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EMPLOYEE PROGRESS INTERVIEWS

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BRIDGING THE GAP BETWEEN DIDACTIC AND EXPERIENTIAL LEARNING: EMPLOYEE PROGRESS INTERVIEWS

By

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ABSTRACT

BRIDGING THE GAP BETWEEN DIDACTIC
AND EXPERIENTIAL LEARNING:
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The objectives of this project were (1) to study the differences in student performance of employee interviews across variable levels of student involvement with the learning materials, and (2) to compare random segment evaluation with whole evaluation procedures.

The unit was developed from learning outcomes with a final objective to demonstrate the ability to plan and conduct a simulated progress interview. Test questions were written for the objectives. Objectives and test items were placed on a rating scale and six expert reviewers rated them.

An analysis of the information to present in the unit was completed following an instructional development model. Three student volunteers completed a formative evaluation.

Two units were completed, identical in content. One included written model answers to the embedded questions (unit with examples) and one included questions with space for the students to write answers (unit with practice).

Four scenarios were written for practice. Practice sessions following completion of the self-instructional unit were arranged for certain students to conduct simulated interviews (role-players), certain students to observe (observers) and certain students to observe and evaluate the simulated interviews (directed observers).

Students participating in this study included forty students in the General Dietetic Coordinated Study Plan (GDCSP) at Michigan State University. Students completed a personal information sheet, written pre-test, a videotaped pre-test interview and a self-assessment of their interview. The unit was then distributed to the students and was completed individually.

The following week, students completed a written post-test and participated in a role-play practice session. After the practice, students were asked to complete the attitude survey regarding the unit. Students were given a scenario to utilize to prepare for the post-test interview and completed a self-evaluation of post-test performance.

Item analysis statistics were completed. The written test was divided into sub-tests by enabling objectives to ascertain which objectives had been met and which objectives had not been met.

Three Juniors and five Seniors showed acceptable level of performance on the pre-test while 19 Junior and 20 Senior students reached the minimum performance criteria level on

the post-test. Student scores on the unit with practice and student scores on the unit with examples were compared and no significant difference was found.

No student met the minimum criteria for performance on the pre-test interview; 15 Junior and 19 Senior students met the minimum criterion level (.75) on the post-test and it was concluded that the unit positively effected learning. Three-way ANOVA was applied to test for significance of difference between the groups on the post-test performance. The junior level directed observers did less well than the other test groups. It was concluded that all students do not have to participate in a role-play session to learn from it. Senior students perceived learning more by using the materials which required practice and Senior students completing the unit with practice felt that the materials were clearer in comparison with the unit with examples.

Costs for the unit included the developer's time, typing, paper and other materials, duplication costs, actress time, and videotapes. A major expenditure was the time spent in evaluating the pre- and post-videotaped interviews. It is concluded, since the materials can be used with large numbers of students at minor expense, that they are economical.

The length of each interview was determined in units by the VTR counter and this number was divided into 15-unit segments. Half of the units comprising each interview were

drawn randomly for evaluation. The mean of the two instructors' evaluations was compared with the rating given the full-length evaluation and the reliability was .45 for the Junior students and .51 for the Senior students. Random sample evaluation via this procedure is not reliable enough to use to assign individual grades.

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CHAPTER I

INTRODUCTION

Current trends in dietetic education include competency-based curriculum, coordination of didactic learning and field experience, and multiple strategies to individualize learning (Essentials, 1976; Roach, 1978; Breese, et al, 1977.) Each dietetic program is responsible for developing an educational system which follows these recommendations and for testing and evaluating.

Self-instructional learning materials have been developed in many dietetic programs and are recommended for the following reasons. Self-instructional materials with a competency-based foundation allow students an opportunity to better coordinate clinical and didactic experiences since the materials can be studied individually, and allow students to spend variable amounts of time on the materials to reach competency.

As part of an evaluation system, simulation has been recommended to allow more reliable evaluation of the students' performance of the skills to be learned (Muslin, et al, 1974.) Simulation as an instructional tool can be described as a selective representation of reality. Simulation

is an effective method of eliciting complex skills or behaviors and permits practice of those skills to increase the transfer of learned skills to real settings. Simulation has been recommended as an evaluation tool in situations where real world evaluation is not feasible or practical (Ward, undated.)

Sets of recommended competencies for entry-level generalist dietitians have been developed by various researchers (MSU, 1976; Howard and Shiller, 1977; FSMEC, 1975.) Employee progress interviewing has been considered an essential competency; however, it is a complex skill which is difficult to teach in a lecture mode and is also difficult to structure as a real world experience, particularly in facilities with labor unions. Self-instructional materials and simulation appear to be possible instructional alternatives to facilitate student learning of employee interviewing and to ensure transfer of these skills to a professional setting.

Nature of the Problem

The Michigan State University General Dietetics Coordinated Study Plan (GDCSP), Department of Food Science and Human Nutrition, College of Human Ecology, has been developed as a competency-based professional curriculum and evaluation strategies have been formulated by the faculty to reflect the needs of the entry-level dietetic practitioner. The American Dietetic Association (ADA) has responsibility for setting the academic standards for the GDCSP which are

described in the Essentials for Coordinated Undergraduate Programs in Dietetics with Self-Study Guide (Essentials, 1976.)

The course, Practice of Dietetics (HNF 480), is a component of professional preparation in the GDCSP which allows students to practice, with supervision, professional skills in a real world setting. HNF 480 is described in the 1979 MSU Description of Courses (p. 481) as follows:

> Application and integration of nutrition and managerial concepts related to the practice of dietetics.

HNF 480 is comprised of two sections: one with emphasis on clinical dietetics and one with emphasis on foodservice systems management. In the context of this project, HNF 480-Foodservice Systems Management, is of major interest. A more detailed description of the course is offered in Appendix A. An attempt to facilitate transfer of theoretical concepts in didactic instruction to the actual performance of skills in a real setting is a major focus or area of educational endeavor.

Admission to the GDCSP is limited to 20 students per year. Eligibility requirements have been developed and published (see Appendix A.) Eligible student applications are numbered and 20 are chosen by random selection. Enrollment in HNF 480 is limited to 10 students each term the course is offered (Winter and Spring terms.) This controlled enrollment is necessitated partly by the fact that a limited number of acceptable (in terms of proximity and quality of

experience) field placement sites in the Lansing area are available wherein students can attempt to fulfill the 900 to 1,000 clock hour field experience established by ADA. The MSU residence hall system is the only contracted facility and permits 10 placement positions per term for two terms per year.

ADA will accept a certain unspecified number of hours spent by students in self-instructional settings and simulated settings as part of the experiential requirement. If the entry-level competencies of the graduates of a program have been identified, and appropriate measurement strategies developed with a supportive curriculum, fewer than 900 hours may be scheduled in field placements. Hours in simulation and self-instructional materials may be counted. ADA has not described particular self-instructional modes or simulation types, thus one has many alternatives as long as the outcomes of the instruction can be appropriately measured. These self-instructional and simulation materials may allow more students to learn and practice professional skills while still meeting experiential hour requirements when the field experience facilities are limited.

Currently it is difficult to individualize the sequence of coursework to make a timely match with concurrent field experiences since students and instructor meet one day each week for scheduled class sessions to cover specified topics. The development and use of self-instructional materials may

have the effect of allowing students to study materials at an appropriate time in the field experiences. Simulation practice sessions may increase transfer or application to other settings.

Following a recommended procedure of videotaping student performance for later evaluation has advantages in terms of student learning, but the time requirements may be prohibitive. Alternative evaluation procedures to decrease time needed, while maintaining evaluation reliability, could increase the feasibility of using videotaping. Random sampling of videotaped performances and student self-assessment are possible advantageous alternatives.

The topic of employee interviewing has been identified by several institutions as being an important entry-level competency and is of interest to this researcher. No self-instructional materials on progress interviewing were located.

Problem Statement

The problem, therefore, addressed by this project was allowing closer coordination of didactic and experiential learning and positively affecting transfer of learning to the real setting, while determining a practical evaluation procedure. This problem was approached through development, testing, and evaluation of alternative instructional approaches to teaching employee interviewing to students and the comparison of alternative performance evaluation modes.

The dependent variable was a measure of student performance on interviewing; the independent variable chosen to be manipulated includes a range of levels of structured student involvement with the materials to be learned (i.e., such as formulating and writing answers to questions and role playing interviews.)

Justification

Improving coordination of experiences and individualization of learning strategies, topic selection, alternative evaluation modes, and costs are the four areas of justification for this project.

Coordination of Didactic and Experiential Learning in HNF 480 and Individualization of Learning Strategies

Due to schedule constraints, didactic portions of HNF 480 were presented in a six to eight hour block. Meeting for such an extended period of time as a class was less than optimal due to the difficulties inherent in maintaining student and instructor enthusiasm and interest for several consecutive hours. Learning may be enhanced by shorter class sessions and a variety of instructional techniques with integration of field site and in-class activities (Lewis and Beaudette, 1977.) Different events occur in the field experience facilities each day of the week and the students should be assigned to the halls for experiential endeavors on each

of the days of the week. Development of self-instructional materials would allow more freedom to better schedule classroom activities.

Even when given extensive field experience, there are some skills for which it is difficult or impossible to arrange practice; for example, it is unlikely that a student would be allowed to perform a progress interview with an employee, particularly in an institution with a labor union. At the same time, it is an important skill for the entry-level dietitian to obtain. In other cases, it may be difficult for the instructor to evaluate a student's performance in the real setting because the instructor's presence would change the sequence of events. It is also possible that the level or quality of practice available to the student at the field site is not adequate.

Selection of Topic

Research into essential competencies of the entry-level generalist dietitian was used to determine a topic. The dietetic component of the Food Science and Human Nutrition Department at Michigan State University sent a series of questionnaires to practicing dietetic professionals, persons responsible for academic and professional preparation, and significant others such as hospital administrators to determine the necessary entry-level competencies of generalist registered dietitians. A list of several hundred important competencies was developed. Several other

documents have been developed also addressing the selection and validation of competencies for professional dietetic programs (Howard and Shiller, 1977) while others have published competencies directed to foodservice management programs (FSMEC, 1975.) A review of these competencies indicates a substantial amount of similarity.

The topic chosen (progress interviewing) addresses a skill listed repeatedly as an essential competency of entry-level foodservice management dietitians. Progress interviewing was chosen since successful performance is vital, but also because the content has remained fairly stable in contrast to initial or employment interviews which are subject to changing legal standards and low reliability problems. Termination interviews are seldom the responsibility of an entry-level dietitian.

Progress interviewing has been found by this researcher to be difficult to teach and evaluate by the lecture and written evaluation mode currently used in HNF 480. Employee progress interviewing is also difficult to structure as a real world experience and to evaluate through field evaluations since managers are reluctant to allow students to evaluate employees, particularly in unionized foodservices. The skill of progress interviewing requires integration of many knowledge areas; there is seldom one correct answer since each set of circumstances is unique. Self-instructional materials and simulation appear to be possible instructional alternatives.

Alternative Evaluation Modes

Students' performance after studying the self-instructional materials was recorded via videotape for evaluation purposes. Two alternative evaluation modes were compared with the instructors' evaluation of the whole performance for reliability: students' self-assessment of whole performance, and instructors' evaluation of random sample segments of performance.

The time involved for two instructors to evaluate full length videotaped performances is prohibitive and limits the use of videotaped simulation evaluation. Random sample segment evaluation would also decrease the time necessary for videotape evaluation and investigation into its reliability is necessary. Students will be expected as professionals to be able to evaluate themselves and require training and practice in self-evaluation to attain this skill. If students can learn to reliably self-evaluate, the use of videotaped simulated performances may be increased.

Costs of Instruction

Didactic instruction in support of the clinical experiences which can be tallied as field experience hours to meet ADA requirements may also assist in allowing increased enrollment in the CSP program. In addition to increased enrollment, the self-instructional materials would allow the instructor more time for field supervision since these

materials would decrease the need for an all day class period once a week. Preparation for, and management of, activities for an all day class period demand a large amount of time on the part of the instructor. Although materials development would require a large time investment initially, it would relieve the instructor of some didactic instruction commitments and provide more time for personal student contact and one-on-one instruction.

These instructional materials might also be useful in traditional dietetics programs wherein some clinical practice is desirable. Materials could be designed to allow use of the written materials in conjunction with, or separate from, the practice.

Since the number of similar dietetic programs is large and expanding, it is also felt that these research findings and materials would be useful to other programs across the country. As of 1979, there were 64 Coordinated Undergraduate Dietetics Programs in the United States. In addition, there were 68 internships, 25 dietetic technician programs, and 155 dietetic assistant programs where the materials might be applicable.

Summary

The general problems include: 1) a lack of coordination between didactic and real experiences, 2) poor provision for optimal transfer, 3) limited course enrollment, and 4) practical limitations on time available for student

evaluation. More specifically, questions drawn from these problems to be considered in the context of this study include:

1. With the content of instruction held constant, does the student's level of participation in instruction make a difference in student learning?

   a. Will there be a difference in performance between students who study a unit with written embedded questions and answers in comparison with students who interact with the unit via writing answers to embedded questions?

   b. Will there be a difference in performance between students who actually participate in role plays in class sessions as compared with students who observe or observe and evaluate the role play?

2. Will student attitudes vary depending on level of participation in the instructional unit?

3. Will there be a relationship between students' scores on content (written objective examination) and transfer (videotaped employee interview) tests?

4. Will student self-evaluation be reliable in comparison with instructor evaluation?

5. Will evaluation of random segments be reliable in comparison with whole evaluation?

6. What are the costs of the various methods in relationship to each other and to learning outcomes?

Limitations

The study was limited by:

1. A threat to external validity since a random sample from the population was not studied. The subjects included 40 students enrolled in the GDCSP since they most closely approximated the national population of students in CUDPs wherein the materials would be most useful.

2. A threat to internal validity, possibly including student attitude about participating in the study and biases of the instructor evaluators.

3. The accuracy, validity, and reliability of the measurement instruments utilized.

Assumptions

It was assumed that:

1. All instructors involved with evaluation had acceptable competence in the area in which students were being evaluated.

2. Since all students were aware of the videotaping situation, the effects due to these circumstances would uniformly affect all of the performances.

Definitions

The following operational definitions are stated to promote common understanding:

1. Administrative Dietitian, R.D.: The administrative dietitian is a member of the management team and affects the nutritional care of groups through the management of foodservice systems that provide optimal nutrition and quality food, (Glossary, 1974.)

2. American Dietetic Association (ADA): The American Dietetic Association is the professional organization for dietetic practitioners who meet the academic, experience, and endorsement requirements for active membership. The profession of dietetics is dedicated to: the improvement of the nutrition of human beings; the advancement of the science of dietetics and nutrition; and the promotion of education in these and allied areas. ADA is responsible for establishing educational and supervised clinical experience requirements and standards of practice in dietetics, (Glossary, 1974.)

3. Clinical experience: Education which is a component of a curriculum and is based on actual activities related to the practice of dietetics.

When used with the title "dietitian", refers to work in a patient or client-oriented situation (Glossary, 1974.)

4. Clinical instructor: Faculty member, salaried by the educational institution, whose major responsibility is developing and/or implementing some part of the professional component of the dietetics curriculum.

5. Coordinated Undergraduate Dietetic Program (CUDP): A formalized baccalaureate educational program in dietetics sponsored by an accredited college or university and accredited by the American Dietetic Association. The curriculum is designed to coordinate didactic and supervised clinical experiences to meet the qualifications for practice in the profession of dietetics (Glossary, 1974.)

6. Dietary: Pertaining to food or diet.

7. Dietetic practice: Performance of activities in fulfilling a professional position in nutritional care (Glossary, 1974.)

8. Dietetic Registration or Registered Dietitian (R.D.): Registration is voluntary and independent from membership in the American Dietetic Association. Dietitians may become registered by:

   a. Meeting the education, experience, and endorsement requirements defined by the Commission on Dietetic Registration.

   b. Successfully completing an examination of basic knowledge related to the practice of dietetics, and

   c. Paying a registration fee.

   Registration provides a convenient measure of professional competence for use in developing registration and establishing standards. In addition, it provides the advantage of a legally-protectible designation (Glossary, 1974.)

9. Dietetics: A profession concerned with the science and art of human nutritional care, an essential component of health science. It includes the extending and imparting of knowledge concerning foods which will provide nutrients sufficient to health and during disease throughout the life cycle, and the management of group feedings (Glossary, 1974.)

10. Dietetic Student: The following terms are presented to clarify the terms commonly used when referring to persons enrolled in professional dietetic education programs (Wenberg, 1977.)

    a. Dietetic Student: A person enrolled in an accredited college or university who has declared a major in dietetics.

    b. Student Dietitian: A person who is enrolled in an undergraduate coordinated dietetic educational program, accredited by the American Dietetic Association to fulfill the academic educational, the didactic and supervised clinical experience requirements to become a professionally qualified dietitian.

    c. Dietetic Intern: A person who has completed the academic requirements of professional education in dietetics and is enrolled in a dietetic internship, approved by ADA to fulfill the didactic and supervised clinical experience educational standards to become a practicing dietitian.

    d. Dietetic Trainee: A person who has completed the academic requirements of professional education in dietetics and is enrolled in a dietetic traineeship, approved by ADA to fulfill the didactic and supervised clinical experience educational standards to become a practicing dietitian. (This term will be dropped in 1980 when all enrollees will be called dietetic interns.)

11. Directed Observers: Students who observed the interview role play session and concurrently evaluated the interviews using the criteria checklist.

12. Field Experience: Assigned experiences in various placement locations to practice skills (see clinical experience.)

13. Foodservice Systems Management--Systems: An array of components formed into a unified whole to perform a systematic, purposeful activity. When used in conjunction with foodservice, it would be the components that make up the production and service of food. Management: The process of achieving desired results by the effective use of human efforts and facilitating resources (Glossary, 1974.)

14. Observers: Students who observed the interview role play session.

15. Professional Education: A prescribed program of study and experience to develop competence in the practice of a profession, social understanding, ethical behavior, and scholarly concern (Glossary, 1974.)

16. Progress Interview: Formal interviews conducted with an employee to assess present job status, solve problems, and formulate objectives for performance.

17. Role Players: Students who conducted interviews based on given scenarios in the role play session.

18. Unit with Examples: Written unit on progress interviewing which included embedded questions for which answers were provided for students to read.

19. Unit with Practice: Written unit on progress interviewing which included embedded questions for which students formulated and wrote answers.

Hypotheses

The following specific hypotheses were formulated and tested by appropriate statistical methods with the .05 level of confidence established for acceptance or rejection of the hypotheses. The analysis of data followed primarily the suggestions of Chambers and Hubbard (1978) to standardize the procedures and to allow valid comparisons in educational research in dietetics.

1. The performance on the progress interview written examination of students taught by "Reading with Practice" will be significantly higher than comparable students taught by the method of "Reading with Examples."

Hypothesis one is stated directionally based on suggestions that student processing of information facilitates retrieval (Bruner, 1961,) and Santogrossi and Colussy (1976) who state that in an undergraduate psychology course, attempts at mastery were more successful in unit with study guide questions.

Performance on the written examination between students studying the unit with examples and students studying the unit with practice was compared with a t-test for independent samples. The written examination was subjected to an item analysis which included indices of discrimination and difficulty to allow decisions to be made regarding improvement of the examination. Students' scores on the pre- and post-tests were compared using a t-test for matched pairs (Glass and Stanley, 1970.)

