are made. Also, manuals containing information included in the training program have proved useful.

Latham et al. (21) reported on a training experience to minimize rating errors in the observation of behavior by managers of a large corporation. The training sessions consisted of a control group, a discussion group, and a workshop to eliminate certain rating errors by managers. The errors which were addressed were contrast effect, halo effect, similarity, and first impression. Six months after the training, the managers rated hypothetical candidates who were observed on videotape. The results showed trainees in the control group committed similarity, contrast, and halo errors. The trainees in the discussion group committed first impression errors while those in the workshop made none of these errors.

According to Latham et al. (21), the difficulty in developing adequate measures of an individual's job performance was generally referred to as the "criterion problem." The importance of this problem was shown in research done by Lifson (30) in 1953 when up to one-third of performance measurement variance was due to rater differences. As indicated by Latham et al. (21), the criterion problem can be reduced by training observers to minimize rating errors.

Dunnette (11) stressed that observers should understand the job behavior description form, regard it as important, and observe systematically and accurately. Borman and Dunnette (31) reported the behavior scaling methodology developed by Smith and Kendell (32) in 1963 has good potential for overcoming or reducing many of the errors often encountered in job performance rating systems. By collecting critical incidents about job performance and using them to define dimensions and to anchor different levels of performance on each dimension, the method should also help to

decrease the semantic ambiguities that are so prevalent in most performance rating systems.

Borman and Dunnette (31) encouraged researchers to evaluate the usefulness of training raters more carefully in the use of behavior-oriented rating forms. Since this type of rating scale is relatively complicated, the ratings performed on this type of format might be more accurate if raters are trained thoroughly in its use. They summarized that if raters can be trained to observe work related behavior more competently and to use behavioral anchors more consistently, a more error free portrayal of ratee performance may be generated using behavior-oriented scales.

Haynes (29) stated that in order for an evaluation program to meet its objectives, the supervisors involved need to be trained in its use. In general, training should cover the basic procedures and concentrate on the actual preparation of evaluations using the selected forms. Such training would improve supervisors' confidence in a program by letting them see it work and by allowing them the chance to correct any misconceptions.

Flanagan et al. (17) reported that before the Clinical Experience Record for Nursing Students was used by Western Pennsylvania Hospital School of Nursing, an instructor manual was developed to orient the instructors in the use of the new critical incident procedures. The students also were oriented to the program and its objectives through a student orientation leaflet and a briefing session.

Ingalsbe (1), after development of the Critical Incident Performance Evaluation Instrument for Foodservice Systems, concluded that specific training for those using this method of performance evaluation would be

essential. With adequate training, the time involved in this type of evaluation process of student performance would not exceed that of other methods.

METHODOLOGY

The purpose of this study was to develop a self instructional module on the use of the critical incident technique of performance evaluation. Ingalsbe (1), instructor for the coordinated undergraduate program in dietetics, developed an instrument for use of the critical incident technique in the Foodservice Systems course. To assure effectiveness, she instructed students and clinical instructors in the use of the technique. This critical incident technique and the instrument developed at Kansas State University has been presented to dietetics educators at several national meetings. The audiences at these meetings appreciated the virtue of the technique but expressed concern about the problems of training people in its use. Ingalsbe found it expedient to instruct students and clinical instructors outside of regular classroom hours. She had expressed a desire for some self instructional methods to obviate the repetition of this material each semester. Following observation of the instructions by Ingalsbe and a conference with her, the decision was reached to develop a self instructional module.

Development of the Module

Initial Stage

In the first phase of development, a booklet was prepared for distribution to a class which contained examples illustrating the concepts of effective and ineffective behaviors in incidents and the categorization of behaviors. The purpose of the booklet was to determine student

reaction to the type of instructional material which might be included in a self study manual.

This booklet was given to fifteen students in the Spring 1978 Food-service Systems class a week after they had viewed slides introducing the critical incident technique and listened to a lecture by the course instructor. Students were asked to write comments about the content of the booklet. The consensus was that it had increased their understanding of the critical incident technique. Following study of the student comments, it was realized that an effective instructional module should begin with an explanation of the critical incident technique of performance evaluation and the behavioral activity categories.

Objectives for the Self Instructional Module

Based upon the comments of the students and the experience of the instructor, the module topical outline was predicated upon reader accomplishments of the following objectives:

1. Recognize distinctions of each behavioral activity category.
2. Determine the behavioral activity category for given critical behaviors.
3. Determine the level of effective behaviors within each behavioral activity category.
4. Determine the level of ineffective behaviors within each behavioral activity category.
5. Categorize a critical behavior contained within a critical incident.
6. Categorize more than one critical behavior contained within a critical incident.

Text of the Module

The text for each of the topics followed closely the presentations which Ingalsbe had found to be most effective with several different classes (Appendix A). The behaviors given in the module for practice categorization were those actually observed and reported by the course instructor, clinical instructors, and students in previous Foodservice Systems classes. Some of the behaviors were excerpted from logs which the students were required to keep during their clinical experiences.

The text began with an introduction in which the six objectives of the self instructional module were listed. The study material was presented in six sections, each devoted to one of the objectives. In addition, the introduction contained guidelines for observation of critical behaviors including specific definitions. An observation form and the Critical Incident Performance Evaluation Instrument also were included. The guidelines, observation forms, and evaluation instrument developed by Ingalsbe had been used for three years.

Section I. The objective of the first section was recognition of distinctions of each behavioral activity category. This section contained a statement by Ingalsbe for each of the ten behavioral activity categories delineated on the Critical Incident Performance Evaluation Instrument. Each category was allotted a single page in the module.

From two to four test exercises were given for each category. These were arranged in typical programmed study format with provision for covering the correct answers.

Section II. The objective of the second section was determination of the behavioral activity categories for given critical behaviors.

Excerpted incidents, comments, and notes from student logs, self evaluations, and instructor evaluations of students in Foodservice Systems class at Kansas State University were presented. Each represented one of the ten behavioral activity categories. Students were instructed to categorize the described critical behaviors according to the Critical Incident Performance Evaluation Instrument. Following each excerpt, a previously determined consensus response was given. Students were instructed to follow the same procedure described in Section I for covering the consensus response until an answer had been selected.

Section III. The objective of the third section was determination of the level of effective behaviors within each behavioral activity category. Excerpted incidents, comments, and notes from student logs, self evaluations, and instructor evaluations of students in the Foodservice Systems class were presented. Each of the ten behavioral activity categories were represented. Using the Critical Incident Performance Evaluation Instrument, students were asked to indicate at what level within each category the critical effective behavior belonged. Following each excerpt, a previously agreed upon consensus response was given. Students were instructed to follow the same procedure described in Section I for covering the consensus response until an answer had been selected.

Section IV. The objective of the fourth section was determination of the level of ineffective behaviors within each behavioral activity category. Excerpted incidents, comments, and notes from student logs, self evaluations, and instructor evaluations of students in the Foodservice Systems class were presented. Each of the ten behavioral activity categories were represented. Using the Critical Incident Performance

Evaluation Instrument, students were asked to indicate the level within each category for each critical ineffective behavior. Following each excerpt, a consensus response was given. Students were instructed to follow the same procedure described in Section I for covering the consensus response until an answer had been selected.

Section V. The objective of the fifth section was categorization of a critical behavior contained within a critical incident. Twenty observed behaviors as reported by clinical instructors were presented. Students were instructed to indicate the category of behavior, whether effective or ineffective, and the level of behavior within the category. Following each incident, a consensus response of category and level within that category was given.

Section VI. The objective of the sixth section was categorization of more than one critical behavior contained within a critical incident. Eight incidents were presented. They were extracted from instructor evaluations and students' logs. Each incident could have more than one behavior and contain both effective and ineffective behaviors. Students were instructed to indicate what category and level were being illustrated by the critical behaviors in each incident. They were also instructed to use the procedure described in Section I for covering the consensus response until an answer had been selected.

Validation

The module was validated by a panel of seven persons composed of the following: three members of the graduate faculty, the Foodservice Systems course instructor, the instructor for the Restaurant Management students,

and two graduate students with experience as former clinical instructors. Based upon their recommendations, revisions were made. These revisions included addition of a preface, clarification of the instructions and definitions in Section I, and changes in consensus responses for some of the examples. Also, general editorial changes were made in all sections of the module.

Preparation of the Self Instructional Package

The self instructional module was spiral bound in a KSU cover following revision. The final self instructional package consisted of a two pocketed folder containing the module on the right hand side. A sheet labeled "Cover Sheet," answer sheets for each section, and a Critical Incident Performance Evaluation Instrument were all placed on the left hand side of the folder. The answer sheets were provided to avoid writing in the booklet and thus permit reuse by others.

Evaluation of the Effectiveness of the Module

Test usage of the module in an actual class under appropriate conditions of comparison with a control and an experimental group was the next procedure. Permission to conduct the study was secured from the College of Home Economics Rights of Human Subjects Committee. Concern of the committee was that the test usage of the module would not devalue any student grade. To alleviate any concerns about students not being able to hear the information presented by the teacher, the lecture to students in the control group was videotaped and the tape was available to students in the experimental group after the two week experimental period.

The Sample

Twenty-eight students in Foodservice Systems (660 650), a course in the department of Dietetics, Restaurant and Institutional Management, were the sample for the study. Nineteen were in the Dietetics program and nine in the Restaurant Management curriculum. They were asked to participate in a study involving development of a module in the use of the Critical Incident Performance Evaluation Instrument, informed of the procedures to be followed, and assured that individual scores would be kept anonymous. Students signed consent forms (Appendix B) required for participation in the research.

The experimental group was assigned the self instructional module and the control participated in the customary lecture and discussion session. Both groups were shown a set of slides introducing the critical incident technique prior to receiving either the self instructional module or the lecture discussion.

Since understanding the critical incident technique of performance evaluation is essential in Foodservice Systems, the three students who did not consent to be in the experimental group if randomly assigned to it, were placed in the control, or lecture discussion group. From the remaining twenty-five students fourteen were selected randomly for the experimental, or self instruction group. The resultant groups were each composed of fourteen students.

Procedure for Evaluation

All students were given a pretest, posttest, and retest. It was explained to the students that the pretest was to ascertain previous knowledge of the Critical Incident Performance Evaluation Instrument and

the posttest was to assess the amount of learning attributable to the two different instructional methods. The purpose of the retest was to measure retention of the critical incident principles and the reinforcing effect of students having used this method of evaluation throughout the semester.

Test Construction. A pretest was constructed and the posttest and retest consisted of the same items reordered in sequence (Appendix C). Eighteen critical behaviors in ten incidents excerpted from observation forms from self evaluations and instructor evaluations of students in the Foodservice Systems class were presented in the test. All ten behavioral activity categories were represented. The test required students to classify critical behaviors in the correct behavioral activity categories at the appropriate levels.

To establish validity, the test was pilot tested on the course instructor, the instructor for the Restaurant Management students, and two graduate students with experience as clinical instructors in the Foodservice Systems class. This evaluation panel decided on the consensus responses for the test.

Test Administration. The pretest was administered during scheduled class time. In a subsequent special session scheduled in addition to regular class time, all students were given a slide illustrated introductory lecture on the critical incident technique. The fourteen students in the experimental group were each given a self instructional module explaining the Critical Incident Performance Evaluation Instrument and providing practice at classifying the critical behaviors in the correct

categories at the appropriate levels. They were allowed two weeks to accomplish the module at their convenience.

The posttest was administered to all students during scheduled class time two weeks after the pretest. The retest was administered during scheduled class time six weeks after the posttest.

Scoring the Test. Several years of experience in categorizing behaviors had indicated that a single correct response to an incident was rarely possible. In recognition of valid differences of opinion and the certainty that some students might add extra answers to the stated consensus response, the scoring scheme had to allow for such deviations. Three points were subtracted for any added answers and five points were subtracted for correct answers omitted from a maximum score of 90, derived by multiplying the eighteen consensus responses times five points each. Adding answers that could possibly be considered correct, depending on the interpretation by the student, was considered less of an error than the omission of the consensus response.

Data Analysis

The four criterion measures shown in Table 1 were computed for the pretest, posttest, and retest. A t-test for related samples was used to compare the pretest to the posttest, the pretest to the retest, and the posttest to the retest on each of the four measures. This was done for the two groups combined and for the self instruction and lecture discussion groups separately.

A t-test for two independent samples was done to compare the difference on each of the four measures between the two groups (33). Difference

scores as shown in Table 1 also were computed. A t-test for independent samples was used to compare the two groups on each of the difference scores.

An analysis of covariance was done to compare the means of the post-test and retest of the two groups (34). In the analysis of the posttest, the pretest was the covariate. In the analysis of the retest, both the pretest and posttest were covariates. On all analyses, the level of acceptance was set at .05.

Table 1: Measures for evaluation phase of study

	computation
criterion measures:[1]	
number missed (M)	total no. of correct answers omitted
number added (A)	total no. of extra answers added
number correct (C)	total no. of correct responses
total score[2]	90 - (5M + 3A)
difference scores:[3]	
difference score$_1$	posttest - pretest score
difference score$_2$	retest - pretest score
difference score$_3$	retest - posttest score

[1]Each score computed for pretest, posttest, and retest.

[2]Maximum possible score: 18 correct answers at 5 points each = 90.

[3]Difference scores were computed for each of the four criterion measures.

RESULTS AND DISCUSSION

Evaluation of the Effectiveness of the Module for the Foodservice Systems Class

Total Class

The four criterion measures shown in Table 1 were computed for the pretest, posttest, and retest. The results for comparisons of the pretest versus posttest versus retest scores are shown in Table 2 for the self instruction and lecture discussion groups combined. As indicated, significant differences on the three criterion measures of number missed, number correct, and total score were found in comparisons of the pretest and posttest ($t\ value_1$). The number missed decreased significantly and the number correct increased significantly as did the total score. In comparisons of the pretest to the retest ($t\ value_2$), significant differences were found on all four criterion measures. In the comparisons of the posttest to the retest ($t\ value_3$), no significant differences were found on any of the four criterion measures.

The findings for comparisons of the pretest versus posttest ($t\ value_1$) indicate that learning occurred among the total group of students in the Foodservice Systems course as the result of exposure to either method of presentation of the concepts related to the critical incident technique. The findings for comparisons of the posttest to the retest ($t\ value_3$) indicate there was retention of the concepts and ability to apply them. These data also suggest a reinforcing effect from the use of the Critical Incident Performance Evaluation Instrument as a method of

Table 2: Pretest, posttest, and retest mean scores of combined group (N = 28)[1]

criterion measures	pretest mean s.d.	posttest mean s.d.	retest mean s.d.	t value$_1$[2]	t value$_2$	t value$_3$
1. number missed[3]	7.57 ±2.35	5.96 ±2.08	5.58 ±2.21	3.51**	3.43**	0.48
2. number added[4]	7.93 ±4.18	6.50 ±3.91	5.46 ±4.05	1.67	2.47*	0.98
3. number correct[5]	10.43 ±2.35	12.06 ±2.08	12.42 ±2.21	3.51**	3.43**	0.48
4. total score	28.36 ±15.84	40.68 ±15.77	45.85 ±16.20	3.75***	4.52***	1.01

[1]Combined group = self instruction + lecture discussion groups.

[2]t value for related samples. t_1 = comparison of pretest and posttest, t_2 = comparison of pretest and retest, t_3 = comparison of posttest and retest.

[3]Number missed = number of correct answers omitted.

[4]Number added = number of incorrect or extra answers added.

[5]Total score = 90 - [measure 1 (5 points) + measure 2 (3 points)].

* $P \leq .05$
** $P \leq .01$
*** $P \leq .001$

evaluation in clinical situations during the intervening time from the posttest to retest.

Self Instruction Group

The test results for the self instruction group are shown in Table 3. Significant differences were found in number missed, number correct, and total score in comparisons of pretest and posttest scores (t $value_1$).

In comparison of pretest to retest scores (t $value_2$), significant differences again were found on the same three criterion measures. As in the results for the total group, no significant differences were found in the comparisons of posttest to retest (t $value_3$).

Table 3: Pretest, posttest, and retest mean scores of self instruction group (N = 14)

criterion measures[1]	pretest mean s.d.	posttest mean s.d.	retest mean s.d.	t^2 $value_1$	t $value_2$	t $value_3$
1. number missed	8.07 ±2.58	5.57 ±2.10	5.53 ±2.57	3.74**	4.09**	0.24
2. number added	7.71 ±4.45	6.21 ±4.08	4.77 ±4.11	1.07	2.01	1.27
3. number correct	9.93 ±2.59	12.43 ±2.10	12.46 ±2.57	3.74**	4.09**	0.24
4. total score	26.50 ±17.31	43.50 ±17.19	49.00 ±17.34	3.12**	4.19***	0.44

[1]For criterion measures, see footnotes for Table 2.

[2]t value for related samples. t_1 = comparison of pretest and posttest, t_2 = comparison of pretest and retest, t_3 = comparison of posttest and retest.

** $P \leq .01$
*** $P \leq .001$

Lecture Discussion Group

Table 4 presents test results for the students in the lecture discussion group. As shown, a significant difference was found on only one criterion measure, the total score, in comparisons of the pretest and posttest (t $value_1$) although posttest results on the other three measures were in the expected direction. In comparisons of pretest to retest (t $value_2$), the only significant difference again was found on the total score. No significant differences were found in the comparisons of posttest to retest scores (t $value_3$).