2. The performance on the progress interview practical examination of students taught by any one of the methods "Reading with Examples", "Reading with Practice", "Observer", "Directed Observer", or "Role Player" will not differ significantly from comparable students taught by any other of the methods.

Hypothesis two is stated non-directionally based on the research results of Holmes (1975) who found no significant difference in learning between observers of live and videotaped simulation sessions. On the videotaped post-test interviews, differences between the sample means among observers, directed observers, role players, unit with practice and unit with examples, were tested for significance

by three-way ANOVA (Glass and Stanley, 1970.) An item analysis of the criteria checklist was completed to allow decisions to be made regarding improvement of the materials.

3. The measured attitudes regarding the progress interview unit of students taught by any one of the methods "Reading with Examples", "Reading with Practice", "Observer", or "Directed Observer", will be less favorable than the measured attitudes of comparable students taught by the "Role Player" method.

Hypothesis three is stated directionally since although research has not indicated differential attitudes between participants in a simulation, it is reported that simulation improves student attitudes (Ward, undated.) Differences between reported attitudes of the test groups were reviewed and meaningful differences tested using appropriate statistics.

4. The performance of students on a progress interview written examination will not correlate positively with the students' performance on the progress interview transfer test.

Hypothesis four is stated directionally since the written objective examination measures information storage while the criteria checklist measures actual skill performance. Although it has been traditional to use written examinations to predict later performance, they seem to be two different kinds of abilities in this case. A relationship between students' scores on the written objective examination and the post-test videotaped interview was determined by Pearson Product Moment Correlation (Terrance and Parker, 1971.)

5. The students' self-evaluations of performance on the progress interview practical examination will not differ significantly from the instructors' evaluations of the students' performance on the progress interview practical examination.

Hypothesis five is stated non-directionally since there is not evidence to lead to a directional hypothesis.

6. The instructors' evaluations of the videotaped simulated progress interview will not differ significantly from the instructors' evaluations of the videotaped simulated progress interview by a random sample segment method of evaluation.

Hypothesis six is stated non-directionally since research by Wise and Donaldson (1961) indicates that random sampling can be used effectively to evaluate employee performance.

Ebel's inter-class correlation coefficient (Ebel, 1972) was used to test inter-rater reliability between the instructors scoring the videotaped interviews, the students' self-assessment of the videotaped interviews, and the instructors' random sample evaluations.

7. The costs of utilizing self-instructional materials will be less than costs of traditional teaching modes.

Hypothesis seven is stated directionally since, although initial development costs are high, subsequent utilization costs would be slight. Costs have been calculated and are reported to allow appropriate comparisons.

CHAPTER II

REVIEW OF RELATED LITERATURE

Literature in the areas of dietetic education, transfer, teaching alternatives, criterion-referenced testing and measurement, attitude scaling, random sample segment evaluation, and diagnosis and revision in the development of instructional materials have been reviewed. Literature in the area of employee progress interviewing has also been reviewed and will be included within the instructional unit as developed.

Dietetic Education

An overview of educational trends in the field of dietetics is important as a framework and foundation for this research project. Current trends in dietetic education have been reported extensively in the literature and three areas can be readily identified as competency-based curriculum, coordination of didactic learning and site experience, and multiple strategies to individualize learning.

Competency-Based Curriculum

The curriculum evaluation mode for undergraduate programs in dietetics has shifted from "courses" to the

"competencies" required of those seeking eligibility for membership (Report of the Task Force, 1976) with the emphasis on specific objectives and personalization of instruction (Hart, 1978.) The essential elements of those programs have the following characteristics:

1. A focus on role-derived competencies to be demonstrated.
2. Statement of competencies in behavioral terms.
3. Publication of the competencies.
4. Use of criteria to measure the competency and stress on mastery rather than norm-referenced testing.
5. Consideration of the learner's performance rather than just knowledge.
6. Permission for the learner to progress at his own rate (Hart, 1978.)

Several institutions have spent considerable resources attempting to delineate competencies for entry-level generalist dietitians (Howard and Shiller, 1977; Loyd and Vaden, 1977; MSU, Department of Food Science and Human Nutrition, 1976.) ADA has also established a committee to develop uniform competencies as preliminary work for competency-based education across the dietetic profession (Report of the Task Force, 1978.)

Coordination of Didactic Learning and Site Experience

Another concept is that of coordinating clinical experience with didactic experiences to promote student motivation and transfer of learning. Ideally, courses are designed to

give the student the necessary background of theory and practical experience, to provide opportunities to apply knowledge to the real world, to allow for discovery, and to develop observational, problem-solving, and decision-making skills (Watson, 1976.) Coordinated Undergraduate Dietetic Programs are modeled after this concept and the numbers of such programs are increasing. Evaluation of CUDP's is beginning and will grow in sophistication (Roach, 1978.)

A three-step model of theory, practice and discussion of experience has been suggested to assist in integration of didactic and clinical learning. In dietetics, the preclinical study may include textbooks, articles, lectures, discussions, self-help materials, and other learning techniques, to allow the student to proceed to the clinical area with a plan of action (Lewis and Beaudette, 1977.)

Multiple Strategies to Individualize Learning

A variety of teaching-learning strategies have been reported in the literature, primarily focusing on clinical rather than management dietetics. Ohio State University's CUDP has developed and evaluated case studies for computer-simulation of nutritional care delivery. These case studies are used to supplement field experiences concurrently with didactic instruction. The researchers compared results on the simulations with the students' pre-professional GPA, professional courses GPA, scores on the American College Test, and

Myers-Briggs Personality-type Indicator. Faculty time was also recorded. Findings from the two-year pilot studies indicate no significant differences in academic learning and clinical performance when students substituted computer-simulated experiences for hospital-based experiences. Ohio State is continuing use of the simulations (Breese, et al, 1977.)

Unklesbay (1977) discussed an instructional strategy of students conducting foodservice clinics throughout Missouri. Evaluation indicates that the students can contribute to nutritional care of the elderly in Title VII Nutrition Programs. The author suggests future research to evaluate the use of alternate education techniques during training programs with qualitative measurement of the students' professional accomplishments.

Steed, et al (FSMEC Proceedings, 1975) report the development of an instructional unit simulating an aspect of labor relations related to foodservice including a contract negotiation simulation and 10 incidents. Nineteen students were involved in testing the unit. Evaluation of the materials was subjective with students reporting favorable attitudes about this instructional mode.

A programmed instruction unit in institutional purchasing for dietetic students was developed and evaluated by Pietrzyk, et al (1978.) Forty-five dietetic students in three groups (students from CUDP's, dietetic assistant and technician programs) were involved in testing. The students

showed a significant increase in learning from pre- to post-test ($p \leq .01$) and measured attitudes were favorable. Time to complete the unit was assessed.

Fiel, et al (1979) report a model to evaluate skills of medical students which met two criteria: it had to be a valid measure and it had to be used with a high degree of reliability. The steps followed included: 1) selection of a skill, 2) division of the procedure into objectives, 3) subdivision of objectives into steps by task description, 4) converting the task description into an evaluation instrument by adding a rating scale for each task (a weighted scale was used since it was felt that some items were more important than others.) A student's score for the evaluation was the sum of points given for each task. The authors tested the model for inter-rater reliability and concluded that each evaluator should be within $\pm .10$ of the mean of the rating scores. Results established the reliability of the model.

Carroll and Monroe (1979) reviewed 73 studies on the teaching of medical interviewing. Conclusions regarding implications for teaching included: 1) instruction has generally promoted significant gains in interview skills, 2) provision should be made for direct observations and feedback on student behaviors to promote insight into complex processes, 3) standardized presentations of model behaviors may be more effective than live, spontaneous demonstrations, 4) instruction should include explicit statements of the

skills to be learned and evaluated since structured, specific instruction with demonstration is more effective, and 5) this type of teaching process is "enormously time consuming". The authors make recommendations for future research including questions regarding retention of skills and comparative studies of single components of teaching methodologies between alternative programs.

Bell (FSMEC Proceedings, 1973 and 1975) suggests use of a variety of evaluation measures from paper-pencil examinations to real-world observations. This report suggests that instructors utilize interviews, criterion checklists, student self-evaluation, etc., to test a wide range of competencies.

Ingalsebe and Spears (1979) report the development of a criteria checklist for evaluating student performance in a dietetic foodservice management course utilizing the critical incident concept introduced by Flanagan. Twenty-six students were involved with the initial development by collecting and recording critical incidents. Students' attitudes were favorable about this type of evaluation due to its objectivity and continuity.

In medical education, evaluation techniques have been developed utilizing standardized interview situations, videotaping, and clearly defined rating scales. Student-client interviews were taped, after the unit on interviewing was completed, and the videotaped performances were evaluated by a medical staff member, social worker, and the client who

had been interviewed. The study group elicited an average of 76 percent on content and 86 percent on process items while the control group averaged 47 percent and 62 percent respectively. A significant difference ($p \leq .01$) using the Wilcoxon Rank Sum Test was found (Hutter, et al, 1977.)

In another study (Lansley and Aycrigg, 1970), students' and faculty members' evaluations of a model of a psychiatric interview were compared for inter-rater reliability. The authors make an intriguing point: a basic assumption is that the better student is one whose performance most closely approximates that of the "expert" and may deter advancement in the clinical sciences.

Hutter, et al (1977) report developing checklists to evaluate allied health students' interviews in a clinical setting. The checklists were derived from the learning objectives for the unit and covered data that students were required to address in the interview setting with clients. Instructors evaluated taped interviews by the students and found that students using the checklists performed better than those not using checklists.

Direct observation by an instructor of a clinical encounter with a real or simulated patient can accomplish the goal of reliable evaluation of students' skills (Barrows, et al, 1976). Unfortunately, direct observation or review of videotaped encounters can represent a tremendous drain on faculty time. The authors attempted to solve the problem by designing a "self-assessment unit" which allows the

student to carry out his own evaluation. Evaluation of videotaped encounters with simulated patients, multiple choice exams with answer sheets, expert models of the simulated encounter, and feedback from the simulated patient were used for student self-assessment. Medical students tended to be critical of their own performances and it was necessary to have the sessions taped to accurately record the events. Barrows, et al, (1976) view self-evaluation as a critical activity throughout the physician's professional life.

Pacoe and co-workers (1976) state that no one is better able to judge some aspects of the interview such as accurate empathy and non-possessive warmth than someone in the client's position. A training model to provide feedback from simulated clients was developed.

The Department of Psychiatry at Michigan State University has attempted to develop new student performance evaluation modes (Muslin, et al, 1974) as it became apparent that no single mode of assessment would adequately measure the diversity of skills expected of the student. The four varying procedures used included testing of cognitive objectives, behavior observations, interview skills and self-evaluation. Assessments included extensive use of videotaped behavior to provide a standard simulus and to reduce variability inherent with live patients. The use of videotaped behavior also enabled repeated use of the learning materials and increased the reliability of the ratings.

Videotape also lends itself to self-instruction since the student could view the tape independently. The development of rating instruments for higher level behaviors was problematical due to the difficulty of 1) getting good models of behaviors, 2) increasing inter-rater reliability, 3) setting criterion levels for performances, 4) getting faculty to subject their observational skills and biases to colleague scrutiny, and 5) the non-quantifiable nature of some behavior. The rating forms developed by Muslin, et al (1974) were based on objectives and included a continuum of levels of performance. Some problems were reported in making the test "fair" to students since different patients were assigned to each student. In general, students were uneasy about live observers and raters.

In summary, since ADA has recommended a competency-based curriculum for dietetic programs, many institutions have developed on this model. CUDP's are also required to demonstrate a close coordination between didactic and experiential learning. One method which has been recommended and used extensively in dietetic education to allow closer coordination, individualization of experiences, and better preparation for field experiences, is self-instructional materials. Evaluation instruments are continually being developed and tested. Criteria checklists have been tested for evaluation of actual performances; they have also been useful for evaluation of videotaped performances. Assessment of inter-rater reliability is recommended. Student self-assessment units have been utilized with success.

Transfer

Learning is brought about to establish capabilities that will be of lasting usefulness to the individual, i.e., making it possible for an individual to perform in a situation not identical to the learning situation but similar to what is learned for example, applying classroom learning in a field experience site. This is termed "transferability" and can be called lateral transfer since it refers to generalization of the skill across a broad set of situations. The transfer, and therefore usefulness, of learning will be increased if it is practiced in as wide a variety of situations as possible when it is learned (Gagne, 1965.)

Bruner (1972) recommends inducing active participation on the part of the learner and creating a challenge to solve problems to promote transfer of learning. Bruner (1961) states that active student processing of information encourages differentiation and organization of the information more than if it is passively received. If information is stored and organized in terms of a person's own interests and cognitive structures, there is more chance of it being accessible when needed.

Goldstein and Sorcher (1974) have recommended a four-step model for transfer training. The first step is to present the best possible demonstration of the desired behavior for the learners to observe. The second step is practice of the behavior by the learners. It is viewed as important to

organize the training setting to focus on the specific tasks to be performed. Step three is providing for reinforcement wherein group or individual feedback may be given to the learners. The fourth step is planning for transfer to the real setting by describing some possible problems, limitations, etc., which may be encountered and discussing ways of dealing with them.

Gropper (1975) defines transfer as the correct identification of a new stimulus which has not been encountered during instruction and the making of a correct alternative response to it which has not been practiced during instruction. He described the skills as 1) being able to see the similarity between the non-encountered stimulus and other stimuli belonging to the same class, 2) being able to see the similarity between the non-practiced response and other practiced or non-practiced correct alternative responses. Methods for increasing transfer effectiveness of materials are recommended: 1) provide recognition practice involving pairs of stimuli belonging to the same class, 2) use of diagrams to call attention to similarities, 3) provide visual or verbal cues to facilitate difficult generalizations, 4) provide model examples varying in similarity, and 5) provide rules which identify relevant and critical properties.

Davis, Alexander and Yelon (1974) refer to transfer situations as referent situations or where the student will need what he is learning. They describe a referent situation test of performance which closely approximates the real setting.

Haslerud and Meyers (1958) tested the hypothesis that principles derived by the learner solely from concrete instances will be more readily used in a new situation than those given to him in the form of a statement of principles and an instance. Two groups of college students were given the same task. Group A received rules to follow while Group B received only examples of the completed task. When both groups were tested initially, Group A performed better. However, when both groups were tested a week later, Group B performed better.

To summarize, it is important that students be able to make an application of knowledge in real settings and enhancing transfer will assist in accomplishing this application. Active participation, problem-solving, practice with corrective feedback, and examples of the task, have been recommended to improve transfer. Simulation can encompass a variety of these characteristics; role play and case study are often a part of simulation.

Teaching Alternatives

Alternative teaching strategies have been researched and recommended as possessing certain advantages. Simulation has been advanced as a methodology for increasing transfer of learning and as such would be a useful strategy for this project. Case study and role play require students to use skills in an applied fashion and also may tend to increase transfer by allowing students to practice in a variety of situations.

Simulation

Simulation can be described as a selective representation of reality. It emphasizes crucial aspects of a real situation and focuses the student's attention, while eliminating extraneous, complicating factors (Davis et al, 1974.) Simulation, which produces a close approximation of actual events or processes, can represent a highly effective alternative method of eliciting complex skills or behaviors and allow for practice of those skills. It requires active participation of the respondent (Maatsch, 1974.)

Simulation has been used with apparent enthusiasm and effectiveness and has been reported in the literature of education, business, medicine, and allied health education including dietetics (Gohring, 1978; Inbar and Stol, 1972; McLean, 1978; Gines, et al, 1978.)

Maatsch (1975) describes a comparison of teaching a simple task using the various methods of 1) lecture manuscript, 2) programmed instruction, 3) nominal lecture, 4) seminar, 5) observation groups, and 6) simulation. The performance of recall, problem-solving, application and recognition were tested. Simulation consistently showed the best results; nominal lecture the poorest results. With subsequent tests thirty days later, it was found that the method did not differentially affect forgetting. Similar performance results were found for active participants and observers of a simulation. The simulation method enabled

the students to pace themselves to allow time to process the information. These students also received immediate feedback for incorrect responses and, therefore, obtained a higher performance level.

Holmes (1975) describes the difference between achievement when the student is a live observer of a simulation and when he is an observer of a simulation via videotape. Observer performance and satisfaction was not significantly different for live vs. televised observation. The author also found that observer performance could be improved by viewing simulation participants with relatively low aptitude for the learning task. This allowed the observer to hear more instructor feedback and also provided more time for information processing.

Muslin et al, (1974) have suggested simulation as an evaluation tool and have used simulation in medical education to test interpretive skills of simulated clinical and laboratory data, problem-solving skills, and clinical judgment using simulated problems in patient management, and interpersonal skills and attitude by simulated interviews and conferences. This author states that simulation has some disadvantages as an evaluation tool since certain aspects of reality or human behavior cannot be economically simulated or appropriately measured by this method. For example, recall of factual information is more economically and directly measured by objective testing. Advantages of simulation as an evaluation tool include: 1) the problems more closely

correspond to reality, 2) the focus is on the elements of primary concern, 3) the tasks may be standardized for all examinees, 4) the criteria for performance may be specific, detailed, and predetermined, 5) the risk to real patients is not a factor, and 6) the learning is enhanced through prompt, specific feedback.

Ward (undated) states that the evaluation mode for a simulation will depend on the objective or learner outcomes desirable at the conclusion of the instruction. If the outcome is to be an observable skill, raters such as instructors or possibly other students, can evaluate performance with a checklist specific to that skill. Other researchers (Towar and Vosburgh, 1976; Fiedler, 1977) have reported a method of training raters in order to develop inter-rater reliability. The degree of acceptable reliability was established at the discretion of the researcher depending on the difficulty or complexity of the skill being rated.

Ward (undated) reports that the evaluation of instructional games or simulations should give account to three aspects of the instructional materials and experience. First, there must be a concern with what has been learned in terms of content information. A second evaluation area is motivation or the students' affective response to the instruction since one of the reasons for use of instructional simulation is to increase the interest level of the learner to enhance learning. The third evaluation aspect is the concern for transfer of learning. Although traditional education

procedures usually have not tested transfer, this can be the primary reason for using instructional games and simulations and should be evaluated. Learning of information may be evaluated using a written pre-test, post-test procedure. Motivation can be evaluated by an observer to the simulation, or the learners may be asked to evaluate their own level of interest. Transfer evaluation is most effectively done in longitudinal studies after learners' entry into the real world setting; while ideal, this is impractical. It was suggested that the skills to be learned be evaluated in a different but similar simulation setting.

Case Study and Role Play

Role playing and written case studies require the student to use the skills or make an application of the theory to a real problem. The technique of role playing comes from the work of Moreno (1953). Maier et al, (1975) stipulate that the objective of role playing is to promote insight into interpersonal relationships by asking one to play the role of another. According to this author, role playing requires the person to carry out an action or idea, permits practice in carrying out that idea or action, promotes attitude change by placing persons in specified roles where it teaches one to be sensitive to the feelings of others, permits a better understanding of the impact of feelings, and enables one to find personal faults in a low-threat setting where training to control feelings and emotions may be obtained.

The case study approach to human relations was initiated at Harvard University (Maier, et al, 1975.) Case study may be used to discourage snap judgments about people and behavior and limit the practice of looking for the "correct" answer. The authors also state that the case study illustrates how the same set of events can be viewed from different perspectives, while it trains one to discuss situations with the emphasis placed on practical thinking. The authors felt that role playing a case study would combine these benefits, but the cases should include a minimum of extraneous detail, produce results that are generalizeable to other similar situations, and exhibit interesting and challenging experiences.