Table 4: Pretest, posttest, and retest mean scores of lecture discussion group (N = 14)

criterion measures[1]	pretest mean s.d.	posttest mean s.d.	retest mean s.d.	t value$_1$[2]	t value$_2$	t value$_3$
1. number missed	7.07 ±2.06	6.36 ±2.06	5.62 ±1.89	1.30	1.38	0.85
2. number added	8.14 ±4.06	6.79 ±3.87	6.15 ±4.04	1.30	1.45	0.34
3. number correct	10.93 ±2.06	11.64 ±2.06	12.38 ±1.89	1.30	1.38	0.85
4. total score	30.21 ±14.63	37.86 ±14.28	43.69 ±15.36	2.23*	2.33*	0.96

[1] For criterion measures, see footnotes for Table 2.

[2] t value for related samples, t_1 = comparison of pretest and posttest, t_2 = comparison of pretest and retest, t_3 = comparison of posttest and retest.

* $P \leq .05$

Comparison of Self Instruction and Lecture Discussion Groups

In comparing whether the self instruction was as effective as the lecture discussion, mean scores on each of the four criterion measures were compared for the two groups on the pretest, posttest, and retest as shown in Table 5. No significant differences were found on any of the criterion measures, however, mean scores on the posttest and retest tended to favor the self instruction group.

For additional analysis, difference scores were computed as discussed in the data analysis section. Significant differences were found in the two groups on the pretest versus the posttest on difference scores for two criterion measures, number missed and number correct (Table 6). This differential between the pretest and posttest on the two criterion measures of number missed and number correct indicated greater change for the self instruction group. The lecture discussion group scores, however, were more positive on the pretest measures as shown earlier. Greater change, therefore, could have been anticipated. Also, a greater change in total score for the self instruction group was found, but the difference between the two groups was not significant on this measure. The changes in comparisons of the pretest to the retest favored the self instruction group slightly on all four measures but none was significant.

Since pretest differences existed even though they were not significant, additional analyses were done to study possible group differences when these pretest scores are taken into account. Analysis of covariance was done with the pretest as the covariate to study differences in posttest means between the two groups (Table 7). Scores on both the pretest

Table 5: Mean scores of self instruction and lecture discussion groups

criterion measures[1]	self instruction group mean s.d.	lecture discussion group mean s.d.	t value[2]
pretest:			
number missed	8.07 ±2.58	7.07 ±2.06	1.13
number added	7.71 ±4.45	8.14 ±4.06	0.27
number correct	9.93 ±2.59	10.93 ±2.06	1.13
total score	26.50 ±17.31	30.21 ±14.63	0.61
posttest:			
number missed	5.57 ±2.10	6.36 ±2.06	1.00
number added	6.21 ±4.08	6.79 ±3.87	0.38
number correct	12.43 ±2.10	11.64 ±2.06	1.00
total score	43.50 ±17.19	37.86 ±14.28	0.94
retest:			
number missed	5.54 ±2.57	5.62 ±1.89	0.09
number added	4.77 ±4.11	6.15 ±4.04	0.87

[1] For criterion measures, see footnotes for Table 2.

[2] t value for independent samples. All values nonsignificant.

Table 5: (cont.)

criterion measures	self instruction group mean s.d.	lecture discussion group mean s.d.	t value
number correct	12.46 ±2.57	12.38 ±1.89	0.09
total score	48.00 ±17.35	43.69 ±15.36	0.67

Table 6: Mean difference scores[1] of self instruction and lecture discussion groups

criterion measures[2]	self instruction group mean s.d.	lecture discussion group mean s.d.	t value[3]
difference scores$_1$			
number missed	-2.50 ±2.50	-0.71 ±2.05	2.06*
number added	-1.50 ±5.24	-1.36 ±3.89	0.08
number correct	2.50 ±2.50	0.71 ±2.05	2.06*
total score	17.00 ±20.36	7.64 ±12.83	1.45
difference scores$_2$			
number missed	-2.38 ±2.10	-1.15 ±3.02	1.20
number added	-2.69 ±4.82	-2.15 ±5.37	0.27
number correct	2.38 ±2.10	1.15 ±3.02	1.20
total score	20.00 ±17.21	12.46 ±19.26	1.05

[1] Difference score$_1$ = posttest - pretest score.
Difference score$_2$ = retest - pretest score.
Difference score$_3$ = retest - posttest score.

[2] For criterion measures, see footnotes for Table 2.

[3] t value for independent samples.

* $P \leq .05$

Table 6: (cont.)

criterion measures	self instruction group mean s.d.	lecture discussion group mean s.d.	t value
difference scores[3]			
number missed	0.15 ±2.30	-0.62 ±2.59	0.80
number added	-0.92 ±2.63	-0.38 ±4.11	0.40
number correct	-0.15 ±2.30	0.62 ±2.59	0.80
total score	2.00 ±16.49	4.46 ±16.81	0.38

Table 7: Analysis of covariance tables for posttest measures

source	d.f.	mean squares	F ratio
number missed:			
group[1]	1	9.64	2.74
pretest[2]	1	24.60	6.99*
residual	25	3.52	
number added:			
group	1	1.25	0.09
pretest	1	56.66	4.00
residual	25	14.16	
number correct:			
group	1	9.64	2.73
pretest	1	24.60	6.79*
residual	25	3.52	
total score:			
group	1	358.88	1.69
pretest	1	1191.15	5.62*
residual	25	212.08	

[1]Group = 2 groups self instruction and lecture discussion.

[2]Pretest used as a covariate.

* $P \leq .05$
** $P \leq .01$

and posttest were controlled in analysis of covariance of the retest scores between groups.

On three of the criterion measures (number missed, number correct, and total score), differences in the posttest scores were explained by pretest scores. After removing the initial differences between the two groups, no significant differences on posttest means due to group were found. The two groups did not differ on retest means when adjusted for differences in pretest and posttest with one exception, number added. The lecture discussion group had a significantly higher number of added responses than did the self instruction group.

SUMMARY AND CONCLUSIONS

Summary

The purpose of this research was to develop a self instructional module for orienting students to the use of the Critical Incident Performance Evaluation Instrument developed by Ingalsbe (1). The rationale for the development of this module was to relieve instructors of the repetitious orientation of students at the beginning of clinical experiences. A module was developed for use as a self study text and a reference. This module contained an explanation of the critical incident technique and the behavioral activity categories. The major portion of the module was devoted to sections for practice in classifying critical behaviors into appropriate categories.

The module was evaluated with a class of twenty-eight dietetic and restaurant management students enrolled in the junior level required course, Foodservice Systems, at Kansas State University. For research purposes, the class was divided into two equal groups, one receiving the self instructional module and the other the lecture discussion. The efficacy of the module was tested by comparing the scores on a pretest, posttest, and retest of the group using the self instructional module with the group receiving the instruction by traditional lecture-discussion methods.

The four criterion measures of number missed, number added, number correct, and total score were computed for the pretest, posttest, and retest. A t-test for related samples was used to compare the scores on each of the four measures for the two groups combined as well as each

group separately. A t-test for independent samples was done to compare the two groups on each of the four measures. Difference scores indicating change from one test to another were computed and analyzed using a t-test for independent samples. Also, an analysis of covariance was done to compare the means of the posttest and retest of the two groups when initial differences between the two groups were controlled.

Conclusions and Recommendations

The analysis of data revealed that the self instructional module was as effective as the lecture discussion in teaching the concepts of the critical incident technique. Based on this finding, the self instructional module could be used to relieve faculty from presentation of this material outside of class time and allow students to master the technique at times convenient to their schedules. Also, the module could be used to familiarize instructors who had not been involved previously in the technique.

Ingalsbe (1) concluded that the Critical Incident Performance Evaluation Instrument was an effective method of performance evaluation. The critical incident technique and the instruction in its use provided by the self instructional module should be extended to future Foodservice Systems classes. Also, this module could be used effectively in other clinical courses in which performance is an integral part.

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APPENDIXES

APPENDIX A

Self Instructional Module

SELF INSTRUCTIONAL MODULE

IN THE USE OF THE

CRITICAL INCIDENT PERFORMANCE EVALUATION INSTRUMENT

PREFACE

For your enlightenment, the critical incident technique consists in the observation and recording of behaviors in a series of activity categories related to professional practice. You will learn the significance of critical incidents in which your behavior is either the best to be expected or one which could be improved.

The meaning of a critical incident will be significant to you through the definitions and your experience in clinical practice. The function of this learning module is to acquaint you with the evaluative procedures in the critical incident technique and enable you to function with this method in your clinical experiences.