Simulation which is a close approximation of actual events can elicit complex skills and allow for practice of those skills. Simulation has further been recommended as a methodology to evaluate complex skill performance. Case study and role play can be effective components of simulation since they also require students to make an application of knowledge and allow for practice in a variety of situations.

Criterion-Referenced Testing and Measurement

Criterion-referenced testing is appropriate to this project since the evaluation is of a simulated performance of a progress interview, rather than of the student's information base. Although measures of criterion-referenced

test validity and reliability are not firmly established, some measures have been recommended.

A criterion-referenced test is one constructed to yield measurements that are directly interpretable in terms of specific performance standards. The usual norm-referenced test is one that yields test scores that discriminate between individuals on the trait being measured. As developed by McClelland (1976) at the Institute for Competence Assessment, criterion-referenced testing has the following traits:

1. Measures use of, rather than storage of, information.
2. Uses a format closely resembling performance-related situations, and
3. Measures abilities causally related to successful performance rather than being merely correlated with the performance.

Glaser (1963) and Popham (1975) were the first to introduce and to popularize the field of criterion-referenced testing. The purpose was to provide the kind of test score information needed to make decisions arising in objective-based instructional programs. Criterion-referenced tests are currently used to monitor individual progress in objective-based educational programs, to diagnose learning deficiencies, to evaluate educational and social action programs, and to assess competencies on various certification and licensing examinations.

Popham and Husek (1969) note that test score reliability is dependent on test score variability. Since it is not uncommon to observe rather homogeneous distributions of

criterion-referenced test scores, they feared that test developers would scrap their tests because of low reliability scores. These authors suggest that test developers should understand low classical reliability estimates for tests since low values were to be expected. But no alternatives were suggested at that time. Haladyna (1974) suggests that test developers "create" test score variance by "pooling" the two groups of learners (those expected to be masters and those expected to be non-masters, perhaps a group of examinees prior to receiving instruction) then apply one of the classical reliability approaches and interpret end results in the usual way. Livingston (1972) suggests that the purpose of a criterion-referenced test was to discriminate each examinee's estimated domain score from a cut-off score. The author indicates that it is then possible to re-define variations in estimated domain scores and domain scores about the "cut-off" score rather than define the mean domain score which is the procedure in classical test theory. The farther the group mean domain score is from the cut-off score, the more reliable the scores are said to be. Shavelson, Block and Ravitch (1972) suggest that reliability information is needed on each subset of items measuring an objective included in a test when test items are arranged into clusters according to the objective being measured.

Carver (1970) proposes two procedures for assessing reliability of criterion-referenced tests. The first procedure requires the administration of the same test to two

comparable groups, and a comparison of the percentages of examinees that were classified as masters. The second procedure requires the administration of two parallel tests to the same group, and a comparison of the percentage of "masters" on the two tests. With either procedure, the more comparable the percentages, the more reliable the tests are said to be. Carver's procedures were based on the replicability of distributions, while the usual concept of reliability in mental testing is based on the replicability of individual scores, and would be a weak form of evidence for criterion-referenced test reliability.

Hambleton and Novick (1973) suggest that the reliability of mastery classification decisions should be defined in terms of the consistency of decisions from two administrations of the same test or parallel forms of a test.

Several approaches to the determination of test length have been reported (Novick and Lewis, 1974: Fhaner, 1974: Millman, 1972 and 1973: and Wilcox, 1976.) The length of a criterion-referenced test is related to the usefulness of the test scores obtained from the test. Short tests, typically, produce imprecise domain score estimates, and lead to mastery decisions that prove to be inconsistent across parallel form administrations or test-retest administrations. When criterion-referenced tests are used to assign learners to mastery states, the problem of determining test length is related to the number of classification errors one is

willing to tolerate. One way to assure low probabilities of misclassification is to make the test very long; this is usually not feasible.

Millman (1973) recommended consideration of the following factors in setting cut-off scores for assigning learners to mastery states:

1. Performance of Others: Set the cut-off so that a pre-determined percentage of a group of examinees pass.

2. Item Content: Have a set of experts inspect items in a test to determine the minimum number of items that learners must answer correctly in order to be considered masters.

3. Educational Consequences: Determine the cut-off score that maximizes the relationship between test performance and some criterion measure such as test performance on a subsequent objective to which the first is a prerequisite skill.

4. Psychological and Financial Costs: Set a low cut-off score when remediation costs are high (Millman, 1974.)

5. Errors Caused by Guessing and Item Sampling: Apply a correction factor to either the cut-off score or learner test score.

Block (1972) studied the degree to which varying cut-off scores during segments of instruction influenced end of learning criteria. Six criterion variables were selected for study: achievement, time needed to learn, transfer, retention, interest, and attitude. The results revealed that groups subjected to higher cut-off scores during instruction performed better on the achievement, retention, and transfer tests. On the interest and attitude survey there was a trend for interests and attitudes to increase

until the .85 group, and then to level off. The .75 group fared poorly on the transfer, interest, and attitude measures, suggesting some extra-experimental influence. The results seem to indicate that different cut-off scores may be necessary to achieve different outcome measures.

Fremer (1974) outlined procedures to increase the validity of criterion-referenced tests under the following topics:

A. Preparation of Objectives: "Amplified" objectives may be more useful than behavioral objectives. An amplified objective is an expanded statement of an educational goal which provides boundary specifications regarding testing situations, response alternatives and criteria of correctness.

B. Generation of Test Items: Items are generated for domains, utilizing principles of item writing used in norm-referenced achievement test construction.

C. Item Analysis: This includes judgments of test items by content specialists. The judgments are made concerning the extent of "match" between test items and the domains they are designed to measure. Two questions are addressed: are the domain specifications clearly written and is there agreement among content specialists that a set of items adequately sample a particular domain? Another approach is to apply empirical item analysis techniques that have been used frequently in norm-referenced test construction.

Rovinelli and Hambleton (1977) asked content specialists to rate test items relative to a set of objectives. Their three possible ratings of a test item had the following meanings: definite feeling that an item is a measure of an objective, undecided about whether the item is a measure of an objective, and definite feeling that an item is not a

measure of an objective. The authors describe a second procedure involving the use of a rating scale. Content experts were asked to rate the appropriateness of test items as measures of objectives. The ratings were tallied and averaged to determine a rating.

Item analysis can also be accomplished by Cronbach's (1971) duplication method. Two teams of equally qualified item writers and reviewers work independently in developing a criterion-referenced test. If domain specifications are clear, and sampling representative, the tests should be equivalent.

Empirical methods of item analysis may provide more information. Discrimination indices may provide useful information for detecting "bad" items. Henrysson and Wedman (1974) argue that even carefully prepared domain specifications and precise item generation specifications never completely eliminate subjective judgments that influence test construction.

D. Item Selection, Test Length, Cut-Off Scores: This step includes selecting a sample of test items from the population of test items. Test length and cut-off scores have been discussed above.

E. Reliability and Validity Studies: These are completed after selection of items following guidelines discussed above.

A criterion-referenced test measures use of information and uses a format closely resembling performance related situations. However, statistical measures of

criterion-referenced tests are only now being developed. Recommendations have been made for determining test length, assigning cut-off scores, and increasing validity.

Empirical Item Analysis

In relationship to competency-based materials, item difficulty and item discrimination statistics may be used primarily for improving objective examinations (Douglass and Olson, undated.) Items with inappropriate difficulty levels and/or low discrimination may reflect a poor item on a norm-referenced exam, but not necessarily on a competency-based examination. Therefore, judgment is required to eliminate or improve items. An item can fail to act as desired for one of three reasons:

1. The item may be faulty; it can contain clues unrelated to relevant knowledge that hint at the correct answers; it can be ambiguously or poorly worded; or it can fail to reflect instruction.

2. The instruction can be misleading or inadequate. The knowledge that the item is intending to measure may not have been learned.

3. The instructional objectives can be inadequately specified. An item may not be measuring well because no specific knowledge area serves as a basis for the item.

It is important to know that items should never be accepted or rejected solely on the grounds of item analysis. The instructor's good judgment is used to write appropriate items and it should be used to revise them. Poor items should generally be revised rather than discarded. Four

relatively simple and straightforward item statistics are useful for evaluating criterion-referenced test items (Douglass and Olson, undated.)

A. The Pre-test Index of Difficulty: This is simply the percentage of the pre-test or uninformed group answering the item correctly. The smaller this index is the better the item. If a high percentage of the uninformed group of students can answer an item correctly, there is probably a clue in the item or the students may already have the knowledge tested by the item before instruction. Close examination of the item should reveal which situation exists.

B. The Post-test Index of Difficulty: This is the percentage of students in the post-test or informed group that answer the item correctly. This index should be as high as possible. After instruction, most of the students should have the knowledge which was taught. If the post-test index is low the item may be misleading or ambiguous or the instruction may not be adequate in that area.

C. The Pre-test Post-test Discrimination Index: This is the post-test difficulty index minus the pre-test difficulty index. It varies from 1.00 to -1.00. This index should be fairly high since it is desirable for the post-test index to be high and the pre-test index to be low. The discrimination index measures the group gain from pre-test to post-test. It will be low if either the item was easy for the uninformed group or difficult for the instructed group. Again, a low index can be caused by a faulty item or weak instruction.

The authors also state that the students' patterns of response can provide useful additional information for multiple-choice items. The pattern of response consists of the number of students choosing each of the alternatives in the multiple-choice item for pre-test and post-test.

Item analysis can aid with improving objective examinations. Judgment is still required, as inappropriate difficulty levels or low discrimination may not necessarily

reflect a poor item on a competency-based examination. Item analysis statistics include the pre-test and post-test indices of difficulty, pre-post test discrimination index and multiple-choice pattern of response.

Attitude Scaling

An introduction to attitude scaling is important to this project since one of the instruments used was a student attitude survey. An attitude is a predisposition to think, feel, perceive, and behave toward a reference or cognitive object (Kerlinger, 1973.) There are three major types of attitude scales discussed in the literature.

The Thurstone-type or Equal-appearing Interval Scale, places the individual along an agreement continuum, but also scales the attitude items by importance (Butcher, 1956.) This type of attitude scale may not give as much information as the Likert Scale because of its dichotomous response mode (Isaac and Michael, 1977.)

The Guttman-type or Cumulative Scales include a relatively small number of homogenous items measuring only one attribute. This scale gets its name from the cumulative relationships between the items and the total scores of individuals and is appropriate when only one attribute is involved (Butcher, 1956.)

The Likert-type or Summated rating scales contain a set of items considered equal in attitude or value loading. Subjects can respond to the items with varying degrees of

intensity on a scale ranging between extremes. The scores are summed and averaged to find the total score. Summated rating scales appear the most useful in behavioral research since they are easier to develop and yield about the same information as the more laboriously constructed equal-appearing interval scale. Greater variances have been obtained with Likert scales (Butcher, 1956) and comparisons have shown that Likert scales produce higher coefficients of reliability (Robinson et al, 1968: Maranell, 1974.)

Likert (1932) stipulates that in the construction of summated scales: 1) each statement should be of such a nature that persons with different points of view will respond differentially, 2) items cannot deal with statements of fact, only with expressions of desired behavior, and should be written to deal with present rather than past attitudes (the word "should" is a convenient way of stating the proposition so that it involves a desired behavior); 3) each item should be clear, concise, straightforward, with a simple vocabulary; 4) double-barreled statements should be written as two separate statements, 5) it is desirable to word the statement so that the model reaction approximately falls in the middle of the possible, and 6) statements should be worded so that about half of the items have one end of the continuum as the response and the other half have the response at the other end.

Kerlinger (1973) recommends that when constructing the Likert scale, one should prepare and select more statements

than he is likely to use since after testing with a group some statements may be found unsatisfactory. For scoring purposes a numerical value must be assigned to the possible alternative responses. The lower number can be assigned to either end. Split-half reliability can be determined by correlating the sum of the odd statements for each individual against the sum of the even statements. Item analysis can be done by calculating the correlation coefficient for each item. If a negative correlation is found, it indicates that the numerical values are not properly assigned and that the one-five ends should be reversed. If a zero or very low correlation is found, it indicates that the statement fails to measure that which the rest of the statements measure and is undifferentiating and contributes nothing to the scale.

Poppleton and Pilkington (1963) compared the measurement of one particular attitude by four scales. The Thurstone, Guttman, Likert, and Guilford scales demonstrated reliability. The Likert scale exhibited a high degree of validity and was less difficult to use.

Robinson et al (1968) lists other criteria for attitude scales as:

1. Comprehensive set of questions relevant to the topic.
2. Item analysis shows items significant at the .05 level.

3. Avoids "response set" to attitude statements for reasons other than the content of the items. Two methods suggested to avoid this are to include interesting and pleasant statements and to occasionally list the responses from one to five in reverse order.

Of the three major types of attitude scales discussed in the literature, the Likert-type scale is simplest to develop and research indicates that it can yield about the same information as other scales. Likert (1932) describes parameters for construction of these scales.

Random Sample Segment Evaluation

The random sample evaluation of videotaped performances was initiated by reports in the literature of work sampling for employee evaluations. This type of work sampling is a quantitative technique for measuring and analyzing activities, primarily applied to industrial settings and employee evaluation. The technique requires the use of random, short observations and is based on the law of large numbers which states that the distribution of random samples tends to resemble the total distribution from which the samples are drawn. Each minute of the total population of minutes must have an equal chance of being drawn in random sampling. The accuracy of work sample technique was compared with that of continuous time studies using 14 industrial operations and the average difference between the two methods was 2.5 percent (Wise and Donaldson, 1961.) Random sample segment evaluation was utilized in a foodservice

operation to analyze student employee payroll requirements between kitchen facilities and the results were used to make recommendations for improvements in services (Wilson, 1956.)

The theory of distribution of random samples resembling the total distribution from which the samples are drawn has been applied to employee evaluation in industrial settings and can be accurate. An application to student performance evaluation remains to be tested.

Diagnosis and Revision in the Development of Instructional Materials

After testing and evaluation of the instructional materials developed, some revisions will be necessary to improve them. Literature in the area offers guidelines for diagnosis and revision to improve materials.

Revision consists of the introduction of, alteration of, or substitution of display, response, or feedback mechanisms which were used in development. Gropper (1975) suggests revisions of instructional materials based on student achievement data that indicate significant improvement in learner achievement after testing, evaluation, and revision. This author reports four data sources for evidence on which to base revision decisions:

1. The developers' own characterization of the program in testing.
2. The results of students' performance.
3. Student characterization of the program.
4. Comparison of program results for differing groups.

If the materials are favorably evaluated, the developer can proceed with revision on an ad hoc basis, revising individual tasks which student error or personal inspection reveal to be faulty, without negatively altering results. If the materials are not favorably evaluated, diagnostic effects must be more sophisticated and extensive.

Student errors during instruction and on criterion-referenced tests have been used to guide program revision. Front-end analysis of objectives identifies what students are expected to learn; diagnosis for revision should identify what students have achieved or failed to achieve. If a student fails to generalize or transfer from the learning situation to the testing situation, certain program omissions are likely: too few examples were used or they were insufficiently varied (Gropper, 1975.)

Summary

A review of literature in the area of dietetics indicates testing and evaluation of a wide range of instructional technologies; however, there is a lack of information and research in the area of progress interviewing applied to institutional foodservice. Client interviewing in the clinical dietetics setting is well represented in the literature and some instructional development has been accomplished (Breese, et al, 1977.) The focus and content of this type of interviewing is very different from employee progress interviewing. Instructional units dealing with communication

skills and the interviewing process are available, but do not deal with the content area of employee evaluation (Welsch, Adam and Fitz, 1979.) The content areas of the employment interview and employee evaluation are discussed to some extent, but no self-instructional units were found (West, et al, 1978.) Since this skill is considered essential, development of materials is necessary.

From a variety of instructional strategies, methodologies effective in increasing transfer would be most advantageous in the context of this project since employee interviewing is a skill that the entry-level dietetian will be required to achieve. A variety of instructional alternatives such as individualized materials to allow students to study the materials at their own pace and at appropriate times in relationship to the field experience, simulation to allow students to practice the skills in a variety of situations, case studies and role play to increase transfer, are recommended. These materials should be developed on a competency-based, criterion-referenced model.

Until quite recently, there have been few reliable guidelines for criterion-referenced test construction, assessment, and test score interpretation and this has hampered the use of these tests. Standard procedures for testing and measurement within a norm-referenced framework have become well known, but work is needed regarding criterion-referenced tests. A basic difference in comparison to norm-referenced tests is that criterion-referenced tests are not

constructed specifically to maximize the variability of test scores, whereas a norm-referenced test is so constructed. Since the distribution of scores on a criterion-referenced test will tend to be more homogeneous, there will be less variance which is critical to the usual interpretation of norm-referenced statistical tests. The use of empirical item analysis statistics has been recommended to improve criterion-referenced tests. Criterion-checklists have been recommended to evaluate videotapes of student performance.

Random sampling has been applied to employee evaluation in industrial settings and compared with standard employee evaluation. It may be a useful technique in supervisor observation of employee performance to improve employee evaluation while decreasing amount of time spent in evaluation.

After completion of testing and development of materials, analysis of student errors typically have provided researchers and developers with diagnostic evidence to guide program revision. Front-end analysis of objectives identifies what students are expected to learn; diagnosis for revision should identify what students have achieved and have failed to achieve.

Using the literature as a guide, the specific project addressed in this research was the development, testing, and evaluation of an instructional unit on employee interviewing including self-instructional and simulation components to allow: 1) students to use the materials in conjunction with

appropriate experiences in field sites, and 2) facilitation of transfer of the skills to real world settings. Evaluation instruments are criterion-referenced. Comparisons were made between performances of students who had varying levels of active participation in the learning process. Evaluation was conducted in three modes to allow comparisons between: 1) instructors' whole evaluation, 2) students' self-assessment, and 3) instructors' random segment evaluation.

CHAPTER III

METHODOLOGY

Methodology is described under the headings of design, preliminary procedures, and research procedures conducted to carry out the planned design.

Design

The research has been divided into two segments to describe the design developed. The first part was evaluation of the self-instructional unit and simulation practice sessions with student performance scores as the dependent variable. The second part was comparison of the three modes utilized to evaluate student performance and again performance scores were the dependent variable.

Evaluation of the Instructional Materials

Test groups were formulated to vary the amount of required interaction with the instructional materials to compare effectiveness of learning as measured by a score on a post-test simulated employee interview. Independent variables included: for the self-instructional materials 1) a written unit with practice wherein students were required to formulate and write answers to embedded questions,

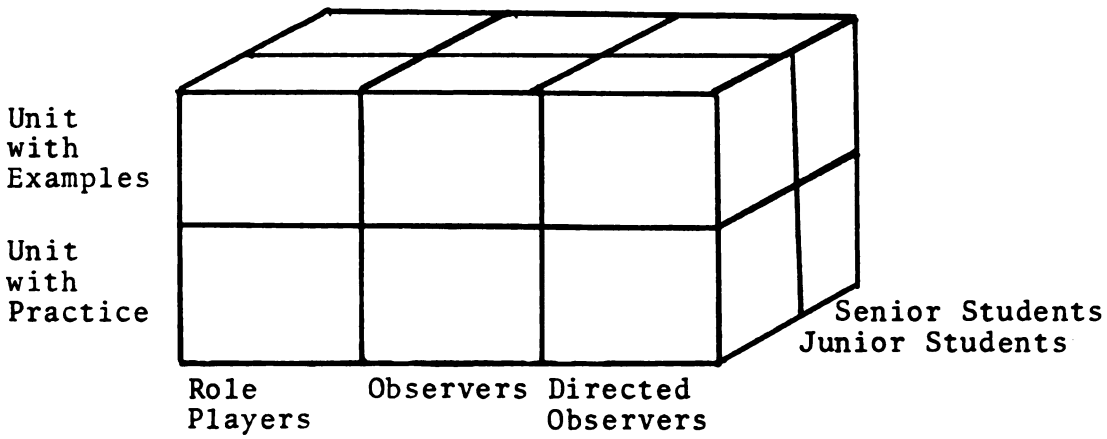
2) a written unit with examples wherein students were required to read embedded questions with answers provided; and for the practice session 3) observers who watched the role play practice, 4) directed observers who observed and evaluated the role play practice utilizing a criteria checklist, and 5) role players who conducted interviews in the practice session. Table 1 describes the test group assignments. The dependent variable was student performance on a post-test simulated employee interview as measured by a criteria checklist. Figure 1 displays the two by two by three way analysis of variance (ANOVA) design.

TABLE 1

Test Group Assignments			
Treatments	Student Enrollments for Academic Terms, 1978-1979		
	Fall	Winter	Spring
1. Unit with Examples Observer	3 juniors	3 seniors	
2. Unit with Examples Directed Observer	3 juniors	3 seniors	
3. Unit with Examples Role Player	4 juniors	4 seniors	
4. Unit with Practice Observer	3 juniors		3 seniors
5. Unit with Practice Directed Observer	3 juniors		3 seniors
6. Unit with Practice Role Player	4 juniors		4 seniors

FIGURE 1

Two by Two by Three-Way ANOVA Design



Comparison of Three Evaluation Modes

Student performance on the post-test simulated employee interview was videotaped to preserve the performance for several evaluation procedures. Once again, the score received by the student was the dependent variable. Independent variables included: 1) instructors' evaluation based on whole performance evaluation, 2) student self-assessment of performance, and 3) instructors' evaluation based on random segment evaluation.

Preliminary Procedures

Progress Interview Unit Development

The progress interview unit was developed beginning with a list of learning outcomes which the learner should achieve with a final objective to develop the ability to

plan and conduct a simulated progress interview (see objectives in Appendix B.) Test questions were written for the unit to include many examples of real world problems which required the student to think about and plan the various steps of the interview model. Background information and theory were written as the first part of the unit, followed by the interview model and a written description of each step of the model with situationally specific examples for each step.

A hierarchical analysis of the content of the unit (following Hiob's, 1978, self-instructional module on preparing modules) was completed and is shown as Table 2. Hiob's model is based on Gagne's domains of learning, Table 3, which indicate progressively more complex types of learner behaviors. This analysis can be helpful to the instructional developer in sequencing information to facilitate learning.

Davis, Alexander, and Yelon (1974) describe a systematic design process for instructional materials development. The first stage is describing the current status of the learning system including the purpose, resources, students and teacher qualities. Second is deriving and writing learning objectives which are precise and unambiguous. The third stage is planning an evaluation system to determine if objectives are met. Task description (determining the steps involved in performing the task) and task analysis (types of learning involved in a task) are completed to guide decisions about sequence and extent of information to include. A flow

TABLE 2

Hierarchical Analysis of the Progress Interview Unit		
PRE-REQUISITES	1	States human motivation theories.
	2	Demonstrates interpersonal communication skills.
	3	States reasons for employee evaluation and describes employee evaluation techniques.
	4	Describes expectancy and contingency motivation theories.
	5	Demonstrates characteristics of effective feedback.
	6	Identifies effects of the interviewer's attitude about performance appraisal.
	7	Identifies problem-solving skills.
	8	Discriminates priorities for a progress interview.
	9	Discriminates specific job requirements from an individual employee's personal characteristics.
	10	Originates pre-planning for an interview.
	11	Discriminates employee strengths.
	12	Discriminates the counterparts of weaknesses.
	13	Chooses interview location and environment.
	14	States reasons for advance appointments.
	15	States reasons for employee self-assessment.
	16	Generates solutions to problems through the employee.
	17	Demonstrates controlling the direction and content of an interview.
	18	Generates job-related goals with the employee.
	19	States reasons for and uses of timelines.
	20	Identifies consequences of appropriate performance.
	21	Identifies reasons for documentation of the interview process and outcomes.
	22	States uses of the interview records.
	23	Generates an evaluation of the interview process and results.
	24	States reasons for a planning guide for interviewing.
	25	Generates a planning guide for an interview.
	26	Originates a simulated progress interview and evaluates it.

TABLE 3

Gagne's Domains of Learning		
Capability	Verb	Example
Attitude	Chooses	Chooses to do progress interviews with employees
Motor Skill	Executes	Executes the task of setting up an appropriate environment
Information	States	States reasons for making advance appointments
Intellectual Skill		
Discrimination	Discriminates	Discriminates priorities for the interview
Concrete Concept	Identifies	Identifies consequences of appropriate behavior
Defined Concept	Classifies	Classifies problems as training or problem solving
Rule	Demonstrates	Demonstrates characteristics of effective feedback
Higher Order Rule (problem-solving)	Generates	Generates solutions to problems with the employee
Cognitive Strategy	Originates	Originates a simulated progress interview

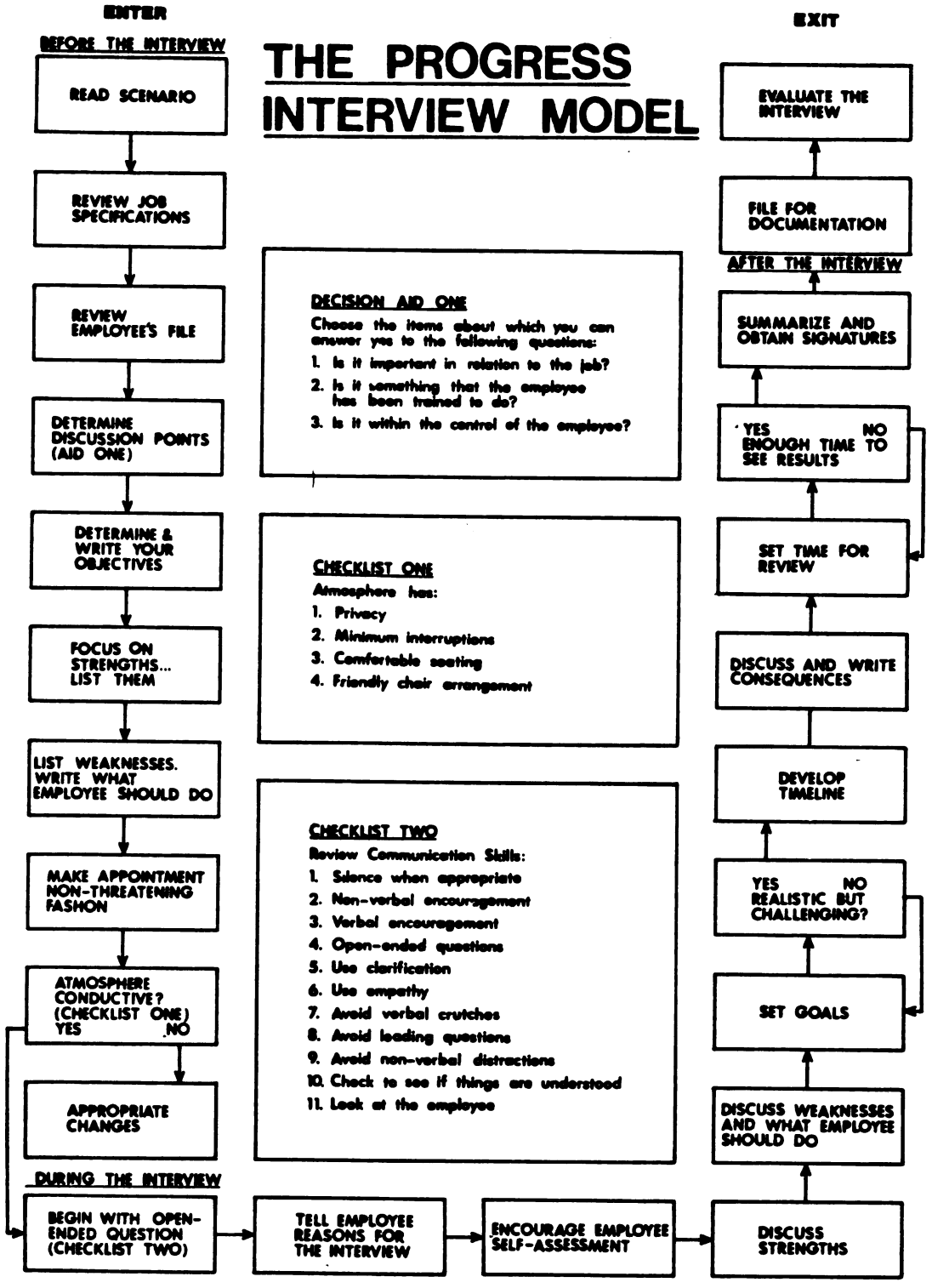
chart resulting from the task analysis became the core of the interview model and was included in the instructional materials (see Figure 2.)

The two methods described (task analysis and hierarchical analysis) were used to determine content and sequencing of the information concerning interviewing. The results of each analysis were compared and found to be similar in terms of the structure of the interviewing instructional materials. Literature regarding progress interviews recommends a sequence to teach interviewing which includes providing background theory, a behavioral model, practice of the behavior, and evaluation and feedback to the learner (Richetto and Zima, 1976; Lopez, 1975.) This model and the content analyses were utilized in this project.

Two units were completed with identical content. One included written answers to the embedded questions for the students to read (unit with examples) and the other included questions followed by blank space for students to formulate and write their own answers (unit with practice.)

Four scenarios were written to use as testing and classroom practice situations, following completion of the self-instructional unit by students (see Appendix B.) Four different scenarios were developed utilizing common, real world experiences and included instructions for the interviewer, instructions for the interviewee (employee), and instructions for the evaluator of the interview. One was used as a pre-test, prepared and videotaped prior to beginning the unit. Two scenarios were used in the classroom for

FIGURE 2


ENTER
BEFORE THE INTERVIEW
READ SCENARIO
REVIEW JOB SPECIFICATIONS
REVIEW EMPLOYEE'S FILE
DETERMINE DISCUSSION POINTS (AID ONE)
DETERMINE & WRITE YOUR OBJECTIVES
FOCUS ON STRENGTHS... LIST THEM
LIST WEAKNESSES. WRITE WHAT EMPLOYEE SHOULD DO
MAKE APPOINTMENT NON-THREATENING FASHON
ATMOSPHERE CONDUCTIVE? (CHECKLIST ONE) YES NO
APPROPRIATE CHANGES
DURING THE INTERVIEW
BEGIN WITH OPEN-ENDED QUESTION (CHECKLIST TWO)
TELL EMPLOYEE REASONS FOR THE INTERVIEW
ENCOURAGE EMPLOYEE SELF-ASSESSMENT
DISCUSS STRENGTHS
DISCUSS WEAKNESSES AND WHAT EMPLOYEE SHOULD DO
SET GOALS
YES NO REALISTIC BUT CHALLENGING?
DEVELOP TIMELINE
DISCUSS AND WRITE CONSEQUENCES
SET TIME FOR REVIEW
YES NO ENOUGH TIME TO SEE RESULTS
SUMMARIZE AND OBTAIN SIGNATURES
AFTER THE INTERVIEW
FILE FOR DOCUMENTATION
EVALUATE THE INTERVIEW
EXIT
THE PROGRESS INTERVIEW MODEL
DECISION AID ONE
Choose the items about which you can answer yes to the following questions:
1. Is it important in relation to the job?
2. Is it something that the employee has been trained to do?
3. Is it within the control of the employee?
CHECKLIST ONE
Atmosphere has:
1. Privacy
2. Minimum interruptions
3. Comfortable seating
4. Friendly chair arrangement
CHECKLIST TWO
Review Communication Skills:
1. Silence when appropriate
2. Non-verbal encouragement
3. Verbal encouragement
4. Open-ended questions
5. Use clarification
6. Use empathy
7. Avoid verbal crutches
8. Avoid leading questions
9. Avoid non-verbal distractions
10. Check to see if things are understood
11. Look at the employee

role play practice. The scenarios were accompanied by an organization chart to allow the student to visualize the larger organizational framework and a job specification of the particular position of interest in the scenario. When the materials were in draft form, a formative evaluation by volunteer experts and students was completed.

Formative Evaluation of the Unit

Expert Evaluation: Expertise in terms of recruiting reviewers includes academic expertise in the content area, practical expertise in applying the content area in the field, and instructional development expertise in relationship to the structure of the materials. Six reviewers agreed to participate in the formative evaluation procedure including experts in content and experts in instructional development. Two foodservice managers, who are actually using the skill in the field, reviewed the documents. One of these two reviewers was a foodservice coordinator who has the responsibility to make employee progression decisions and to recommend training programs for foodservice supervisors. The four remaining reviewers included one professor of foodservice systems management, two industrial psychologists with experience and academic background in instructional development, and one professor in the area of learning and evaluation services.

The first document sent to reviewers included objectives written for the progress interview unit listed on sheets with a one to four rating scale from "This objective is very important" (1), to "This objective is not important and should be deleted" (4), (see Appendix B for an example of the form utilized.) The reviewers were asked to rate the objectives using the scale and were encouraged to make written or oral comments.

The second document sent to reviewers consisted of 57 test items written for the unit. These items included both the embedded test items which appear in the text of the unit and the written pre- and post-test items. These items were listed on sheets with a one to three rating scale from "This item is appropriate to measure the objective" (1) to "This test item is not appropriate to measure the objective and should be deleted" (3). Again, reviewers were encouraged to make comments if desired.

The last document for review was the criteria checklist developed to evaluate the role play interviews. Reviewers were asked to critique the checklist.

Student Evaluation: Three student volunteers participated in the one-on-one formative evaluation of the revised unit and test instruments. Each of the three students, similar in academic background to the target population of this study, was currently enrolled in the traditional dietetic major in the Department of Food Science and Human Nutrition. Two were junior level and one a senior-level

student. At Michigan State University, these students most closely approximate the academic backgrounds of students in the GDCSP.

The researcher met with and reviewed each step of the unit with each student independently. The student was asked first to complete the pre-test to allow a subjective evaluation of the test difficulty. The student then worked through the unit, marking any place in the test which was ambiguous or confusing. The student was also asked to mark embedded test items in the text which were ambiguous or confusing, or to which the answer was not clear from the text. As a final task, each student completed the post-test to correct errors and/or discuss any items about which there was a question.

Selection of the Actress to Play the Part of the Employee

The students were to videotape a post-test employee progress interview as the final evaluation component of the interview unit. It was necessary to locate a person to play the role of the employee during this post-test interview recording who had no prior contact with the students involved in the study. It was felt that standardization of the difficulty of the post-test was desirable to allow reliability of the observer evaluations. A trained interviewer was employed to play the part of the employee.

The Michigan State University Student Employment Manual includes a job description which was considered appropriate: Interviewer IV, job number 354. The description was as follows:

> Functions as a simulated patient responding verbally in a medical interview situation directed by student physicians. Instruction on simulated program and supervision is received from the Interview Training Aide supervisor, supervisory physician, or designated official. Qualifications may vary according to implemented program. (p. 22.)

The office of Medical Education, Research and Development in the Colleges of Osteopathic and Human Medicine at Michigan State University has used interviewers extensively in physician training. Ms. Holly Holdman, in the Education Resources section, has worked extensively with simulated patients and has published a manual, The Training of Simulated Patients. Ms. Holdman was contacted and asked to recommend an interviewer to play this role. She responded with several recommendations and subsequently two were contacted for interviews. The woman employed came with the following recommendation:

> She's dynamite, very mature, very good at giving feedback, and an MSU student.

Role of the Actress with the Students

The actress was given a copy of the scenario written for the final examination and asked to learn her role. Before the first videotaping was scheduled, the researcher met with the actress to discuss the scenario. Since the

actress had no experience in an institutional foodservice, it was necessary to give her additional details regarding the situations described to assist her in making realistic responses to the students' inquiries during the interview. The actress studied the content of the interview unit and the student performance evaluation criteria. She was instructed to expect an upward time limit of thirty minutes for each interview.

The developer discussed the concept of standardizing responses with the actress before the research was conducted. Standardization of responses was limited since students could ask a variety of questions and the actress had to be free to respond in a realistic manner to each of the students. It was determined that the important aspect of standardization was to avoid extremes of ease or difficulty in the different interviews. There were specific items which the actress would introduce into each of the interviews as well as some standard responses to the students' questions. Students were given feedback on their interview technique after the interview.

The sequence of events was: 1) student conducted interview, 2) student completed self-evaluation of the interview, 3) student received feedback from the point of view of the "employee" on the interview interpersonal technique, and 4) the student was given the opportunity to change any self-ratings for the interview, but reasons for the change had to be listed. The students were also asked to comment on the post-test interview experience.

Research Procedures

Sample Selection

Since the CSP has limited enrollment, the primary group of students to participate in the research were selected by the standards set by the Department of Food Science and Human Nutrition for entry into the program (Appendix A.) The 20 available openings are filled by a random computer selection from the eligible applications.

Student Assignments to Test Groups

Twenty junior and 20 senior CSP students participated in the study during Fall, Winter, and Spring terms, 1978 to 1979. The 20 juniors and 20 seniors were placed in test groups by random assignment. Juniors were involved in the first trial, then a second trial was conducted involving the senior students.

The junior students involved in the first test of the unit met as a group one day of the week in the framework of the course HNF 301, then divided into two groups of 10 for the lab sessions during the week. Senior students were involved as part of the course HNF 480; 10 registered each of Winter and Spring terms.

Each of the two groups of 20 students (junior or senior) were first divided and assigned to the test groups 1) unit with examples or 2) unit with practice. Assignments were made using a table of random numbers and the registrar's alphabetical class list.

The 10 students in each of these test groups were then assigned to one of the three test groups 1) role players who conducted interviews in the practice session, 2) observers who observed the role play practice, or 3) directed observers who observed and evaluated the role play interviews using the criteria checklist, again by utilizing a table of random numbers and the registrar's alphabetical class listing.

Instrumentation

Personal Information Sheet: In order to describe the subjects and to assess variability among students in background and experience, a personal information sheet was devised to obtain data including: name, student number, current enrollment classification, GPA, academic training in the areas of communications, psychology, management, foodservice administration, labor relations, and education, and experience in foodservice facilities, (where, when, duration and position.) A sample of the personal information sheet is shown in Appendic C. Personal information was tallied to concisely describe these parameters of the subjects.

Written Objective Examination: All test items were written to measure enabling objectives for the instructional materials. Fifty-seven test items were reviewed and rated by experts and modifications completed before use of the materials. Of the 57 items, 37 were utilized as the written final examination and 20 were utilized as embedded questions.