INSTRUCTIONS

This self instructional module is designed to maximize your learning related to the use of the critical incident performance evaluation instrument. It is essential that you read carefully all instructions.

This booklet is divided into six sections. It is suggested an entire section be completed at one time rather than stopping in the middle of a section.

Read pages iii to vi which present an introduction to the critical incident technique of performance evaluation developed by Ingalsbe (1).

INTRODUCTION

This module is an introduction to your use of critical incident technique. Upon completion of the module, the reader should be able to:

1. Recognize distinctions of each behavioral activity category.
2. Determine the behavioral activity category for given critical behaviors.
3. Determine the level of effective behaviors within each behavioral activity category.
4. Determine the level of ineffective behaviors within each behavioral activity category.
5. Categorize a critical behavior contained within a critical incident.
6. Categorize more than one critical behavior contained within a critical incident.

Each of these objectives will be the subject of one of the six sections in the learning module. All ten behavioral activity categories in the critical incident performance evaluation instrument developed by Ingalsbe (1) will be considered in each section of this module.

THE CRITICAL INCIDENT TECHNIQUE

Guidelines for Observation of Critical Behaviors

Throughout the semester, you will be evaluated on your performance in clinical experiences. 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 their peers.

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 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 Categorization of Critical Behaviors

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

1. For Instructor, 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?

Recording the Critical Behaviors

Record the critical behaviors on the forms provided. An example of an observation form is shown in figure one. 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.

Since self evaluation is important to self development, it is recommended that 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.

The Critical Incident Performance Evaluation Instrument

This instrument consists of parallel columns for "behaviors to be encouraged" and "suggestions for improvement." These columns are separated by writing space for the date and a number corresponding to the number of the behavior as described on the observation form. This provides a composite up-to-date picture of your performance. The Critical Incident Performance Evaluation Instrument is found in figure two.

KANSAS STATE UNIVERSITY, COLLEGE OF HOME ECONOMICS
Dietetics, Restaurant and Institutional Management Department

Name _____ Observer _____ Date _____

Item Behavioral Activity Category	
____ 1. PLANNING AND ORGANIZING ____ 2. OBSERVING, REPORTING AND DOCUMENTING ____ 3. APPLYING SCIENTIFIC PRINCIPLES TO FOODSERVICE 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	Describe exactly what happened
What was EFFECTIVE	INEFFECTIVE

Figure 1

Behaviors to be Encouraged	Date	What Happened	Date	What Happened	Suggestions for Improvement
1. PLANNING AND ORGANIZING					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
a. Develops 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					
2. OBSERVING, REPORTING AND DOCUMENTING	Date	What Happened	Date	What Happened	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
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					
3. APPLYING SCIENTIFIC PRINCIPLES TO FOODSERVICE MANAGEMENT	Date	What Happened	Date	What Happened	3. 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
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					
4. CHECKING	Date	What Happened	Date	What Happened	4. CHECKING A. Should seek pertinent information from menu, recipe, schedules and other management tools B. Should check food inventory, orders and quantities prepared Should check supply inventory and order Should compare number of employees on duty with schedule C. Should compare quality of food and portion size to established standards D. Should consult procedure manuals for equipment operations E. Should make continuous checks during preparation and service
a. Checks goals, policies, procedures and management tools of the foodservice system					
b. Checks adequacy of food quantities					
Checks adequacy of supplies					
Checks adequacy of staff on duty					
c. Checks food quality and portion size					
d. Checks operating condition of equipment and utilities in the facility					
e. Checks for adherence to the policies and procedures pertinent to the goals of the foodservice					

Figure 2

	Date	What Happened	Date	What Happened
5. RELATING TO INSTRUCTORS, MANAGERS, EMPLOYEES, PEERS AND CLIENTELE 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				
6. ADAPTING TO NEW OR STRESSFULL 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				
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				
8. USING CREATIVITY a. Uses creativity and imagination in completing assignments b. Suggests new approaches to attainment of an objective				
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				
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				

5. 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. 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. 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. Should not unthinkingly adhere to custom
   B. Should be innovative

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. 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

CONTENTS

SECTION I

Objective: Recognition of distinctions of each behavioral activity category.

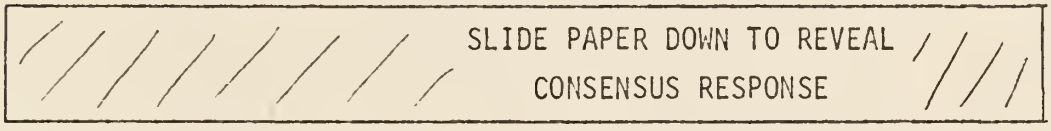
On the following pages you will find a definition for each of ten behavioral activity categories as delineated on the Critical Incident Performance Evaluation Instrument (fig. 2). Following each definition will be questions to test your understanding of the behavioral activity category. These questions should be answered without referring back to the definition. If you make an incorrect response or do not fully understand the category, then refer back to the definition to resolve the misunderstanding.

The material has been arranged in the form of a programmed learning text. As the excerpts are read and the correct level of behavior is contemplated, a piece of paper or cardboard should be used to cover the answer which will follow immediately below the behavior excerpt.

Example: Planning and organizing course and personal _____ should pertain to the clinical facility to which you are assigned.

After making the selection of the appropriate level of behavior, the masking paper may be moved downward to reveal the consensus response.

Example: Objectives



If your answer is correct, proceed to the next question. If your answer is incorrect, review the definition of the behavioral activity category in Section I and review the levels of behavioral activity on the Critical Incident Performance Evaluation Instrument (fig. 2). Then reread the selected excerpt and attempt to resolve your first selection with the consensus response.

Please record all answers on the answer sheet provided; do <u>not</u> write in the booklet.

CRITICAL INCIDENT CATEGORY 1

PLANNING AND ORGANIZING

Completion of class assignments would fall within this category which relates to your ability to plan in accordance with course and personal objectives. Personal objectives must be based on your potential to achieve, being careful that objectives are neither too difficult nor too simple. Objectives should pertain to the clinical facility in which you are working, and the time scheduled for achievement should be reasonably accurate. The extent of attainment of objectives will indicate utilization of available resources. If an objective is achieved without the use of available resources, you will be redirected in establishing a more challenging objective. This will require the use of additional resources and will further develop your potential.

1. Planning and organizing course and personal _____ should pertain to the clinical facility to which you are assigned.

objectives

2. In order to achieve your objective, you must arrange your time _____ and allocate enough _____ for accomplishment of each task.

schedule time

3. To achieve your objective in the allotted time, you are expected to use available _____. If you did not need available assistance, it is indicated that your objective was not sufficiently challenging.

resources

CRITICAL INCIDENT CATEGORY 2

OBSERVING, REPORTING, AND DOCUMENTING

Behaviors in this category begin with your answering questions correctly about what you have done or observed. Knowledge of the foodservice system is necessary for you to report and explain observations important to the system. This requires more than merely identifying the elements of the foodservice system. By using the foodservice system model, you should be able to explain the effects of a given situation on the foodservice.

4. The critical examination of _____ requires understanding of foodservice systems.

observations

5. To explain your observations in detail, you must understand the _____ concept of management.

systems

6. To analyze correctly the _____ of an observed situation, you must be able to make a comparison with the foodservice system model.

effect

CRITICAL INCIDENT CATEGORY 3

APPLYING SCIENTIFIC PRINCIPLES TO FOODSERVICE MANAGEMENT

A situation observed, reported, and documented can be analyzed by using the problem solving approach. This approach consists in suggesting more than one alternative and comparing the advantages and disadvantages of each. A suitable alternative is selected based on this comparison. Finally, you must, if permitted, implement the chosen alternative. If you are unable to assume responsibility for implementing the alternative in the clinical facility, give a prediction of how your selection would affect the foodservice. The "problem solving" approach may give you an understanding of why the present method is superior to the alternatives. You should be encouraged to use the problem solving approach to verify the appropriateness of your own decision in the clinical facility where you have responsibilities for decision making.

7. You may expand on your experiences in observing, reporting, and documenting behaviors if you can suggest _____ solutions to the one recorded.

alternative

8. When you suggest alternative solutions you should be comparing _____ and _____ of each solution in order to choose the best one.

advantages disadvantages

9. If you are unable, because of the clinical facility's limitations, to implement your best solution, you may record it in category three if you can _____ the consequences of its implementation.

predict

CRITICAL INCIDENT CATEGORY 4

CHECKING

Before you can function effectively in a foodservice system, you must determine the goals and objectives of that foodservice and review the policies, procedures and available management tools. Only after completing this, will you be able to interpret the adequacy of food quantities, supplies and staff, and relate food quality and portion size to the standards for that specific foodservice system. The first four levels of behavior in the CHECKING category are seen when you are pursuing the one behavior, checking. To attain level (e) your behavior covers a much broader scale. Here, checking is seen as a continuous process being performed in conjunction with other management functions, and at the same time you relate the information you attained to the organizational goals.

10. Just as you must know your own goals in order to plan an effective approach to accomplishing them, so must you know the goals and _____ of the foodservice system to function effectively in it.

objectives

11. After learning the objectives of the foodservice, you will be better able to judge the _____ of food quantities, supplies, and staff.

adequacy

12. In order for you to reach the highest level of behavior in CHECKING (e), you must check and relate the information continuously to the organization's _____.

goals

CRITICAL INCIDENT CATEGORY 5

RELATING TO INSTRUCTORS, MANAGERS, EMPLOYEES, PEERS AND CLIENTELE

This category includes your human skills while functioning within the foodservice organization and also performing activities of the course. The ultimate goal is to apply human skills in the effective supervision of employees. To attain this goal, you must first cooperate with the people associated with the foodservice, then offer assistance, when needed, and finally express yourself tactfully under all circumstances. To be categorized at level (d), "assist in supervision of employees," the incident must contain a behavior relating to human skill.

13. Perhaps the most important skill you will learn in your clinical experience is how to _____ employees.

supervise (or relate to)

14. Cooperation, assistance, discipline, and tactful corrections must be learned in order to relate to employees effectively. To reach the highest level of the RELATING category you must display ability in _____.

human skills

CRITICAL INCIDENT CATEGORY 6

ADAPTING TO NEW OR STRESSFUL SITUATIONS

A new clinical experience will create an environment of uncertainties for you and will require you to develop independence. Behaviors exhibited in various levels of independence are placed in this category. An important consideration, when placing behaviors in this category, is that much of the ordinary functioning of a foodservice system constitutes a stressful situation for a student manager. During the production and service of a meal in a foodservice, you need to be able to foresee situations which require decision making and then take appropriate action in handling the situation. Asking for excess guidance indicates the inability to cope with stress. Similar behavior is also necessary in more commonly recognized emergencies as fire, accidents, utility outages, equipment breakdowns, etc. The key to behaviors in this category is the stress or frustration associated with the environment in which you are placed.

15. One trait a clinical experience is designed to develop in you is _____.

independence

16. As a student manager, you will be placed in a _____ situation by virtue of working in the clinical environment.

stressful

17. Foresight is required in your role as a student manager, and excessive requests for assistance indicate an _____ to handle the situation yourself.

inability

18. The key to rating your behaviors in this category is the amount of _____ associated with the critical incident being recorded.

stress

CRITICAL INCIDENT CATEGORY 7

USING LEARNING OPPORTUNITIES

Your major objective in this category is learning. You are encouraged to participate in class activities not only for the purpose of learning, but also for sharing knowledge and experiences with other students. It is very important that behavior exhibit effective two-way communication which includes both speaking and listening. You should see evaluation as a learning situation and seek to improve your performance as a result of the evaluation. Finally, you should voluntarily become involved in learning situations by participating in organizational activities which will further self development as a professional.

19. Your objective in the clinical environment is to _____.

learn

20. In classroom activities, your learning can be expanded through shared _____ with other students.

experiences

21. You should view your _____ as a continuation of the _____ experience and seek to improve your _____.

evaluation learning performance

22. Taking a step toward professional development is evidenced when you participate in _____ activities.

organizational

CRITICAL INCIDENT CATEGORY 8

CREATIVITY

Unique and effective approaches in the completion and presentation of course assignments can be judged as creative behavior. Within the foodservice clinical facilities, you are encouraged to make suggestions which would lead to the improved quality of output for that specific foodservice system. When such suggestions are made, you are also encouraged to follow through with behavior for applying scientific principles to foodservice management. Behavior, which is new or different from the usual, should be the objective for creativity.

23. Completion and presentation of course assignments can be judged as creative behavior if the approaches to the assignment are _____ and _____.

unique effective

24. In evaluating your creativity a new or _____ approach which you have developed must be observed or recorded.

different

CRITICAL INCIDENT CATEGORY 9

ACCEPTING PROFESSIONAL RESPONSIBILITY

Your major objective in this category is to develop the desire to perform by utilizing the knowledge and skills of a professional who provides quality foodservice to clientele. This objective distinguishes these leadership and management responsibility behaviors from those in category 3, APPLYING SCIENTIFIC PRINCIPLES TO FOODSERVICE MANAGEMENT. Therefore, you are observed as a professional giving advice and demonstrating correct procedures based on the knowledge and skills which you possess. You should be flexible and function voluntarily beyond the requirements of this course. Leadership qualities may also be observed when you function with peers in completing course activities and as you assume responsibility for personal appointments, schedule changes, etc.

25. Your demonstrated desire to use your professional _____ and _____ in serving clientele within your foodservice system differentiates this category from Category 3, APPLYING SCIENTIFIC PRINCIPLES TO FOODSERVICE MANAGEMENT.

knowledge skills

26. To receive an evaluation in this category, you will have to perform voluntarily more than the minimum requirements for the course. Your leadership ability may be evaluated when you take the _____ for functioning with the other students and making and keeping appointments, etc.

responsibility

CRITICAL INCIDENT CATEGORY 10

JUDGING PROFESSIONAL VALUES

Helping you develop realistic self evaluation is one of the major responsibilities of the clinical instructor, and behaviors representing self evaluation are in this category. To be effective, the self evaluation must be realistic, i.e., the same types of behavior the clinical instructor would have recorded for your behavior are what you should be recording. Realistic self evaluation includes both effective and ineffective behaviors. You are expected to maintain the values and ethics of a professional in a foodservice organization.

27. Upon completing the course, you should have gained an ability to _____ yourself objectively.

evaluate

28. You must be _____ when evaluating yourself. The tendency is to see yourself more favorable than the actual situation may warrant.

realistic

29. You should list both _____ and _____ behaviors when evaluating yourself. Realize you will make mistakes, accept them, and learn from them.

effective ineffective

30. Remember that in your clinical situation you are learning, and expected to maintain, a professional set of ethics and _____.

values

SECTION II

Objective: Determine the behavioral activity category for given critical behaviors.

On the following pages are excerpted incidents, comments, and notes from student logs, self evaluations, and instructor evaluations of students in the Foodservice Systems class at Kansas State University. Each represents one of the ten behavioral activity categories. Using the Critical Incident Performance Evaluation Instrument, indicate the behavioral activity category in which you believe the critical behavior belongs. Use the procedure described on page 1 for covering the consensus responses until you have selected your answers.

DETERMINATION OF BEHAVIORAL ACTIVITY CATEGORIES FOR CRITICAL BEHAVIORS

SOURCE	EXCERPT
Clinical Instructor Comment	1. In reading her log, it was evident the student achieved her objectives. Behavioral activity category _____ _____ Consensus response: Planning and Organizing
Clinical Instructor Comment	2. The student's discussion of situations seen in the residence hall foodservice included reasons for the situation occurrence. Behavioral activity category _____ _____ Consensus response: Observing, Reporting and Documenting
Clinical Instructor Comment	3. In discussion of the problem, the student predicted the future effects of her selected alternative. Behavioral activity category _____ _____ Consensus response: Applying Scientific Principles to Foodservice Management
Clinical Instructor Comment	4. The student checked on the food quality. Behavioral activity category _____ _____ Consensus response: Checking
Self Evaluation	5. I assisted the employees at Woodrow Wilson School with the service and clean-up of lunch. Behavioral activity category _____ _____ Consensus response: Relating to Instructors, Managers, Employees, Peers, and Clientele

SOURCE	EXCERPT
Clinical Instructor Comment	6. The student needed minimal guidance in adjusting to the new facility. Behavioral activity category _____ _____ Consensus response: Adapting to New or Stressful Situations
Clinical Instructor Comment	7. The student contributed often to the group discussion. Behavioral activity category _____ _____ Consensus response: Using Learning Opportunities
Clinical Instructor Comment	8. The student used imagination in the format of her menu assignment. Behavioral activity category _____ _____ Consensus response: Using Creativity
Self Evaluation	9. I decided to delay beginning at the hospital until my health was better. I feel I assumed the responsibility of a professional by not wanting to be in the food-service while I was still recovering from an illness. I made arrangements to make up the work I missed. Behavioral activity category _____ _____ Consensus response: Accepting Professional Responsibility
Clinical Instructor Comment	10. The student had a very realistic self evaluation. Behavioral activity category _____ _____ Consensus response: Judging Professional Values

SECTION III

Objective: Determine the level of effective behaviors within each behavioral activity category.