All 37 items included in the written examination were objective in nature; computer answer sheets were utilized to facilitate analysis. Fremer's (1974) procedures for increasing validity of criterion-referenced tests were used as guidelines. Item analysis was conducted to generate data useful in improving the examination. The 37 item objective examination was utilized as a pre- and post-test and is shown in Appendix C. Cut-off scores for mastery assignment were set at different levels, .75 and .80, for the junior and senior students respectively, based on higher academic status of senior students. Cut-off levels were determined based on Millman's (1973) criteria.

Criteria Checklist: A checklist was developed to evaluate student performance on the interviews. Fourteen items were included on the checklist with a rating scale from one to four or "not applicable". Points from one to four for each item included specific descriptors of behavior which represented a rating of 1, 2, 3, or 4 to guide evaluators' assignment of points. A sample of the criteria checklist is shown in Appendix C. Reviewers had an opportunity to respond to the criteria checklist and many suggestions were utilized to make improvements.

The 14 items were abstracted from the flow chart developed as an interview model from the task analysis. These items were gleaned from the literature concerning progress interviewing as being important to the success of the interview, both from a process and content perspective. They

represent crucial aspects of an employee interview as well as items which are observable from the perspective of the evaluator. Evaluation does not require the evaluator to make assumptions regarding unobservable events or processes.

Cut-off score was set at .75 for assignment to mastery or non-mastery states since a rating of 3 on all items (or .75) is acceptable performance while a 4 rating (1.00) is near perfect performance and practically non-attainable without extensive experience in interviewing.

Attitude Scale: A modification of two affective evaluation forms was used: 1) the affective evaluation form used previously in developmental work from Dr. Stephen Yelon (MSU Learning and Evaluation Service) and 2) the form used by Dr. Rose Tindall (1976) in her dissertation to evaluate student responses to instructional materials. The items were developed to evaluate four aspects of the instructional materials: clarity, reasonableness, perception of amount learned, and perception of feedback received. Seventeen items were written following Likert's (1932) guidelines for item development. Three open-ended items were included as well. Items were placed on a one to five point Likert-type scale with descriptors from "strongly agree" to "strongly disagree". A sample of the attitude scale is in Appendix C.

The attitude survey had been field tested previously in testing and evaluation of other instructional materials.

The instrument had been revised and refined several times to ensure items which were clear and congruous with the rating scale. Students completed the survey individually.

Time Records: As part of the cost assessment, students were asked to estimate time spent on the units. Class time and student counseling time were recorded by the instructor. Faculty time involvement included time spent in preparation of materials, classroom procedures, and in evaluation of objective and practical examinations.

Classroom Procedure

During the initial meeting in the sequence for this unit students were informed of the required activities included in the progress interview unit. Students were asked to complete a personal information sheet and a written pre-test examination of the interviewing unit. Computer answer sheets were used to facilitate scoring and item analysis. Students were asked to videotape a pre-test and a scenario was distributed for use as a guide in the pre-test to standardize the content to allow for reliable evaluations. The students completed the pre-test interview videotape in pairs during the following five days. Students completed an evaluation of their pre-test for comparison with the instructors' evaluations of the pre-test. The pre-test written and performance evaluation results were compared with post-test results to measure improvement. After

the pre-test had been videotaped, the unit was distributed to students. Students completed the unit outside the classroom.

At the beginning of the class session, students completed a written post-test over the content of the unit completed outside of class. The students then met in two groups of 10 students each for the role play practice. Prior to practice sessions, students were randomly assigned to one of the three test groups: role player, directed observer, or observer. Four interviews were practiced during the session, with open discussion following each of the interviews. The practice was guided by two scenarios which were included in the unit materials to allow pre-planning by all students. These practice sessions were videotaped to collect examples of interviews to use with the unit in the future. The group required to write responses in the unit turned in their materials to the instructor to allow a check for completed written responses. After the practice sessions, the students were asked to complete the student attitude survey regarding the unit. At the conclusion of practice, students made appointments for the post-test videotaping with the simulated employee.

During the following week, post-test videotaped interviews were completed with a detailed scenario to structure the interview. Each post-test interview required approximately one hour. Students completed an evaluation of their post-test performance. The timeline for implementation of the materials is shown in Figure 3.

FIGURE 3

Timeline of the Unit Implementation			
Written and Videotaped Pre-test	Complete Self-Instructional Unit	Practice Sessions	Schedule and Complete Videotaped Post-test
Week 1	Week 2	Week 3	Week 4

Whole Performance Evaluation

Two instructors viewed videotape recordings of the pre- and post-test simulated interviews and evaluated them using the criteria checklist. Two instructors completed evaluations to allow for development and measurement of inter-rater reliability. Evaluators were given training to improve inter-rater reliability which included review and discussion of each of the items on the checklist and their related point scale descriptors as well as sample interviews to practice evaluation.

Student Self Assessment

Each student evaluated her own pre- and post-test interview subsequent to its performance using the criteria checklist. After the post-test, the student evaluated the performance, received feedback from the actress, and then had an opportunity to change ratings based on this feedback. Few students opted to change their own ratings after feedback and these change data were ignored in the analysis.

The feedback given to students after the interview consisted of subjective response on the part of the "employee" to the interviewer. Students' comments (Appendix D) indicate that they learned from this feedback, but it did not relate specifically to the items on the checklist, and this may explain why students did not choose to change their own ratings.

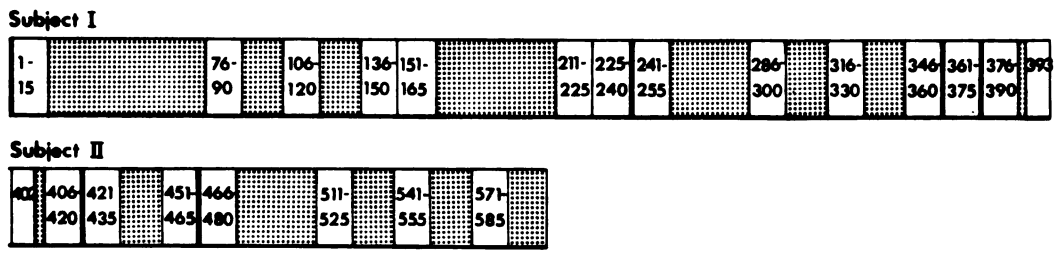
Random Sample Segment Evaluation

To determine the feasibility of decreasing the time required for evaluation and thereby increasing the possibility of using videotaping, random samples were taken from videotaped interviews by randomly selecting 42-second segments of the tapes. The videotaped recorder counter was utilized to designate the length of each of the interviews. On the Sony VTR presently in use in the Dietetics Instructional Resources Center, 27 units on the counter is approximately equal to 85 seconds. The researcher viewed selected interviews to determine how long segments should be to view as random blocks. It was determined that segments should be at least 42 seconds for two reasons: 1) the instructors felt that this time frame allowed them to determine what was occurring in the interview segment and make a judgment about the students' performance, and 2) the counter on the videotape recorder had to be accommodated.

The length of each interview was determined in units by the counter and this number was divided into 15-unit segments (approximately 42 seconds each.) The 15-unit segments were listed individually on cards, cut into standard size, and placed in a box to allow random selection. The number of 15-unit segments varied by the length of the videotaped interview. Half of the units were drawn from the box in a random fashion to complete a random sample of half of the units in the interview. The number of segments selected varied depending on the length of the interview but always comprised half of the interview. The numbers of each segment were noted on a card taped to the videotape container, in consecutive order so that evaluators would be able to determine which segments to evaluate and so that evaluators would be able to start at the beginning of each tape and progress through the tape to the end without having to rewind. Examples of the sets of numbers drawn are shown in Figure 4.

FIGURE 4

Examples of Random Sample Sets of Videotaped Performance Segments by Counter Number



CHAPTER IV

RESULTS

Progress Interview Unit Preliminary Evaluation

Objectives, test items, and the criteria checklist were evaluated by subject matter and instructional development experts. The importance of each objective to the course content was rated on a one to four scale ("very important" to "should be deleted" respectively.) Initially, objectives were complex with more than one level of performance required. The major area of reviewer comments was the need to re-write objectives into smaller, specific performances. The ratings were tallied and are shown in Appendix B. One objective received a rating of more than three (a poor rating) and was subsequently eliminated. The objective was that the student "will state reasons for using timelines and will generate a timeline given data to graph". A revised set of objectives as included in the materials is shown in Appendix B.

Fifty-seven test items were rated by these same reviewers on a one to three scale ("appropriate to objective" to "should be deleted" respectively.) The ratings were tallied and appear in Appendix B. The most noted changes were

suggestions for word deletions, substitutions, or re-ordering of sentence structure for clarification. The revised set of test items is shown in Appendix C. Table 4 lists the specific test items developed to evaluate each objective.

The criteria checklist for the role play interviews was the last document for expert review. Suggestions were made to clarify the rating scale descriptors, to place these descriptions closer to the rating scale items, and to design the criteria checklist as a one-page form. The resultant criteria checklist is included in Appendix B.

Three students, similar in academic background to the target population of the study, participated in the evaluation of the revised unit and test instruments. Scores of 20, 13, and 20 were obtained as correct, based on a total possible score of 37. An average of twenty minutes was required to complete the pre-test. Students' comments indicated that the progress interview unit should contain more information on timelines and that there should be a more obvious link between a decision aid on the interview model flowchart and the step it supplements. The average time required to read the unit was one and one-half hours. In general, the student formative evaluation was positive regarding the progress interview materials. The materials were revised as suggested by the expert reviewers and students and prepared for duplication. Packages of materials were assembled for testing.

TABLE 4

Performance on Enabling and Terminal Objectives by Class Level							
		Juniors			Seniors		
Objective	Test Items	*Met	**Mixed	Not Met	Met	Mixed	Not Met
A1	34,37	X			X		
A2	8			X			X
A3	26,32	X			X		
B1	4,6	X			X		
B2	9,36		X		X		
B3	10			X			X
B4	7,11,28	X			X		
B5	17,31		X			X	
B6	5	X			X		
B7	27	X			X		
C1	13	X			X		
C2	12,30	X			X		
D1	15,24,25	X			X		
D2	3			X	X		
E1	14,16	X			X		
F1	1	X			X		
F2	2			X	X		
F3	22,23	X			X		
F4	20,21			X	X		
F5	29			X	X		
F6	18,19		X			X	
F7	33			X	X		
F8	35	X			X		
Terminal	Simulated Interview	X			X		

*Test items for this objective were answered correctly by >.75 of the subjects.
**One or more of the test items for this objective were answered incorrectly.

The Sample

Forty student dietitians currently enrolled in the CSP were involved in the study. Requirements for eligibility to apply for entrance into the program are described in Appendix A. From eligible applications, 20 are chosen each year by random computer selection. Students participating in the study completed a personal information questionnaire which was tallied and is shown in Table 5. Senior students were a half year older than the junior students on the average, had compiled a higher grade point average (both overall at MSU and transfer credit), and had been in attendance at MSU an average of three terms longer than the junior students. Senior students had completed more coursework in related areas such as communications, management, administration, and education. Although work experience in a foodservice position was comparable between the juniors and seniors, senior students had accumulated more experience in supervisory positions in foodservices.

Pre-Post Written Examination Evaluation

The written examination was composed of 37 objective test items. This examination was administered to the 40 students prior to distribution of the unit on interviewing and after completion of the written unit. The students were asked to mark answers on a computer answer sheet to assist in the tabulation of evaluation data. The examination was

TABLE 5

Description of Subjects Tallied from Personal Information Questionnaire

ITEM			n=20 JUNIORS	n=20 SENIORS
Age	Range		20-25	20-23
	Mean		21	21.5
Academic Status				
	Juniors		10	0
	Seniors		10	20
GPA	MSU	2.0-2.9	2	0
		3.0-3.49	15	6
		3.5-4.0	0	12
	Transfer	2.0-2.9	0	1
		3.0-3.49	4	0
		3.5-4.0	0	6
Number of Terms at MSU				
	Range		4-10	6-16
	Mean		7.9	10.85
Academic Training				
(Number of students who had completed at least one course in the following areas)				
	Communications		4	9
	Psychology		20	20
	Management		7	17
	Administration		15	20
	Labor Relations		2	1
	Education		6	12
Work Experience				
	Foodservice Worker			
	Less than 6 months		5	6
	6 months - 1 year		4	5
	1 - 2 years		1	5
	More than 2 years		5	4
	Foodservice Supervisor			
	Less than 6 months		4	5
	6 months - 1 year		0	2
	1 - 2 years		1	0
	More than 2 years		0	1

subjected to an item analysis to obtain data relevant to improvement of the examination after testing and evaluation of the materials.

An item difficulty assessment was completed so that a pre to post comparison of item discrimination could be completed (see Table 6.) Larger numbers on the item discrimination assessment indicate a more discriminating item. Items 5, 7, 11, 13, 18, 20, 22, 24, 25, 27, 28, 34, and 37 may measure prerequisite or previously learned information since more than .80 of the junior students were able to answer these items on the pre-test or the item had an obviously correct response. These items test information concerning use of the interview information, job specifications, problem solving model components, discrimination of important incidents, appropriate feedback technique, reinforcement and expectancy motivation theories.

Items 10, 13, 15, 18, 19, 24, 25, 26, 30, and 31 were answered correctly by more students on the pre- than the post-test. Seven of the 10 items listed are attributed to responses by senior students. Three of the items identified below as most difficult to answer correctly (10, 19, and 31) are also in this list. These items test information concerning the purposes of giving performance feedback, problem solving model components, evaluation of the interview, feedback techniques, determining consequences for meeting objectives, and type of advance information relayed to the employee. The results seem to indicate that this information in the instructional materials was confusing to students.

TABLE 6

Written Objective Examination Item Analysis Statistics, Juniors (n=20) and Seniors (n=20)

	Pre-test Index of Difficulty		Post-test Index of Difficulty		Pre-Post Index of Discrimination*	
Test Item	Juniors	Seniors	Juniors	Seniors	Juniors	Seniors
1	.50	.60	.95	.95	.45	.35
2	.20	.25	.45	.80	.25	.55
3	.05	.30	.70	1.00	.65	.70
4	.45	.30	.90	.95	.45	.65
5	.85	.85	.90	.75	.05	.10
6	.75	.60	.90	1.00	.15	.40
7	.90	.95	.95	1.00	.05	.05
8	.70	.75	.70	.90	.00	.15
9	.20	.35	.50	.90	.30	.55
10	.20	.40	.40	.20	.20	-.20
11	.85	.80	.95	1.00	.10	.20
12	.10	.25	.65	.85	.55	.60
13	1.00	.95	.95	1.00	-.05	.05
14	.65	.90	.90	1.00	.30	.10
15	.60	.90	.75	.80	.15	-.10
16	.65	.45	.80	.95	.15	.50
17	.70	.85	1.00	1.00	.30	.15
18	.95	1.00	.85	1.00	-.10	.00
19	.60	.65	.65	.55	.05	-.10
20	.85	.90	.95	.85	.10	.05
21	.60	.55	.70	.85	.10	.30
22	1.00	1.00	1.00	1.00	.00	.00
23	.75	.95	1.00	1.00	.25	.05
24	1.00	.95	.80	1.00	-.20	.05
25	.95	.95	1.00	.90	.05	-.05
26	.75	1.00	.95	.95	.20	-.05
27	1.00	.90	.95	1.00	.05	.10
28	.85	.80	.90	.90	.05	.10
29	.55	.65	.60	.95	.05	.30
30	.75	1.00	.95	.95	.20	-.05
31	.70	.90	.70	.65	.00	-.25
32	.45	.40	.95	.90	.50	.50
33	.30	.60	.50	.75	.20	.15
34	.80	.80	1.00	.95	.20	.15
35	.75	.95	.90	.95	.15	.00
36	.70	.90	.95	.90	.25	.00
37	.85	.80	1.00	.95	.15	.15

* This is the post-test difficulty index minus the pre-test difficulty index and measures gain from pre-test to post-test (Douglass and Olsen, undated.)

Items 10, 19, 31, and 33 on the post-test were identified as most frequently answered incorrectly ($\leq$.75 of the students answering correctly.) These items test information concerning purposes of giving performance feedback, evaluating the interview, type of advance information relayed to the employee, and reasons for timelines.

Examination of the multiple choice response pattern shown in Table 7 details more clearly the specific incorrect responses chosen most frequently on certain items. The junior students most frequently chose incorrect responses on items 2, 9, 10, 21, and 33. Senior students demonstrated incorrect responses on items 10 and 19. These test items cover information concerning planning to be completed before the interview, reasons for appraisal unreliability, purposes of giving performance feedback, evaluation of the interview, discrimination of important incidents, and reasons for timelines. A comparison of Table 7 with the written examination allows a detailed analysis of the student errors to use in revision of the materials.

The item analysis results facilitate a determination of which enabling objectives were met satisfactorily. Table 4 displays the match between test items and objectives. There are four objectives which both juniors and seniors did not satisfactorily meet: A2, B3, B5, and F6. These objectives include use of motivation theories, choosing reasons for employee interviews, choosing reasons for making advance appointments, and choosing a criteria for evaluating the interview.

TABLE 7

Multiple Choice Question Pattern of Response by Percent of Subjects Choosing Each Response, Pre and Post-test Written Examination, Juniors (n=20) and Seniors (n=20)

Test Item	Pre-Test		Post-Test		Test Item	Pre-Test		Post-Test	
	Jrs.	Srs.	Jrs.	Srs.		Jrs.	Srs.	Jrs.	Srs.
1a	.0	.40	.0	.0	21a	.15	.05	.20	.10
b	.50	.40	.05	.05	b	.65	.55	.70	.85
c*	.50	.60	.95	.95	c	.20	.40	.10	.05
2a	.80	.75	.55	.20	22a	.0	.0	.0	.0
b	.0	.0	.0	.0	b*	1.0	1.0	1.0	1.0
c*	.20	.25	.45	.80	c	.0	.0	.0	.0
					d	.0	.0	.0	.0
5a	.15	.10	.10	.25	23a	.20	.05	.0	.0
b*	.85	.85	.80	.75	b*	.75	.95	1.0	1.0
c	.0	.05	.0	.0	c	.05	.0	.0	.0
6a	.05	.0	.0	.0	24a	.0	.05	.0	.0
b*	.75	.60	.90	1.0	b	.0	.0	.20	.0
c	.20	.40	.10	.0	c	.0	.0	.0	.0
d	.0	.0	.0	.0	d*	1.0	.95	.80	1.0
9a	.45	.15	.45	.10	25a	.0	.0	.0	.0
b*	.20	.35	.50	.90	b	.05	.05	.0	.10
c	.35	.45	.05	.0	c*	.95	.95	1.0	.90
10a	.05	.0	.0	.0	26a	.20	.0	.05	.0
b	.75	.60	.60	.75	b	.0	.0	.0	.0
c*	.20	.40	.40	.20	c*	.75	1.0	.95	.95
d	.0	.0	.0	.0	d	.0	.0	.0	.0
13a	.0	.0	.0	.0	33a*	.30	.60	.55	.75
b*	1.0	.95	.95	1.0	b	.70	.35	.45	.25
c	.0	.0	.05	.0	c	.0	.0	.0	.0
d	.0	.05	.0	.0					
14a	.0	.0	.05	.0	34a*	.80	.80	.95	.95
b*	.65	.90	.90	1.0	b	.20	.15	.05	.05
c	.0	.0	.0	.0	c	.0	.05	.0	.0
d	.35	.10	.05	.0					
19a*	.60	.55	.65	.55	35a	.0	.0	.0	.0
b	.0	.0	.0	.0	b*	.75	.95	.90	.95
c	.40	.45	.35	.45	c	.25	.05	.10	.05
20a	.15	.10	.05	.05	36a	.20	.05	.05	.05
b*	.85	.90	.95	.85	b	.10	.00	.0	.05
c	.0	.0	.0	.0	c*	.70	.90	.95	.90
					37a	.10	.10	.0	.0
					b*	.85	.80	1.0	.95
					c	.05	.10	.0	.05

*Indicated correct response for each item.