On the following pages are excerpted incidents, comments, and notes from student logs, self evaluations, and instructor evaluations of students in the Foodservice Systems class at Kansas State University. Each excerpt represents one of the ten behavioral activity categories. You are to indicate the level (a, b, c, d, e) of effective behavior you believe is illustrated in each excerpt using the Critical Incident Performance Evaluation Instrument (fig. 2). The excerpts have been arranged into the ten behavioral activity categories to acquaint you with the types of behavior which have previously been considered to best represent the behavioral activity category indicated. Use the procedure described on page 1 for covering the consensus responses until you have selected your answers.

BEHAVIORAL ACTIVITY CATEGORIES--EFFECTIVE BEHAVIORS

SOURCE	EXCERPT
Log Entry	1. PLANNING AND ORGANIZING My source of information on formal and informal organization was taken from Personnel Management, by Chruden and Sherman. Level of behavior _____ Consensus response: d Utilizes resources pertinent to objective attainment
Log Entry	2. OBSERVING, REPORTING AND DOCUMENTING At the junior high, the unit heads were used to supervise, answer questions, and talk together about menu items. They use the linking process between the subsystems to reach a quality product in the output element. If something is not right in material, skills, or facilities, feedback is used to inform the cook manager. Level of behavior _____ Consensus response: e Relates elements of the actual system to the foodservice systems model
Clinical Instructor Comment	3. APPLYING SCIENTIFIC PRINCIPLES TO FOODSERVICE MANAGEMENT The student made suggestions in log as to how the problem of poor attitude by the cooks towards special dinners could be corrected. Level of behavior _____ Consensus response: a Suggests remedial measures for situations considered incorrect
Clinical Instructor Comment	4. CHECKING The student checked for adherence to the policy on portioning at Kramer. Level of behavior _____ Consensus response: e Checks for adherence to the policies and procedures pertinent to the goals of the foodservice

SOURCE	EXCERPT
Log Entry	5. RELATING TO INSTRUCTORS, MANAGERS, EMPLOYEES, PEERS, AND CLIENTELE When visiting the warehouse with the storeroom man, I asked him about an open box of sugar and noodles sitting on the floor. He stated, "When they cook with it, they'll kill all the germs anyway." I explained that open packages are a sanitation and safety hazard--spills can cause accidents; open foods attract insects. Level of behavior _____ Consensus response: c Tactfully expresses opinions, concerns, and frustrations
Log Entry	6. ADAPTING TO NEW OR STRESSFUL SITUATIONS As soon as I heard two employees were absent due to illness, I began helping in lunch tray assembly and delivery. Level of behavior _____ Consensus response: c Takes immediate and appropriate action in emergencies
Clinical Instructor Comment	7. USING LEARNING OPPORTUNITIES In addition to the required work at the Union, the student turned in a complete layout of the Union foodservice. Level of behavior _____ Consensus response: c Expends extra effort to learn
Clinical Instructor Comment	8. USING CREATIVITY The student chose an unusual diet as one of her modifications in her menu planning assignment at the hospital. It was interesting to see this done. Level of behavior _____ Consensus response: b Suggests new approaches to attainment of an objective

SOURCE	EXCERPT
Self Evaluation	9. ACCEPTING PROFESSIONAL RESPONSIBILITY I had planned my schedule on Monday but had been unable to contact the school which I intended to visit on Wednesday. However, when I came to class on Tuesday, I found that other students had also scheduled themselves for a visit to the same school which I had intended to visit. I redid my schedule and coordinated the visit with the other school. Level of behavior _____ Consensus response: b Willingly cooperates with assignment or schedule change
Self Evaluation	10. JUDGING PROFESSIONAL VALUES My logs are incomplete records of my experiences at the various foodservice installations I visited. The reason is my paying more attention to another project while at the schools than making the most of my experiences and recording the numerous events which I observed. I actually learned and experienced much more in the foodservice areas than is shown on the logs. I realize that the instructor will be unable to accurately assess my learning due to the lack of documentation on my part. Level of behavior _____ Consensus response: b Reports situation accurately despite reflection on self

SECTION IV

Objective: Determine the level of ineffective behaviors within each behavioral activity category.

On the following pages are excerpted incidents, comments, and notes from student logs, self evaluations, and instructor evaluations of students in the Foodservice Systems class at Kansas State University. Each excerpt represents one of the ten behavioral activity categories. You are to indicate the level (A, B, C, D, E) of ineffective behavior you believe is illustrated in each excerpt using the Critical Incident Performance Evaluation Instrument (fig. 2). The excerpts have been arranged into the ten behavioral activity categories to acquaint you with the types of behavior which have previously been considered to best represent the behavioral activity category indicated. Use the procedure described on page 1 for covering the consensus responses until you have selected your answers.

BEHAVIORAL ACTIVITY CATEGORIES--INEFFECTIVE BEHAVIORS

SOURCE	EXCERPT
Clinical Instructor Comment	1. PLANNING AND ORGANIZING Student had not viewed video tape or slide presentation, as required, prior to orientation. Level of behavior _____ Consensus response: B Should schedule the time required for objective attainment
Clinical Instructor Comment	2. OBSERVING, REPORTING AND DOCUMENTING Student's log has good reporting of methods and incidents but he does not make any analysis of the findings. The student reports materials are stored on pallets. He does not question the correctness of the procedure or whether or not this is the best way of storing materials. Level of behavior _____ Consensus response: D Should analyze the situation
Clinical Instructor Comment	3. APPLYING SCIENTIFIC PRINCIPLES TO FOODSERVICE MANAGEMENT The student just listed duties of employees from job description. Should compare these to actual duties and analyze advantages and disadvantages. Level of behavior _____ Consensus response: B Should recognize advantages and limitations for each alternative
Clinical Instructor Comment	4. CHECKING The student was not aware that two employees were late for work until being informed by another employee. The student had not checked the schedule upon reporting for work. Level of behavior _____ Consensus response: B Should compare number of employees on duty with the schedule

SOURCE	EXCERPT
Clinical Instructor Comment	5. RELATING TO INSTRUCTORS, MANAGERS, EMPLOYEES, PEERS, AND CLIENTELE Student raised a question in discussion about "quality" then before she received an answer or discussion was over, she changed the subject. Level of behavior _____ Consensus response: C Should have appropriate discussions with instructors and others
Clinical Instructor Comment	6. ADAPTING TO NEW OR STRESSFUL SITUATIONS Student required much explanation and help in understanding what was expected in the school lunch experience. Level of behavior _____ Consensus response: A Should recognize new situations and not wait for guidance
Clinical Instructor Comment	7. USING LEARNING OPPORTUNITIES Did not talk or comment during the group discussion. Level of behavior _____ Consensus response: A Should be encouraged to participate in group discussion
	8. USING CREATIVITY (Ineffective creativity is very difficult to observe. No cases have been recorded to date to demonstrate ineffective creativity.)
Clinical Instructor Comment	9. ACCEPTING PROFESSIONAL RESPONSIBILITY Student became upset when jobs were rotated in the foodservice operation. Level of behavior _____ Consensus response: B Should be adaptable to change

SOURCE	EXCERPT
Clinical Instructor Comment	10. JUDGING PROFESSIONAL VALUES Although I had observed errors the student had made, she had not written any ineffective behaviors.

Level of behavior _____

Consensus response: A Should not avoid responsibility for a personal error

SECTION V

Objective: Categorize a critical behavior within a critical incident.

The following are actual observed behaviors as reported by clinical instructors. Using the method described previously for programmed instruction, indicate the category of behavior, whether effective or ineffective, and the level of behavior within the category.

Example: Log and assignments were not handed in on due date.

Category and level _____

Consensus response: 1 E

CATEGORIZATION OF CRITICAL BEHAVIORS WITHIN A CRITICAL INCIDENT

SOURCE	EXCERPT
Clinical Instructor Comment	1. Student's dress for orientation was not appropriate. Category and level _____ Consensus response: 5 A
Clinical Instructor Comment	2. Student did not have the objectives written prior to orientation as required. Category and level _____ Consensus response: 1 A
Clinical Instructor Comment	3. During her scheduled time at Woodrow Wilson, student helped ladies serve breakfast. Category and level _____ Consensus response: 5 b
Clinical Instructor Comment	4. Student tried several times to go to Junior High. They seemed reluctant to have students after a mix-up the week before that resulted in too many students there at one time. Student rearranged her schedule so that she was finally able to visit the Junior High. Category and level _____ Consensus response: 9 b
Clinical Instructor Comment	5. Student needed little help in adjusting to the facility or assignment. Category and level _____ Consensus response: 6 a

SOURCE	EXCERPT
Clinical Instructor Comment	6. In the production scheduling part of the assignment, the student made a different and comprehensive form to use. Category and level _____ Consensus response: 8 a
Clinical Instructor Comment	7. Student checked food quality and portion sizes by observing and eating two school lunches for which she had developed standards. Category and level _____ Consensus response: 4 c
Clinical Instructor Comment	8. Student related elements of the hospital foodservice system to the foodservice system's model. Category and level _____ Consensus response: 2 e
Clinical Instructor Comment	9. Student made a very important point in group discussion. Category and level _____ Consensus response: 7 a
Clinical Instructor Comment	10. When discussing the situation of running out of fruit at dinner, student suggested corrective measures. Category and level _____ Consensus response: 3 a

SOURCE	EXCERPT
Clinical Instructor Comment	11. During her clinical experience in the Student Union cafeteria, student saw a theft occur. She followed the thief into the Union concourse but lost sight of him in the crowded area. She reported the loss to the dietitian immediately and gave a description of the thief.
	Category and level _____
	Consensus response: 6 c
Clinical Instructor Comment	12. Student has had difficulty in the past in meeting her time schedule. She set an early deadline for assignment and met it.
	Category and level _____
	Consensus response: 1 e
Clinical Instructor Comment	13. The student was in the hospital experience phase of her Foodservice Systems class. When in Wichita over the weekend, the student contacted Wesley Medical Center for information on their modified diets for additional input into her assignment.
	Category and level _____
	Consensus response: 7 c
Clinical Instructor Comment	14. In log, student discussed food and other items being left off trays and gave reasons for such occurrence.
	Category and level _____
	Consensus response: 2 d
Clinical Instructor Comment	15. In discussion of tray assembly, student predicted how much easier assembly would be if certain changes were made. These changes were stated in her log.
	Category and level _____
	Consensus response: 3 d

SOURCE	EXCERPT
Clinical Instructor Comment	16. In her log, student discussed policies and procedures forms and how some employees did not adhere to the policies such as hairnets.
	Category and level _____
	Consensus response: 4 e
Clinical Instructor Comment	17. Student expressed in appropriate terms her frustration at how the organization handled absences among the employees.
	Category and level _____
	Consensus response: 5 c
Clinical Instructor Comment	18. Student reported in log that she had seen a situation, assessed it immediately, and later found that she had made an incorrect decision.
	Category and level _____
	Consensus response: 10 b
Clinical Instructor Comment	19. Student suggested possible breakfast items that children might like in place of sweetened cereal which is no longer allowed by the school breakfast program. Such items included fruit breads, fruit on top of cereal and fruit yogurt.
	Category and level _____
	Consensus response: 8 b
Clinical Instructor Comment	20. Student rescheduled her quality food assessment study, which she had planned for Wednesday, after the Wednesday school lunch menu was switched to Friday.
	Category and level _____
	Consensus response: 9 b

SECTION VI

Objective: Categorize more than one critical behavior contained within a critical incident.

The following are actual observed incidents. They have been extracted from instructor evaluations and students' logs. Each incident may have more than one behavior and may contain both effective and ineffective behaviors. Indicate on the answer sheet provided what category and level is being illustrated by the critical behavior(s) in the incident. Remember there may be more than one level and more than one category of behavior in each incident. Use the procedure described on page 1 for covering the consensus responses until you have selected your answers.

CATEGORIZATION OF CRITICAL BEHAVIORS WITHIN A CRITICAL INCIDENT

SOURCE	EXCERPT
Self Evaluation	1. During my patient visitation, I failed to get the name of the patient and therefore could not call him by name.
	Category and level _____
	Consensus response: 5 B 10 a
Clinical Instructor Comment	2. In log, it was evident that the student utilized resources in accomplishing her personal objective of discussing the organizational structure of the school system. She related her discussion to the foodservice systems model.
	Category and level _____
	Consensus response: 1 d 2 e
Clinical Instructor Comment	3. The student helped employees serve lunch at the grade school by taking a position on the line and serving the apple crisp. In log, she indicated how much she had enjoyed this experience.
	Category and level _____
	Consensus response: 5 b 7 b
Clinical Instructor Comment	4. In completing energy study, the student's partner was not present and she could not get in touch with him. The student accepted the situation and went ahead and worked on the assignment.
	Category and level _____
	Consensus response: 6 c 9 c

SOURCE	EXCERPT
Clinical Instructor Comment	5. In log, student explained reasons for the food not being made according to the Oriental theme of the special lunch at the Junior High School. She related her explanation to the systems model.
	Category and level _____
	Consensus response: 2 d 2 e
Clinical Instructor Comment	6. In log, the student told of checking the older equipment in the facility and commented that it was working well for its age.
	Category and level _____
	Consensus response: 4 d 2 c
Clinical Instructor Comment	7. In clientele acceptance study, the student designed a new form for determining acceptability of various food items.
	Category and level _____
	Consensus response: 8 a
Clinical Instructor Comment	8. The student offered solutions to the problem of the cook's resistance to special dinners. She compared advantages and disadvantages of each solution. She selected the solution she would implement if allowed. She predicted the effect of her alternative.
	Category and level _____
	Consensus response: 3 a 3 b 3 c 3 d

REFERENCES

1. Ingalsbe, N.G.: Development of a critical incident performance evaluation instrument for a course in dietetics and institutional management. Unpublished M.S. thesis, Kansas State Univ., 1976.

COVER SHEET

Name _____

Date _____

ANSWER SHEET

Self Instructional Module
in the Use of the
Critical Incident Performance Evaluation Instrument

SECTION I

DEFINITIONS OF BEHAVIORAL ACTIVITY CATEGORIES

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SECTION II

DETERMINATION OF BEHAVIORAL ACTIVITY CATEGORIES FOR CRITICAL BEHAVIORS

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SECTION III

DETERMINATION OF LEVEL OF EFFECTIVE BEHAVIORS WITHIN EACH BEHAVIORAL ACTIVITY CATEGORY

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SECTION IV

DETERMINATION OF LEVEL OF INEFFECTIVE BEHAVIORS WITHIN EACH BEHAVIORAL ACTIVITY CATEGORY

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SECTION V

CATEGORIZATION OF A CRITICAL BEHAVIOR WITHIN A CRITICAL INCIDENT (ONE BEHAVIOR)

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SECTION VI

CATEGORIZATION OF CRITICAL BEHAVIORS WITHIN A CRITICAL INCIDENT (MULTIPLE BEHAVIORS)

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8.

WHAT SUGGESTIONS WOULD YOU OFFER TO IMPROVE THIS PACKAGE?

_____ Shorten it

_____ Lengthen it

_____ Make it less confusing

_____ Make instructions clearer

_____ Make it more challenging

_____ Make it more interesting

_____ Other, explain.

For suggestions marked, please indicate how you think this could be done. Also, please make any other comment you have about this module.

COMMENTS:

APPENDIX B

Consent Form

Department of Dietetics, Restaurant
and Institutional Management
Justin Hall
Manhattan, Kansas 66506
Phone: 913 532-5521-2
September 1, 1978

Dear Foodservice System Student:

You are being asked to participate in research involving the development of a training module in the use of the critical incident performance evaluation instrument. Since performance in this course is evaluated by means of the critical incident performance evaluation instrument, a need exists to find the most effective method of explaining this instrument.

All of the class will be given a pretest. Then one-half of the class will be randomly assigned to the experimental group who will receive the self instructional module explaining the critical incident performance evaluation instrument and providing practice at classification of the critical behaviors contained within critical incidents. The other group will receive the lecture discussion by the course instructor. After completion of the two week experimental period, each group will have access to the information used by the other group.

Your grade will not be affected by your participation in the experimental group should you be randomly assigned to it. If you are assigned to the experimental group, you have the right to non-participation in that group and the right to withdraw your consent and discontinue participation in that group. However, since understanding the critical incident technique of performance evaluation is essential in Foodservice Systems, you will receive the lecture discussion if you choose to not participate in the experimental group.

All of the class will be given a posttest. Your individual scores on the pretest and posttest will be kept confidential; scores will be reported as mean scores only. You will have an opportunity at the end of the experiment to find out the results.

Julie Dameron, the researcher, will be glad to answer any concerns about the procedure you may have. You may contact her in Justin 152.

J. Dameron
Instructor

I have read the above statement and have been fully advised of the procedures to be used in this project. I understand all of the above statement and I hereby voluntarily consent to participate.

Date _____ Subject _____

APPENDIX C

Pretest, Posttest, Retest

KANSAS STATE UNIVERSITY, COLLEGE OF HOME ECONOMICS
Dietetics, Restaurant and Institutional Management Department

PRETEST

Critical Incident Performance Evaluation

Using the critical incident performance evaluation instrument, categorize the critical behaviors contained within each critical incident in the appropriate categories at the appropriate levels. Please record answers on the answer sheet; do not write on the test. A critical incident may have more than one critical behavior. A critical incident may contain both effective and ineffective behaviors.