Item Analysis of Criteria Checklist

A modified item analysis was completed of the criteria checklist to identify items which were ambiguous or difficult to rate, as well as items on which students did not perform well. The two instructors' ratings on each item are shown in Tables 8, 9, 10, and 11. Some items indicate notable trends. The desirable trend is for the students' scores to increase on the post-test evaluation and it is important to note that in some cases they did not, e.g., items 5 and 10 in the case of the junior observers, unit with examples. Items 5 and 10 focus on employee strengths and the consequences of meeting goals. Items 1 and 10 for the junior directed observers, unit with practice, were not improved and pertained to developing rapport and determining consequences of appropriate employee behavior. Item two did not improve for the junior observers on the unit with practice. This item entails encouraging participation on the part of the employee. Item 10 for the seniors of all groups on the unit with practice was not improved. Item 10 appears to most consistently pose a problem and students may not have been given enough information to be able to handle a discussion of consequences of performance.

TABLE 8

Percentage of Junior Subjects (Unit with Practice) Scores on Criteria Checklist, Pre and Post-tests*

Item		Directed Observers (n=3)				Role-Players (n=4)				Observers (n=3)			
Rating Scale		1	2	3	4	1	2	3	4	1	2	3	4
1	pre	.34		.67		.13	.50	.25	.13		.50	.17	.33
	post		1.0				.75	.25			.50	.50	
2	pre	.17	.67	.17			.38	.50			.33	.67	
	post	.17			.83			.50	.50			.17	.83
3	pre	.50	.17		.33	.75			.25	.17	.83		
	post		.34	.67				.63	.25			.67	.33
4	pre	.50	.17	.17	.17	.38	.25	.38			.67	.17	.17
	post		.34	.50	.17	.25	.25	.38	.13		.50	.17	.33
5	pre	.33	.50	.17		13	.50	.38		.17	.67	.17	
	post		.34	.34	.34			.75	.25		.33	.33	.33
6	pre	.34	.67			.13	.25	.63			.33	.50	.17
	post		.67	.34			.13	.25	.63			.50	.50
7	pre	.17	.67	.17			.13	.75	.13		.17	.50	.33
	post			.83	.17			.25	.75			.33	.67
8	pre	.17	.34	.17	.33	.50	.50			.17	.50		.33
	post		.33	.67			.50	.25	.25		.50	.17	.33
9	pre		.34	.67		.13	.42	.25		.17	.33	.50	
	post			.83	.17		.13	.50	.38			.33	.67
10	pre	.50	.50			.75	.25			.83			
	post	1.0				.38		.50		.33		.50	
11	pre	1.0				1.0				1.0			
	post		.17	.50	.34	.13		.13	.75			.33	.67
12	pre	1.0				.88	.13			.83		.17	
	post	.34			.67		.25		.75				1.0
13	pre	1.0				1.0				1.0			
	post			.83	.17	.25		.63	.13			.67	.33
14	pre	1.0				1.0				1.0			
	post				1.0				1.0				1.0

*Mean of two instructors' ratings utilized to assign scores.

TABLE 9

Percentage of Junior Subjects (Unit with Examples) Scores on Criteria Checklist, Pre and Post-tests*

Item		Directed Observers (n=3)				Role-Players (n=4)				Observers (n=3)			
Rating Scale		1	2	3	4	1	2	3	4	1	2	3	4
1	pre	.17		.50	.33	.63		.13	.25	.17	.50		.33
	post		.67	.33			.38	.13	.50		.50	.33	.17
2	pre		.17	.51	.33	.13		.25	.63	.67	.17	.17	
	post			.67	.33			.50	.50			.33	.67
3	pre	.17	.17	.33	.17		.25	.13	.63	.17	.50	.17	
	post			.67	.33		.13	.38	.50			.67	
4	pre		.50	.50		.25		.50	.25	.50	.17	.33	
	post		.33		.69		.25	.63	.13		.17	.67	.17
5	pre		.50	.17	.33		.25	.63	.13	.17	.17	.50	
	post			.50	.50			.38	.63	.17	.33	.17	.17
6	pre		.17	.83			.13	.63	.25	.33	.67		
	post		.33	.17	.50			.38	.63		.67	.33	
7	pre			.50	.50		.13	.50	.38			.67	.33
	post			.50	.50			.13	.88			.50	.50
8	pre		.50	.50			.50	.13	.38		.67	.33	
	post			.33	.67			.50	.50			.67	.33
9	pre			.50	.50		.38	.25	.38	.33	.17	.33	.17
	post			.17	.83			.13	.75			.67	.33
10	pre	.33	.50	.17		.38	.25	.25	.13	.83			.17
	post	.33		.33	.17	.50		.25	.25	.83		.17	
11	pre	1.0				1.0				1.0			
	post				1.0				1.0				1.0
12	pre	.67	.33			.88			.13	.83	.17		
	post			1.0			.13	.13	.75	.17	.33		.50
13	pre	1.0				1.0				1.0			
	post	.17		.50	.33	.25		.38	.38	.17		.67	.17
14	pre	1.0				1.0			1.0				
	post				1.0					1.0			1.0

*Mean of two instructors' ratings utilized to assign scores.

TABLE 10

Percentage of Senior Students (Unit with Practice)
Scores on Criteria Checklist, Pre and Post-tests*

	Directed Observers (n=3)				Role-Players (n=4)				Observers (n=3)			
Item \ Rating Scale	1	2	3	4	1	2	3	4	1	2	3	4
1 pre		.50	.50		.13	.38	.50		.50	.50		
post	.17		.50	.34			.63	.38			.34	.67
2 pre			1.0				.75	.25			.66	.34
post			.87	.17			.50	.50			.34	.67
3 pre	.50	.17	.33		.25	.75			.17	.50	.33	
post			.33	.67			.25	.75				1.0
4 pre	.50	.50				.88	.13			.83	.17	
post	.17	.67	.17				.75	.25		.33	.67	
5 pre	.83	.17			.75	.25			.33	.66		
post		.34	.67			.13	.50	.38	.17	.33	.17	.33
6 pre		.17	.83			.25	.75		.33	.50	.17	
post			.83	.17			.75	.25			.67	.33
7 pre		.17	.87				1.0				1.0	
post			1.0				.63	.38			.83	
8 pre	.33	.17	.50			.75	.25		.34	.34	.34	
post		.33	.67				.88	.13		.17	.50	.34
9 pre	.17	.83			.13	.63	.25			.67	.17	
post		.17	.50	.17			.75	.25			.34	.67
10 pre	1.0				.63	.25	.13		1.0			
post			1.0		.50		.25	.25			.67	.34
11 pre	1.0				1.0				1.0			
post				1.0		.25	.50	.25				1.0
12 pre	1.0				1.0				1.0			
post			.50	.50	.13	.33	.25	.25			.34	.67
13 pre	1.0				1.0				1.0			
post	.17		.50	.33			.38	.63			1.0	
14 pre	1.0				1.0				1.0			
post				1.0				1.0				1.0

*Mean of two instructors' ratings utilized to assign scores.

TABLE 11

Percentage of Senior Students (Unit with Examples)
Scores on Criteria Checklist, Pre and Post-tests*

Item		Directed Observers (n=3)				Role-Players (n=4)				Observers (n=3)			
Rating Scale		1	2	3	4	1	2	3	4	1	2	3	4
1	pre	.50	.50			.13	.88			.34	.50		
	post			.50	.50			1.0				1.0	
2	pre			1.0			.13	.88				.83	.17
	post			.34	.67			.50	.50			.34	.67
3	pre	.17	.67	.17		.25	.75				.34	.50	.17
	post			.17	.83			.50	.50			.83	.17
4	pre		.83	.17			.63	.38			.50	.50	
	post		.17	.84			.13	.75	.13		.17	.83	
5	pre	.17	.50	.34		.13	.50	.38		.34	.67		
	post			.83	.17			.75	.25		.34	.34	.34
6	pre	1.0				.63	.25	.13		.67	.34		
	post		.17	.83	.17			.75	.25	.17	.17	.67	
7	pre			1.0		.25	.25	.50		.34		.67	
	post			.67	.17			.50	.50		.17	.67	.17
8	pre	.50	.50			.63	.38			.34	.67		
	post		.34	.67	.17			.88	.13			1.0	
9	pre	.17	.34	.50		.25	.13	.50			.34	.67	
	post				.83		.13	.50	.38			.50	.50
10	pre	.83		.17		.25		.63	.13	.34		.34	.34
	post	.83		.17		.75			.25	.34		.34	.34
11	pre	1.0				1.0				1.0			
	post			.17	.83			.13	.88			.17	.83
12	pre	1.0				1.0				1.0			
	post			.17	.83	.13	.13	.13	.63			.34	.67
13	pre	1.0				1.0				1.0			
	post	.34		.67				.50	.38			.67	.34
14	pre	1.0				1.0				1.0			
	post			1.0		.25			.75				1.0

*Mean of two instructors' ratings utilized to assign scores.

Evaluation of the Written Objective Examination Results

H_o: The performance on the progress interview written examination of students taught by "Reading with Practice" will not differ significantly from comparable students taught by the method of "Reading with Examples".

Scores on the written pre- and post-test are shown in Tables 12 and 13.

TABLE 12

Junior Students' Written Examination Pre and Post-test Scores*

Subject	Pre-test	Post-test	Post Minus Pre-test	Possible Score minus Post-test Score
1	21	30	9	7
2	20	29	9	8
3	25	31	6	6
4	24	28	4	9
5	26	33	7	4
6	24	27	3	10
7	27	28	1	9
8	26	32	6	5
9	29	35	6	2
10	23	30	7	7
11	29	36	7	1
12	22	29	7	8
13	29	31	2	6
14	18	22	4	15
15	25	31	6	6
16	23	34	11	3
17	23	30	7	7
18	23	34	11	3
19	26	30	4	7
20	26	34	8	3
Mean	24.5	30.7**	6.2	6.3

*Total Possible Points=37 **t=10.67, $p \leq .001$

TABLE 13

Senior Student's Written Examination
Pre and Post-test Scores*

Subject	Pre-test	Post-test	Post Minus Pre-test	Possible Score minus Post-test Score
1	30	35	5	2
2	26	32	6	5
3	30	31	1	6
4	31	35	4	2
5	30	34	4	3
6	26	34	8	3
7	27	33	6	4
8	25	35	10	2
9	27	31	4	6
10	25	33	8	4
11	30	33	3	4
12	27	31	4	6
13	26	31	5	6
14	29	34	5	3
15	26	36	10	1
16	24	31	7	6
17	26	32	6	5
18	27	32	5	5
19	26	35	9	2
20	22	32	10	5
Mean	27.0	33.0**	6.0	4.0

*Total Possible Points=37 **t=10.71, $p < .001$

Three junior students and five senior students reached the minimum level of performance (.75 or 28 points and .80 or 30 points for the junior and senior students respectively), on the written pre-test; 19 junior students and 20 senior students reached the minimum performance level on the post-test. Scores on the written pre-post test were compared for

significance of difference using the formula for two-related sample test (matched pairs):

$$t = \frac{\bar{d} - \mu_d}{\frac{s_d}{\sqrt{n}}}$$

t_{n-1} df where n=number of pairs

With t=10.67 and t=10.71 there was a significant improvement from pre-test to post-test for the junior and senior students respectively, $p \leq .001$ in both cases. When H_o is rejected, the confidence interval estimate is given by $\bar{d} \pm t_{\frac{1-\alpha}{2}} \frac{s_d}{\sqrt{n}}$. Confidence intervals were calculated for the junior and senior students as 6.3±2.44 and 6±2.32 respectively.

The written test scores were divided into two groups for comparison of scores: group receiving the unit with practice and group receiving the unit with examples, (see Table 14.) A two independent sample t-test (for equality of two population means) was used to determine significance of difference using the formula:

$$t = \frac{\bar{x}_1 - \bar{x}_2 - (\mu_1 - \mu_2)}{s^2p \left(\frac{1}{n_1} + \frac{1}{n_2} \right)} \quad \text{where } s^2p = \frac{(n_1-1)s^2_1 + (n_2-1)s^2_2}{n_1+n_2-2}$$

With t=.1916 and .1099, respectively, there was no significant difference between these two groups of junior students and the two groups of senior students and H_o is maintained.

TABLE 14

Written Examination Pre- and Post- Test Summary Statistics by Group of Subjects				
	Juniors (n=20)		Seniors (n=20)	
	Pre-test	Post-test	Pre-test	Post-test
Groups I and II				
$\bar{x}$[a]	24.5	30.7	27.0	33.0
S.D.[b]	8.789	10.43	2.33	1.65
S.[c]	167.2	198.17	5.47	2.74
Group I (unit with practice)				
$\bar{x}$	24.3	30.4	26.1	33.1
S.D.	11.34	14.9	6.32	1.52
S.	215.56	134.1	56.9	2.32
Group II (unit with examples)				
$\bar{x}$	24.6	31	27.9	32.9
S.D.	7.15	6.88	3.43	3.43
S.	131.9	61.92	30.9	30.9

[a] x=Mean Score [b] S.D.=Standard Deviation [c] S. =Variance

The performance of junior students on the written examination was compared with the performance of senior students on the written examination using a two independent sample t-test. With t=.725, there was no significant difference between the two groups.

Evaluation of Videotaped Post-Test

H_0: The performance on the progress interview practical examination of students taught by any one of the methods "Reading with Examples", "Reading with Practice", "Observer", "Directed Observer", or "Role Player" will not differ significantly from comparable students taught by any other of the methods.

Scores received by students for performance on the videotaped post-test interviews are shown in Table 15 by cell score and means. Three-way ANOVA was applied to test for significance of difference between the groups. Analysis of variance is a method of identifying, breaking down, and testing for statistically significant variances that come from different sources of variation. A dependent variable has a total amount of variance, some of which is due to the experimental treatment, some to error, and some to other causes. Analysis of variance allows the researcher to control error to an identifiable level which is not possible with multiple t-tests (Kerlinger, 1973.) The design was a two by two by three-way ANOVA.

No student met the minimum criteria level on the pre-test interview; 15 junior and 19 senior students met the minimum criteria level (.75) on the post-test. It should be mentioned that unequal cell sizes were encountered. The method of analysis used as a result contained weighted means. The power of this method is lower than that when equal cell sizes are used.

TABLE 15

Interview Post-test Cell Scores and Means for Subjects by Group			
Juniors (n=20)	Role Player	Observer	Directed Observer
Unit with Examples	55 43 49 44 $\bar{X}$=47.76	41 46 42 $\bar{X}$=43	44 55 46 $\bar{X}$=48.3
Unit with Practice	35 45 41 48 $\bar{X}$=42.45	45 48 44 $\bar{X}$=45.6	37 39 39 $\bar{X}$=38.3
Seniors (n=20)			
Unit with Examples	37 45 43.5 51 $\bar{X}$=44.13	44.5 48 43 $\bar{X}$=45.17	48 47 45 $\bar{X}$=46.67
Unit with Practice	42 43 52 45 $\bar{X}$=45.4	48.5 45.5 49 $\bar{X}$=47.66	45 42.5 41.5 $\bar{X}$=43

The ANOVA data is shown as Table 16. Source BXC (unit vs. practice session role) was significant at the .05 level indicating a treatment interaction for the junior students in the directed observers' group between the unit with examples and the unit with practice. All other sources were not significant.

TABLE 16

Two by Two by Three Way ANOVA Table for Test Groups on Post-Test Interview

	SS*	df	MS	F	p-level
Junior vs. Senior (A)	12.67	1	12.67		
Unit with Practice vs. Unit with Examples (B)	43.53	1	43.53	2.59	>.2
Role Player vs. Observer vs. Directed Observer (C)	11.19	2	5.60		
A x B	46.28	1	46.28	2.75	>.2
A x C	12.37	2	6.18		
B x C	142.2	2	71.1	4.22	<.05
A x B x C	28.21	2	14.1		
Within Cells (error)	471.21	28	16.83		

*There is no total SS when using weighted means for unequal cell sizes.

Predictability of Practical Performance from Performance on the Written Examination

H_0: The performance of students on a progress interview written examination will not correlate positively with the students' performance on the progress interview transfer test.

It was felt that assignment to a "mastery" or "non-mastery" position on the unit might be different if a written examination was used than if a videotaped interview was used as the evaluation device. Scores as a percentage of

total possible score on the written examination for each of the subjects were compared with scores on the practical examination to determine if the level of performance on the written examination would be a predictor of performance on the practical examination (see Table 17.) A Pearson Product Moment Correlation Coefficient was used as the test statistic. The formula is described as:

$$\frac{\Sigma Z_x \times Z_y}{N}$$ where N=number of paired observations

For the first trial with junior students, r =-0.038, indicating no correlation between the two sets of scores. The correlation for the second group of seniors was r =-0.353, indicating a slightly negative correlation between the two sets of scores and H_o is maintained.

TABLE 17

Comparison of Subjects' Written Examination vs. Videotaped Interview, Percent of Total Possible Score

	Written Exam	Videotape Exam	r
(n=20) Juniors	Mean=83.15, S.D.=8.58	Mean=79.15, S.D.=9.26	-0.038
(n-20) Seniors	Mean-89.2, S.D.=4.45	Mean=80.15, S.D.=6.31	-0.353

Comparison of Instructor, Student, and Random Sample Segment Evaluations

Three forms of evaluations were compared for differences in assessing the students' performance on the taped progress interview: 1) each student evaluated his own interview on the taped pre- and post-test interview using the given criteria checklist, 2) the primary instructor and one other qualified instructor evaluated the pre- and post-interviews using the same criteria, and 3) a second qualified instructor evaluated the post-interview using the same criteria checklist by random sample segments. The mean score given to the observations was used as the total mean score for the evaluation comparison.

Inter-Rater Reliability for Pre- and Post-Test Videotaped Interviews

Three evaluations were obtained on the practical, videotaped pre-test and post-test (see Tables 18 and 19.) The calculation of a reliability coefficient was used for estimating the reliability of the two independent evaluators (Ebel, 1972.) The formula is:

$$r = \frac{n\Sigma xy - \Sigma x \Sigma y}{(n\Sigma x^2 - (\Sigma x)^2)\ \ (n\Sigma y^2 - (\Sigma y)^2)}$$

TABLE 18

Junior Students' Videotaped Interview Scores, Pre and Post-test by Two Instructors and Students' Self-Evaluation

	Pre-Test				Post-Test			
	Instructors			(n=20)	Instructors			(n=20)
	1	2	Mean	Student	1	2	Mean	Student
Mean	29.95	33.4	31.68	40.1	45.2	43.0	44.1	45.9
S.D.	5.06	5.87	5.47	7.4	5.2	5.58	5.24	4.98

TABLE 19

Senior Students' Videotaped Interview Scores, Pre and Post-test by Two Instructors and Students' Self-Evaluation

	Pre-Test				Post-Test			
	Instructors			(n=20)	Instructors			(n=20)
	1	2	Mean	Student	1	2	Mean	Student
Mean	25.75	24.75	25.25	30.25	46.4	43.2	44.8	48.1
S.D.	2.36	2.47	2.42	4.18	3.7	3.92	3.81	4.83

The results of the formula applied to the pre-test indicated that the reliability coefficient between the two instructors for junior students was .59 and was .34 for the two evaluators' ratings of the senior students. The score can range from zero to one with scores near one indicating high reliability between raters.