Example:

SOURCE	EXCERPT
Clinical Instructor Comment	After the student did her patient visitation at the hospital, she accepted instructions for improvement from the clinical instructor graciously.
Answer:	7 d
Clinical Instructor Comment	In log, it was evident the student had utilized resources to accomplish her personal objective. She related her discussion to the foodservice systems model.
Answer:	1 d 2 e

SOURCE	EXCERPT
Clinical Instructor Comment	1. In discussing value analysis, the student explained reasons why Grade C cherries were a suitable product. She predicted the effect if management were to purchase two different grades of cherries.
Self Evaluation	2. While eating lunch at Northview School, a ball hit a window where we were sitting in the kitchen and glass shattered in on us and our food. Immediately, I checked to see if anyone was hurt, called for the janitor, and threw away the food from our trays in case glass had gotten into it.

SOURCE	EXCERPT
Clinical Instructor Comment	3. The student cooperated willingly when the day of the group meeting had to be changed.
Clinical Instructor Comment	4. I noticed that the student assisted service employees at the Country Chef Restaurant.
Clinical Instructor Comment	5. The student related her observations in the hospital foodservice to the foodservice systems model throughout her log. She documented points in her log with references from professional journals and the dietitian.
Self Evaluation	6. I attended the Kansas Restaurant Association meeting in Wichita.
Clinical Instructor Comment	7. The student checked the portion sizes of the food served at the Union.
Clinical Instructor Comment	8. During the student's work experience, she made and employed unique and original visual aids in preparation for her employee training session.
Clinical Instructor Comment	9. At orientation the student had not decided on an objective. I had to keep helping her by giving her ideas for an objective. She should have written a self evaluation on this ineffective behavior but did not.
Clinical Instructor Comment	10. The student utilized resource articles to complete her objective on food acceptance by children in the grade schools. She attained her personal objective. In addition she also did a plate waste study in conjunction with the food acceptance study. She related her findings to the systems model.

KANSAS STATE UNIVERSITY, COLLEGE OF HOME ECONOMICS
Dietetics, Restaurant and Institutional Management Department

POSTTEST

Critical Incident Performance Evaluation

Using the critical incident performance evaluation instrument, categorize the critical behaviors contained within each critical incident in the appropriate categories at the appropriate levels. Please record answers on the answer sheet; do not write on the test. A critical incident may have more than one critical behavior. A critical incident may contain both effective and ineffective behaviors.

Example:

SOURCE	EXCERPT
Clinical Instructor Comment	After the student did her patient visitation at the hospital, she accepted instructions for improvement from the clinical instructor graciously.
Answer:	7 d
Clinical Instructor Comment	In log, it was evident the student had utilized resources to accomplish her personal objective. She related her discussion to the foodservice systems model.
Answer:	1 d 2 e

SOURCE	EXCERPT
Clinical Instructor Comment	1. The student utilized resource articles to complete her objective on food acceptance by children in the grade schools. She attained her personal objective. In addition she also did a plate waste study in conjunction with the food acceptance study. She related her findings to the systems model.
Clinical Instructor Comment	2. In discussing value analysis, the student explained reasons why Grade C cherries were a suitable product. She predicted the effect if management were to purchase two different grades of cherries.

SOURCE	EXCERPT
Self Evaluation	3. I attended the Kansas Restaurant Association meeting in Wichita.
Clinical Instructor Comment	4. The student related her observations in the hospital foodservice to the foodservice systems model throughout her log. She documented points in her log with references from professional journals and the dietitian.
Clinical Instructor Comment	5. I noticed that the student assisted service employees at the Country Chef Restaurant.
Self Evaluation	6. While eating lunch at Northview School, a ball hit a window where we were sitting in the kitchen and glass shattered in on us and our food. Immediately, I checked to see if anyone was hurt, called for the janitor, and threw away the food from our trays in case glass had gotten into it.
Clinical Instructor Comment	7. At orientation the student had not decided on an objective. I had to keep helping her by giving her ideas for an objective. She should have written a self evaluation of this ineffective behavior but did not.
Clinical Instructor Comment	8. The student cooperated willingly when the day of the group meeting had to be changed.
Clinical Instructor Comment	9. The student checked the portion sizes of the food served at the Union.
Clinical Instructor Comment	10. During the student's work experience, she made and employed unique and original visual aids in preparation for her employee training session.

KANSAS STATE UNIVERSITY, COLLEGE OF HOME ECONOMICS
Dietetics, Restaurant and Institutional Management Department

TEST

Critical Incident Performance Evaluation

Using the critical incident performance evaluation instrument, categorize the critical behaviors contained within each critical incident in the appropriate categories at the appropriate levels. Please record answers on the answer sheet; do not write on the test. A critical incident may have more than one critical behavior. A critical incident may contain both effective and ineffective behaviors.

Example:

SOURCE	EXCERPT
Clinical Instructor Comment	After the student did her patient visitation at the hospital, she accepted instructions for improvement from the clinical instructor graciously.
Answer:	7 d
Clinical Instructor Comment	In log, it was evident the student had utilized resources to accomplish her personal objective. She related her discussion to the foodservice systems model.
Answer:	1 d 2 e

SOURCE	EXCERPT
Self Evaluation	1. I attended the Kansas Restaurant Association meeting in Wichita.
Clinical Instructor Comment	2. During the student's work experience, she made and employed unique and original visual aids in preparation for her employee training session.
Clinical Instructor Comment	3. The student cooperated willingly when the day of the group meeting had to be changed.

SOURCE	EXCERPT
Clinical Instructor Comment	4. In discussing value analysis, the student explained reasons why Grade C cherries were a suitable product. She predicted the effect if management were to purchase two different grades of cherries.
Self Evaluation	5. While eating lunch at Northview School, a ball hit a window where we were sitting in the kitchen and glass shattered in on us and our food. Immediately, I checked to see if anyone was hurt, called for the janitor, and threw away the food from our trays in case glass had gotten into it.
Clinical Instructor Comment	6. I noticed that the student assisted service employees at the Country Chef Restaurant.
Clinical Instructor Comment	7. The student checked the portion sizes of the food served at the Union.
Clinical Instructor Comment	8. The student utilized resource articles to complete her objective on food acceptance by children in the grade schools. She attained her personal objective. In addition she also did a plate waste study in conjunction with the food acceptance study. She related her findings to the systems model.
Clinical Instructor Comment	9. At orientation the student had not decided on an objective. I had to keep helping her by giving her ideas for an objective. She should have written a self evaluation on this ineffective behavior but did not.
Clinical Instructor Comment	10. The student related her observations in the hospital foodservice to the foodservice systems model throughout her log. She documented points in her log with references from professional journals and the dietitian.

Name _____

ANSWER SHEET FOR TEST ON CRITICAL INCIDENT

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

DEVELOPMENT AND EVALUATION OF A SELF INSTRUCTIONAL MODULE ON THE USE OF THE CRITICAL INCIDENT TECHNIQUE

by

JULIEANNE DAMERON

B.S., Kansas State University, 1971

AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Dietetics, Restaurant,
and Institutional Management

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1979

ABSTRACT

The purpose of this study was to develop a self instructional module for orienting students in the use of the Critical Incident Performance Evaluation Instrument developed by Ingalsbe in 1976. This instrument was developed as a means of evaluating performance in the clinical component of the Foodservice Systems course at Kansas State University. Ingalsbe concluded that before using this method of evaluation, understanding of the concepts was essential. Since the crux of the technique is the placement of student behaviors into specific categories, it is essential that users of the instrument develop experiential proficiency. The rationale for the development of this module was to relieve instructors of the repetitious orientation of students at the beginning of clinical experiences. This self study and reference module contained an explanation of the critical incident technique and the behavioral activity categories. The major portion of the module consisted of sections for practice in classifying critical behaviors into appropriate categories.

Twenty-eight dietetic and restaurant management students enrolled in the junior level course, Foodservice Systems, at Kansas State University were divided into two equal groups, one receiving the self instructional module and the other the lecture discussion. The efficacy of the module was tested by comparing the scores of the two groups on a pretest, posttest, and retest.

Four criterion measures were used to analyze test results: number missed, number added, number correct, and total score. Difference

scores indicating change from one test to another were computed. The t test and analysis of covariance were used to analyze mean scores of the total class and to compare the two groups.

The analysis of data revealed that the self instructional module was as effective as the lecture discussion in teaching the concepts of the critical incident technique. Based on this finding, the self instructional module could be used to relieve faculty from presentation of this material outside of class time and to allow students to master the technique on personal time. Also, the module could be used to familiarize instructors with the technique.