An average of the two instructors' scores was then compared with the junior students' self-assessment scores. The results of the formula in this situation indicated that the junior students to instructor reliability was .006, indicating that the two evaluators had less than one percent reliability, while the senior students to instructor reliability was .34. Students in the GDCSP are required to evaluate all assignments utilizing an appropriate criteria checklist. This is a new procedure for the entering junior students and they tend to check off all items on the lists whether or not they have been completed. This may cause the low reliability seen in the junior students' self-assessment of their pre-test interview. A similar procedure was completed with post-test scores on the practical videotaped examination. First the two instructors' evaluations of the interviews were compared for reliability. For the juniors' post-test, the reliability between the two instructors was .82 which is considered a high reliability and improved over the pre-test reliability (.59.) For the senior students' post-test, the reliability between the two instructors was .70, also an improvement over the pre-test reliability (.34.)

Since there is no set level of reliability recommended in the literature, individual researchers have assessed reliabilities based on the complexity of the behavior to be evaluated and on the uses of the scores obtained from the evaluators. In the context of this study, it would be desirable to have a reliability of at least .70 to give an

individual student a grade on the unit with confidence. In terms of programmatic evaluation or formative student evaluation it may be possible to accept lower levels of reliability (i.e., from .50 to .70) since an indication only of general events is necessary.

H_0: The students' self-assessment of performance on the progress interview practical examination will not differ significantly from the instructors' evaluations of the students' performance on the progress interview practical examination.

The mean score received by the student from the two instructors was compared with the student's self-assessment on the post-test. The coefficient was .64 in the case of the junior students, a considerable increase from the pre-test at .006. The post-test instructor to senior student correlation was .49, an increase from .34 on the pre-test. Inter-rater reliability coefficients are summarized in Table 20.

Since the directed observers were assigned the task in the classroom procedure of using the checklist to evaluate the role play interviews, it was thought that they might be more reliable self-evaluators than the other students in the project. The scores of directed observers are recorded in Table 21.

As seen in Table 20, the reliability coefficient between the two instructors' mean score and the junior students' self-assessment was .84, indicating a rather high degree of reliability. The reliability between the two instructors' mean score and the senior students was lower at .42.

TABLE 20

Inter-rater Reliability Coefficients Between Instructors and Students on Videotaped Post-test Scores		
	Instructor 1 and 2	Instructor Mean and Student
Pre-Test		
Junior (n=20)	.59	.006
Senior (n=20)	.34	.34
Post-Test		
Junior	.82	.64
Senior	.70	.49
Junior Directed Observer		.84
Senior Directed Observer		.42

TABLE 21

Comparison of Directed Observers' Self-Evaluation with Instructors' Mean Evaluation Score				
	(n=20) Juniors		(n=20) Seniors	
	Instructor Mean	Student Self-Evaluation	Instructor Mean	Student Self-Evaluation
Mean	43	42.8	43.2	49
S.D.	6.63	5.74	1.25	2.82

Random Sample Segment Evaluation

H_o: The instructors' evaluations of the videotaped simulated progress interview will not differ significantly from the instructors' evaluations of the videotaped simulated progress interview by a random sample segment method of evaluation.

Two instructors viewed random samples of the post-test interview videotapes and evaluated them using the same criteria checklist described above. Table 22 shows summary statistics of scores. Since only parts of the checklist were completed during this evaluation method, the following formula was applied to determine the "average score" for the interview to use in making comparisons with the full-length evaluation:

$$\frac{\text{Total Points Received}}{\text{Total Number of Items Scored}} \times 14 = \text{Score Assigned}$$

The formula requires that points assigned for the items evaluated be totalled, then the total is divided by the number of items scored to get an average score for each item. This average score is then multiplied by 14 (the number of items on the criteria checklist) to obtain an average score for the interview. This procedure allowed comparisons with scores obtained on the whole evaluations.

Using Ebel's reliability coefficient, inter-rater reliability during evaluation of junior students was measured as .42 for the two instructors who evaluated the interviews by segments; inter-rater reliability during evaluation of senior students was .65. Since the inter-rater reliability of .42 for junior students was comparatively low, and that

TABLE 22

Students' Videotaped Interview Random Sample Segment Scores, by Two Instructors						
	(n=20) Juniors			(n=20) Seniors		
	Instructor 1	Instructor 2	Mean	Instructor 1	Instructor 2	Mean
Mean	47.5	42.9	45.2	44.1	41.2	42.7
S.D.	2.58	4.22	2.89	3.4	5.1	3.97

reliability of the evaluations might tend to improve with practice, the interviews were grouped into halves: first 10 rated vs. second 10 rated to compare reliabilities. Ratings as divided into two halves are recorded in Table 23. The first half reliability was .58 for juniors and .64 for seniors while the second half reliability was .28 for juniors and .48 for seniors.

If one reviews the number of observations on each interview from Table 23, it can be seen that there are interviews in the second half with fewer observations than in the first half. Also, the highest number of observations was for an interview in the first half. Since the number of observations might affect the reliability of the evaluations, the reliability of the evaluations with eight or more observations was determined as .53 for junior students and .51 for senior students. Table 24 summarizes these data.

TABLE 23

Sequence of and Number of Observations for Subjects on Post-test Random Sample Segment Evaluation

Subject Sequence	Juniors Mean No. Observations	Subject Sequence	Seniors Mean No. Observations
1	9	2	9
3	9	4	10
5	8	8	10
6	11.5	10	5.5
8	11	14	9.5
13	8	16	8.5
14	6.5	17	6.5
15	8.5	18	8
16	8.5	19	8
17	7.5	20	5.5
2	7	1	6
4	10	2	8
7	9	5	6.5
9	8.5	6	11
10	6.5	7	11.5
11	5	9	8.5
12	11	11	10.5
18	9.5	12	11
19	8.5	13	9
20	9.5	15	10

TABLE 24

Inter-rater Reliability Coefficients Between Two Instructors Using Random Sample Segment Evaluation

	Instructor 1 and 2	First Half	Second Half	More than Eight Observations
(n=20) Junior	.42	.58	.28	.53
(n=20) Senior	.65	.64	.48	.51

Finally, the mean of the two instructors' evaluations was compared to the mean rating given by the whole evaluations. Random samples and whole evaluation scores are shown in Table 25. Inter-rater reliabilities of .45 for juniors and .51 for seniors were calculated. H_o is rejected since reliability of the random segment method is unacceptably low.

TABLE 25

Comparison of Subjects' Whole Evaluation and Random Sample Evaluation Scores on Videotaped Interview

	Senior Whole Evaluation	Senior Sample Evaluation	Junior Whole Evaluation	Junior Sample Evaluation
Mean	44.8	42.7*	44.1	45.15**
S.D.	3.81	3.97	5.24	2.89

*r = .51 **r = .45

Students' Attitude Survey

H_o: The measured attitudes regarding the progress interview unit of students taught by one of the methods "Reading with Examples", "Reading with Practice", "Observer", "Directed Observer", or "Role Player" will not differ significantly from comparable students taught by any other of the methods.

Results from the student attitude survey are displayed in Table 26. A sample of the attitude survey appears in Appendix C. The survey items were grouped into categories

TABLE 26

Attitude Survey Mean Ratings Displayed by Question and Subject Grouping

Rating Scale: 1: Strongly Agree 2: Agree 3: Uncertain 4: Disagree 5: Strongly Disagree	UNIT WITH PRACTICE (n=20)						UNIT WITH EXAMPLES (n=20)					
	Role Player		Directed Observer		Observer		Role Player		Directed Observer		Observer	
	Jr.	Sr.	Jr.	Sr.	Jr.	Sr.	Jr.	Sr.	Jr.	Sr.	Jr.	Sr.
1. I was often unsure of what was supposed to be learned.	4	3.75	3.3	4.3	4	4.3	3.8	3.75	4.3	3.3	4	3.3
2. The unit was well organized.	2	1.75	2	2	1.7	1.3	2	2.5	1.3	3	3	2.3
3. There was too much information in the unit.	4	4	3.3	4	4.3	4	3.25	4	4.3	3.3	3.3	3.67
4. I learned a lot in comparison with a usual method such as a lecture.	1.75	2	2	3	2.3	1.3	1.5	3.25	1	3.3	1.7	3
5. I learned a lot from the role play session.	1.5	1.75	2.3	1.67	2	1.67	1.5	2	1	2	1.7	2.3
6. I enjoyed the role play session.	1.5	2.5	2.3	2	2.7	2	2.5	4	1.3	3	2	2.3
7. I think that the unit was worth the amount of time spent on it.	2	2.5	1.67	2.3	1.3	1.5	1.5	2.25	1.3	2.67	1.7	2.67
8. There should be more written information or lecture on important concepts.	3.3	3	3.7	3.3	3.3	3.67	2.5	2.5	3	3.3	3	2.67
9. Parts of the unit were unclear.	3	4	3.3	4	2.7	4	3.5	3	2.7	3.3	2.7	3.67
10. I had to ask a lot of questions to clarify it.	4	4.25	3.7	4	2.7	4	4	3.5	4	3.3	3.3	3.3
11. The objectives of this unit were clear.	1.5	2	2.3	2	2	2	2	2	1.7	2.67	2.7	3
12. The objectives of the unit were reasonable.	1.5	2	2	2	1.7	1.67	1.8	2	1.7	2	2	3
13. I feel that I will use what I learned in this unit.	1.3	2	1.7	2	1.7	1.67	1	2.5	1	2.3	1.7	2
14. I didn't get much instructor feedback on how I was doing during the unit.	4.3	3.75	3	2.3	4	2.67	4	3.5	3.3	1.67	2	1.67
15. I would like to have more instructor feedback during the role-play session.	3	3	3.3	3	3	2.3	3.3	3.5	4	2	2	1.67
16. The instructor's discussion was helpful in learning the material	1.5	2.5	2.3	2.3	1.7	1.67	1.8	2	2	2.3	2	2
17. I would recommend modification of the unit before using it with other students	3.3	3.75	3	3.67	4	4.3	3	2.67	3.3	2.67	3.7	2

Comments from Questions 18, 19, and 20 are listed in full in Appendix D.

to facilitate analysis. Questions 1, 2, 8, 9, 10 and 11 were grouped together under the category "clarity" and included items such as "I was often unsure of what was supposed to be learned", "The unit was well organized", "Parts of the unit were unclear", and "I had to ask a lot of questions to clarify it". Questions 3, 7, and 12 were grouped together under the category "reasonableness", and included such items as: "There was too much information in the unit", "I think the unit was worth the amount of time spent on it", and "The objectives of this unit were clear". Questions 4, 5, and 13 were grouped together under the heading "perception of amount learned" and included such items as: "I learned a lot in comparison with a usual method such as a lecture", and "I learned a lot from the role play session". Questions 14, 15, and 16 were grouped together as "perception of feedback". Items under this heading included: "I didn't get much instructor feedback on how I was doing during the unit", "I would have liked more instructor feedback during the role play session", and "The instructor's discussion was helpful in learning the material".

The survey data were first divided into the test groups described above: role player, observer, directed observer, with either unit with practice or unit with examples, and by junior and senior students. A two-way analysis of variance using weighted means was used for class (A) vs. type of materials (B). The junior students perceived learning more by using the materials that included examples, while

the senior students perceived learning more by using the materials which required practice. Cell scores and means are reported in Table 27, and the analysis results are shown in Table 28.

In order to assess clarify, it was necessary to combine students under two categories: unit with practice and unit with examples. A two-sided t-test was performed which gave $t=1.486$, $p \leq .2$. Examination of the senior level student data gave $t=2.189$ with $p \leq .05$. In the case of the senior students, students completing the unit with practice felt that the materials were clearer than those completing the unit with examples.

Data were placed into the original test groups to assess the students' attitudes about "reasonableness". There was no meaningful relationship. There was also no meaningful relationship in the category "perception of feedback". H_0 is rejected since meaningful and significant differences between student attitudes were located.

Student comments received on questions 18, 19 and 20 are included in Appendix D. Generally, comments were very favorable about the unit. Under "What suggestions would you make for improvements?" students suggested that they know their roles before the session to allow better preparation and that the instructor summarize the information before the role play session. Students also suggested that they be permitted to review the pre-test videotape before practice

TABLE 27

ANOVA Cell Means on Attitude Survey under Category "Perception of Amount Learned."

(n=20) Juniors	Role Player	Observer	Directed Observer
Unit with Examples	3.66	5.33	3
Unit with Practice	4.5	6	6
(n=20) Seniors			
Unit with Examples	7.75	7.33	7.66
Unit with Practice	5.66	4.33	6.66

TABLE 28

Two Way ANOVA Table for Attitude Survey under the Category "Perception of Amount Learned."

Source	SS	df	MS	F	p-level
Junior vs. Senior (A)	35.125	1	35.125	13.097	
Unit with Practice vs. Unit with Examples (B)	.876	1	.876		
A x B	27.915	2	13.958	6.979	<.001
Within Cells	91.2	34	2.682		

sessions and that a more difficult employee be used in the scenarios to allow more opportunity for problem solving.

Comments under the questions: "What was the best feature of the unit?" included favorable statements about role playing interviews followed by critiques. The students indicated that it was a practical unit and that the evaluation was helpful. Other comments related to the clarity and organization of the unit itself. The last question was "What was the worst feature of the unit?" Comments indicated that: 1) role playing was difficult, 2) everyone should have had a chance to play a role, 3) the materials were too time consuming, 4) that a lecture would have been better, and 5) the workbook was difficult to use without a table.

Costs

H_o: The costs of utilizing self-instructional materials will not be different from costs of traditional teaching modes.

Costs are presented in three sections: 1) initial development costs for the Progress Interview Unit, 2) anticipated implementation costs, and 3) costs for traditional teaching method. The critical issue is a comparison of the materials, implementation costs and the costs of the traditional teaching method. In an attempt to realistically estimate all developmental costs associated with the progress

interview unit, data are presented in Table 29. (Student time is indicated but not costed.) Development costs occur at only one time and would be spread over the extended use of the unit.

TABLE 29

Developmental Costs	
Development of the Unit	
Writing and Revisions-80 hours at $7.50/hour	600.00
Tabulating Reviewers Responses-9 hours	67.50
Communicating with and Preparation of Materials for Reviewers-12 hours	90.00
Typing-15 hours at $5.00/hour	75.00
Duplication of Units at .03 per page	105.00
Formative Evaluation Sessions-5 hours	37.50
Student evaluators-5 hours	-
Testing of the Unit	
Pre-tests, classroom practice, post-tests Instructor, 9 hours	67.50
Each student-4.5 hours x 40 students =180 hours	-
Actress-45 hours at $4.39/hour	197.55
Videotapes-4 60-minute tapes at $30.00 each	120.00
Evaluation of the Unit	
Pre- and Post-test Item Analysis-5 hours	37.50
Videotaped pre- and Post-test evaluation (80 x 15 minutes)	150.00
Videotape random sample evaluation (80 x 8 minutes)	80.00
Statistical consultant and Computer service	120.00
Revision of the Unit	
Writing-5 hours	37.50
Typing-4 hours	20.00
Development of Instructor's Manual	
Writing-6 hours	65.00
Typing-2 hours	10.00
Total:	$ 1903.85

Anticipated Implementation Costs

Implementation costs of the unit into the present curriculum would be small. Costs of duplication of the materials for 40 students is approximately $105.00, but it is possible to re-use the workbooks and save subsequent costs of duplication. Videotapes and videotaping equipment are available for use within the department at no cost. Student time would remain approximately the same at 4.5 hours each including time for the pre-tests, workbook completion, practice session, and post-test. Instructor time for classroom sessions and post-test evaluation is two hours for the classroom session and approximately one hour in evaluation for each student. The evaluation time could be reduced if alternative procedures such as random sample segment evaluation were developed, refined and utilized.

Instructor Time, classroom (two hours)	15.00	
Instructor time, evaluation	300.00	(optional)
	315.00	

The Costs for the Traditional Teaching Method

Currently, costs are instructors' time for preparation, classroom sessions in lecture, and practice of the interviewing skills. Approximately four hours have been required on the part of the instructor and all students for the unit on progress interviewing. In comparison with the new progress interview materials, instructor classroom time is reduced

while one-on-one contact for student evaluation has been increased. The new materials also make it possible for students in the general dietetic program to work through a unit on progress interviewing whereas this was not possible previously.

Instructor time, preparation (four hours)	30.00	
Instructor time, classroom (four hours)	30.00	
Instructor time, evaluation	300.00	(optional)
	360.00	

H_o is rejected since although costs are similar between the traditional and self-instructional methods for 40 students, cost per student would decrease in the case of self-instructional materials as they are utilized by larger numbers of students.

CHAPTER V

SUMMARY AND CONCLUSIONS

A summary of the statistical results is presented as a review with discussion and conclusions in the following paragraphs.

Progress Interview Unit Preliminary Evaluation

The review of the materials by experts was beneficial to the development in the early stages. Since both content experts and instructional development experts acted as reviewers of the materials, it would be helpful to have developed different types of review forms which more specifically assessed areas of review expertise rather than using only one form for all reviewers. Input from reviewers was useful in revising objectives, test items, and the criteria checklist.

Pre-Post Written Examination Evaluation

Item analysis was completed on the written examination to allow improvement of the examination after completion of testing and evaluation. Item analysis was useful in diagnosing difficulties in the materials for purposes of revision.

There were four objectives which both senior and junior students did not satisfactorily meet: A2, B3, B5, and F6, including use of motivation theories, choosing reasons for employee interviews, choosing reasons for making advance appointments and choosing a criteria for evaluating the interview.

Three junior students and five senior students reached the minimum level of performance (.75 or 28 points and .80 or 30 points for the junior and senior students respectively) on the written pre-test; 19 junior and 20 senior students reached the minimum performance level on the post-test. With t=10.67 and t=10.71 there was a significant level of improvement from pre-test to post-test for the junior and senior students respectively.

H_0 The performance on the progress interview written examination of students taught by "Reading with Practice" will not differ significantly from comparable students taught by the method "Reading with Examples".

H_1 The performance on the progress interview written examination of students taught by "Reading with Practice" will be significantly higher than comparable students taught by the method of "Reading with Examples".

Results from the two groups, unit with practice and unit with examples, were compared for differences using a t-test. With t=.1916 and t=.1099 respectively for junior and senior students, there was no difference between these two groups. Junior students' performance on the written examination was compared with performance of senior students using

a t-test. With t=.725 there was no significant difference between the two groups and H_o is maintained.

It may not be worthwhile in terms of performance on a written examination to require students to spend time constructing and writing answers to embedded questions. It may be possible for students to learn as well from model answers to embedded questions. In classroom situations where students are responsible only for the written information, the least time consuming method may be most useful. However, senior students who wrote answers to questions tended to think the unit was more clear and perceived learning more than those who only read answers.

Evaluation of the Videotaped Post-test

H_o The performance on the progress interview of students taught by "Reading with Practice" will not differ significantly from comparable students taught by the method of "Reading with Examples" and from the performance on the progress interview of students practicing by one of the methods "Observer", "Directed Observer", or "Role Player".

Three-way ANOVA was utilized to test for difference between the test groups on performance on the videotaped post-test. No student met the minimum criteria level on the pre-test interview; 15 junior and 19 senior students met the minimum criterion level (.75) on the post-test. ANOVA indicated that there was a significant interaction between the type of unit completed and the role played in the classroom

sessions. Junior students assigned as directed observers, who completed the unit with practice, did less well on the videotaped post-test than the other groups of students. ($F=4.22$, $p \leq .05$)

Since the directed observers on the unit with practice scored significantly lower than other groups while at the same time evidencing very high self-assessment reliability (.84) it may be possible that these students were learning to self-evaluate in the practice session rather than learning to interview, in comparison with other students. No other significant differences were found and this tends to support Holmes (1975) discussion reported in the review of literature in which he states that observers tend to practice by covertly responding during the simulation. All students in this project read and prepared the scenarios for practice in the classroom and this may increase their ability and tendency to covertly respond and compare their responses with the responses of the role player.

It is notable that while there were no significant differences in student performances on the videotaped post-test (other than that described) that there is a large difference in terms of assignments to mastery states: 15 juniors reached mastery level, while 19 seniors reached mastery level. This has implications for research on determining cut-off levels since differences which statistically may be due to chance can affect mastery placement decisions.

Predictability of Practical Performance from Performance on the Written Examination

H_o: The performance on the progress interview written examination by students will not correlate positively with the students' performance on the progress interview transfer test.

A Pearson Product Moment Correlation Coefficient was used as the test statistic. For the first trial with junior students, r=-0.038 indicating no correlation between the two sets of scores. The correlation for the group of senior students was r=-0.353, indicating a slightly negative correlation between the two sets of scores.

The written objective examination measures stored knowledge while the criteria checklist measures skill performance. They are two different sets of abilities and in this case were not correlated. Objective and practical examinations each have advantages and limitations and may be complementary for comprehensive evaluation of students. Practical examinations, e.g., simulation settings, may be useful in identifying qualified practitioners, but they are also more difficult to construct, administer and evaluate.

Student Self-Evaluation of Performance

Ebel's reliability coefficient was used to calculate reliabilities as reported. Reliability between the two instructors in the case of the junior students was .59 and was

.34 for the two evaluators' ratings of the senior students' pre-test performances. The score can range from one to zero with scores near one indicating high reliability between raters.

An average of the two instructors' pre-test scores was compared with the junior students' self-assessment scores. The results of the formula indicated that the junior student to instructor reliability coefficient was .006 while the senior student to instructor reliability was .34 for the pre-test videotaped interview. A similar procedure was completed with post-test scores on the practical videotaped examination. First the two instructors' evaluations of the interviews were compared for reliability and were .82 and .70 for the junior and senior students respectively, which are considered high reliabilities and considerably improved over the pre-test (.59 and .34 for the junior and senior students respectively.) These reliabilities are used to compare with student self-assessment reliabilities.

H_o: The students' self-evaluation of performance on the progress interview post-test will not differ significantly from the instructors' evaluations of the students' performance on the progress interview post-test.

An average of the two instructors' scores was then compared with the junior students' self-evaluation scores. The results of the formula indicated that the junior student to instructor reliability coefficient was .006, while the senior student to instructor reliability was .34, for the pre-test videotaped interview. A similar procedure was completed

with the post-test scores on the practical videotaped examination. First the two instructors' evaluations of the interviews were compared for reliability and was .82 for the junior students which is considered a high reliability and considerably improved over the pre-test (.59). The reliability was .70 for the senior students' post-test evaluation, also an improvement over the pre-test reliability (.34).

The mean score given the subject by the two instructors was compared with the students' self-evaluation on the post-test and was .64 in the case of the junior students and .49 for the senior students, both increases from the pre-test student-instructor reliabilities of .006 and .34 respectively. Since the directed observers had more practice with using the checklist to evaluate interviews, it was thought that they might be more reliable evaluators. The reliability coefficient between the two instructors' mean score and the junior students self-evaluation was .84, indicating a very high degree of reliability. The reliability in this case for the senior students was lower at .42.

There is some indication that student self-evaluation can be reliable and that students can learn to more reliably evaluate themselves with practice. The high reliability on the part of the junior directed observers and low performance on the interview post-test may indicate that students should learn to self-evaluate separately from learning additional content information. Students appeared to have

more confidence in their pre-test performance in comparison with instructors' evaluations; however, their self-assessment scores did improve on the post-test assessment as well as become more reliable.

Random Sample Segment Evaluation

H_o: The instructors' evaluation of the taped progress interview will not differ significantly from the instructors' evaluation of the taped interviews by a random sample segment method of evaluation.

Two instructors viewed random sample segments of the post-test interviews and evaluated them using the same criteria checklist. Ebel's correlation coefficient was used to calculate reliabilities. Reliability was .42 and .65 for the junior and senior students respectively.

The mean of the two instructors' evaluations was compared with the mean rating given during the full length evaluation and reliabilities of .45 and .51 for junior and senior students respectively were calculated. This level of reliability would probably not be satisfactory for student evaluation.

Since the reliabilities were relatively low, the interviews were divided into two halves (first 10 rated and second 10 rated) to see if reliability improved with practice. The first half reliability was .58 for the juniors and .64 for the seniors, while the second half reliability was .28 and .48 for the juniors and seniors respectively. Since there

were a variable number of observations recorded for each interview and the number of observations could affect reliability of the evaluation, evaluations with only eight or more observations were compared for reliability with the full-length evaluations. This coefficient was .53 and .51 for the junior and senior students respectively and is probably not acceptable for assigning students to mastery or non-mastery states.

A problem identified in the random sample evaluation which may lead to low reliability was that it is not possible to identify omitted items on the checklist. Even so, there is a trend to improve in reliability as the instructors had more experience with the random sample method and with increasing numbers of observations on the checklist. Comments from the instructors using the random sample method for evaluation included observations that there was time to think about and record each segment as the tape was fast-forwarded to the next segment; during the whole tape evaluation, observation and evaluation were completed concurrently.

Since the entire tape was not viewed during the random sample evaluation, several problems presented themselves with the evaluation checklist as it was developed. Items such as "Discusses all Objectives on Evaluator's Guide" were difficult since we may have seen the interviewer discuss only one or two--and it was not possible to determine if all had been

discussed. It is recommended that items be listed separately so that the particular ones which are viewed can be checked off separately.

It was found that many items could be evaluated by "assumption". If we heard only the last sentence of the employee summarizing the interview, it could be assumed that the employee had summarized the interview. By comments throughout the segments of the interview it could be determined that at some earlier stage the problems had been discussed.

Student Attitude Survey

H_o: The measured attitudes regarding the progress interview unit of students taught by one of the methods "Reading with Examples", "Reading with Practice", "Observer", "Directed Observer", or "Role Player" will not differ significantly from students taught by any other of the methods.

H_1: The measured attitudes regarding the progress interview unit of students taught by any one of the methods "Reading with Examples", "Reading with Practice", "Observer", or "Directed Observer" will be less favorable than the measured attitudes of comparable students taught by the "Role Player" method.

Survey items were grouped into categories to facilitate analysis by clustering items under the headings "Clarity", "Reasonableness", "Perception of Amount Learned", and "Perception of Feedback". Items 18, 19 and 20 requested written responses from students and were presented. The survey data were then divided into test groups for comparisons. A two-way ANOVA using weighted means indicated a significant

difference, F=6.979, in that junior students perceived learning more by using the materials that included examples, while the senior students perceived learning more by using the materials which required practice under the category "Perception of Amount Learned". Under the heading "Clarity", a t-test indicated a significant difference with t=2.189. Senior students completing the unit with practice felt that the materials were more clear than senior students completing the unit with examples.

Based on results, H_1 is rejected. It may be that senior students felt more challenged by the application of knowledge to simulated situations than did the junior students. Perhaps senior students recognize value in using information in application questions.

Costs

H_0: The costs of utilizing self-instructional materials will not be different from costs of traditional teaching modes.

H_1: The costs of utilizing self-instructional materials will be less than costs of traditional teaching modes.

Initial development costs for the progress interview unit, excluding student time, is approximately $1,903.85 for 40 students. Implementation costs include only the instructor's time for approximately two hours of class and one hour of evaluation time for each student (which could be optional) for a total of $315.00. Student time requirements remain at

four and a half hours for the completion of the unit. In comparison with the traditional method, instructor classroom time is reduced. Costs for the traditional mode includes four preparation hours, four classroom presentation hours, and one hour of evaluation time for each student (which could be optional) for a total of $360.00. Therefore, utilization of the materials could decrease the cost of teaching this unit somewhat. The new materials also make it possible for students in the general dietetics program to complete a unit on progress interviewing whereas this was not possible previously.

There are many inconsistencies associated with cost assessment, particularly in relationship to benefits accrued. One question relates to the fact that a unit on interviewing has traditionally been included in the course HNF 480 so the reported costs of hours spent do not represent an absolute increase in effort. It is difficult to place a dollar value on the number of hours spent by the instructor in relationship to other objectives which may have been accomplished in place of the development (or "shadow costs"). It is also difficult to place a value on the number of hours spent by students in relation to their gain in knowledge. All students did show an increase in skills of interviewing. However, students required to write answers to the embedded questions spent approximately three-quarters of an hour to one hour longer on the unit and yet did not show a significant higher level of performance on the practical examination.

Since performance level was essentially the same, it may be possible to say that the unit with examples is more cost effective than the unit requiring some answers to be written. Results on the attitude surveys do show some interesting differences between the groups, however.

Another important consideration in relationship to development costs is the number of students who will be able to use the materials over the long run. Michigan State University specifies limited enrollment in the GDCSP to a total of 40 students. However, since the content area of progress interviewing will remain fairly stable over the next few years, several classes of students will be able to use the materials.

As well, all or part of the materials may be used by dietetic students in the traditional dietetic program. Since a minimum of one course in foodservice management is currently mandatory, all dietetic students could utilize the materials for several years. The materials could also be disseminated for use in other dietetic programs. Monies could be recouped to cover development costs and allow for further development of additional materials.

Since instructors in any of these situations could assign the unit on a self-instructional basis, large amounts of time could be saved for more personal student contact, one-on-one teaching, etc.

Generalizability

Since the sample involved in this study was not a random sample of the whole population of coordinated study plan dietetic students, it is not possible to freely generalize the results of this study to the larger group. However, there are certain features of the study and of the requirements for dietetic programs which allow limited generalizations. The 40 students participating in this study were randomly selected from a group of 80 applicants to the GDCSP at Michigan State University. The characteristics of the students at MSU are similar in some respects to dietetic students nationally since ADA has set the minimum criteria for undergraduate program competencies and also for GDCSP competencies. Students across the country receive similar kinds of coursework and learn similar kinds of skills. Selection procedures for entry into GDCSP's are not identical but are similar in many respects, tending to support the concept that MSU students are similar to other program students in some ways.

Therefore, it can be said that the materials as developed, tested and evaluated in this project, could be useful to enhance learning in the area of employee progress interviewing in other dietetic programs in the United States. Since the results of the practice session role differentiation tend to support previous research, it may also be possible to say that similar effects would occur in other dietetic programs.

Summary

Learning materials on employee progress interviewing did significantly improve student knowledge and performance of interviews as measured by a written examination and simulated interview with a criteria checklist.

There was no difference in performance on the written examination between students who wrote answers to embedded questions and students who read model answers to the embedded questions. It may not be worthwhile to require students to spend time constructing answers; however, it is notable that senior students who wrote answers tended to think the unit was more clear and perceived learning more than those who only read the answers.

Junior directed observers who completed the unit with practice did not perform as well as the other students on the post-test simulated interview. It may be possible that these students were learning to self-evaluate in the practice session rather than learning the content of the interview unit since this group also showed a very high reliability in self-evaluating in comparison with the other groups of students. It may not be necessary to allow all students to actually participate in a role play session in order to learn a skill. Students can learn by observing other students role play parts and may tend to internally respond to the simulation events. Covert responses may be enhanced by student pre-preparation.

There was no positive correlation between student performance on the written examination and student performance on the simulated interview. Since the theoretical information tested in the examination is not the same as the behavior required in an interview situation, a positive correlation was not anticipated.

Students' self-evaluation reliability in comparison with the instructors' evaluation tended to improve with practice and with increased knowledge in the subject matter. Random sample segment evaluation reliability is relatively low, particularly for use in assigning grades to individual students. It may be useful for programmatic or formative student evaluation.

Senior students felt they had learned more from the materials which required written responses and also felt that the materials were more clear. Perhaps senior students recognize the value of applying the information learned in the classroom setting.

Costs for 40 students for the traditional teaching method and the self-instructional method were comparable. However, since the self-instructional materials can be used with greater numbers of students at little additional cost, they become more cost effective with more use.

Although the results from this project cannot be freely generalized to the entire population, it is possible to project that the materials developed, tested and evaluated in

this research will be useful in enhancing learning of progress interviewing in other dietetic programs and that the results of the differentiation of role in the practice session would be seen in other programs.

CHAPTER VI

RECOMMENDATIONS

Recommendations follow from the conclusions of the project which can be briefly summarized as: 1) learning materials on employee progress interviewing did significantly improve student knowledge and performance of interviews as measured by a written examination and simulated interview with a criteria checklist, 2) students observing practice role play interviews can learn as much as students who actually conduct role play interviews since they have a tendency to covertly respond, and covert responses may be enhanced by student preparation for practice interviews; 3) scores on the written examination were not predictive of performance on the interview, 4) evaluators tended to improve in reliability with practice from pre- to post-test, 5) comparisons of instructors' mean scores with student self-assessment scores indicate that students' reliability increases to an acceptable level with exposure to the evaluation procedures and practice, 6) random sample evaluation reliability was low in the case of the first trial, and moderate in the second trial; and 7) attitudes were different in two cases as senior students perceived learning more by

using the materials which required practice and that the materials requiring practice were more clear.

Recommendations are included under two general headings of: "Implications for Future Research" and "Suggestions for Revisions in the Materials as Tested".

Implications for Future Research

Future related research is suggested in two stages. First, further testing of simulation use in the classroom; second, testing of the employee interview model.

The area of student self-evaluation is relatively untapped, although there is a requirement for allied health professionals to be able to assess their professional performance as well as the performance of their peers. If students can be trained to do self-evaluation, this skill may be applied and practiced with experience in the real world setting to improve their delivery of skills. Future research could develop methodology described here in other varied instructional settings to assess the reliability of self-evaluation skills. Student peer evaluation is another related area which could be researched in similar fashions.

Videotaped examples of the practice sessions in class and of selected pre- and post-test interviews were saved. Using the videotaped interviews with the self-instructional unit in place of classroom practice would be a beneficial and interesting comparison. The videotapes would be useful

to supplement the formal classroom situations since the students may learn as much from them as from the actual practice in the classroom.

Maatsch (1974) describes some parameters of the "exemplar" to be the role player in the group instruction, and many of his suggestions can be followed with proper selection of videotaped models. The model should not be the slowest student since others may become bored; on the other hand, the best student in the class may be a poor exemplar because his pace is too fast to allow others time to think through their response before the exemplar has responded. The bright student may not make enough mistakes to afford opportunity for feedback and discussion during the critique session. Students observing may tend to learn as much as the role players since they tend to covertly respond as if they were the participating student. This may be facilitated if the model is someone with whom students can identify (approximately their own age, similar sex, etc.) Research could continue in their area.

In relationship to the evaluation component, it would be interesting to use only the audio segment of the videotape and compare instructors' evaluations of those with instructors' evaluations of the videotapes. Since audiotape is relatively less expensive to purchase and requires less expensive equipment to re-play, there may be advantages in using audiotape for interview practice and assessment. Whether or not the video has impact remains to be researched,

for example, in terms of the effects of non-verbal communication. Having only audio may eliminate some of the instructor bias in terms of student recognition.

Two interviews were transcribed into typewritten form to allow use of example interviews in situations where other delivery modes are not feasible or desirable. Another useful comparison may be having the interview models available to students in script form to be read rather than heard and/or seen. A script of a sample interview would allow the students as much time as desired on certain segments of the interview to study, re-read, and evaluate.

The area of interviewing in foodservice has been covered extensively in the literature, but no self-instructional materials were located. An implication for future research in this area would be to use the module with foodservice supervisors and/or managers to determine if it has impact in the real world setting as a methodology for conducting an employee interview program. It would be possible in a large foodservice setting to determine the viability of the model as described in the unit for: 1) increasing employer interest in interviewing, 2) positive employee morale, and 3) decreasing employee turnover. The model might also reduce personnel costs.

Suggestions for Revisions

Suggestions for revisions include improvements in the progress interview materials, in the criteria checklist, as well as the addition of an instructors' manual to accompany the materials.

Progress Interview Materials

Based on testing and evaluation data, several revisions could substantially improve the materials. Since results were generally favorable, minor revisions could be made without extensive diagnosis.

The first 22 pages of the unit contain theory in support of the actual interview model, which is then presented in the following 28 pages of the unit. It was suggested by a reviewer and in student comments, that the theory should be placed in the back of the interview model so that the students could see the application first, then read the theory section for additional clarification and information if necessary. Senior student scores on the written examination tend to indicate that many knew the theory prior to this instruction.

The interview planning guide appeared in the final three pages of the module. One reviewer suggested that the planning guide should appear earlier in the module to give the student a framework for the pre-planning which is discussed in the text of the unit.

The item analysis of the written examination and the students' performance on the videotaped interviews indicate several other necessary modifications in the unit. There should be clarification of the meaning of "consequences" and the use of "consequences" in discussion with the employee. Most students omitted this on the practical interview. Some students also had difficulty with the "problem-solving" step of the interview. More problem-solving examples in an interview setting should be added, particularly in relation to identifying possible solutions. Students had some difficulty discriminating between training needs and interview setting needs on the written examination and additional examples of these items would be beneficial.

Several students commented that a more difficult employee should be created in a scenario for practice. The researcher felt that the important objective was for the student to learn the format of the interview rather than have to deal with difficult employees and this suggestion was not incorporated. More information could be included in the unit, however, about control of the interview situation and who determines what will be discussed during the interview.

Criteria Checklist

Question Two, "Encourages Participation" should be moved to the end of the checklist since it could only be judged at the conclusion of the interview. Question Thirteen

should be placed after fourteen since frequently the interviewer asked for the interview evaluation after signatures had been obtained. In item 10, the description under 1 point and 2 points should be reversed. One evaluator suggested eliminating the "for the next period" segment of the "Employee objectives are set for the next period" since no definite period was stated in the scenario materials.

An additional item addressing control of the interview should be included. It was found that in some interviews, where all the points were addressed, there was considerable waste of time while the interviewer lost control of the interview to the interviewee and just let the conversation ramble. In the problem-solving item, it should be asked "who suggested what the problem is?" and "whose solutions are finally agreed upon".

Instructor's Manual

An instructor's manual to facilitate use of the module by instructors in other programs with dietetic students has been developed. The instructor's manual includes general descriptions of the materials and their uses, scenarios, examinations, and criteria checklists. A table of contents of the instructor's manual is included in Appendix B.

APPENDICES

APPENDIX A

ADMISSION REQUIREMENTS FOR MSU GENERAL DIETETIC COORDINATED STUDY PLAN

EVALUATION STRATEGIES FOR HNF 480-FOOD SERVICE SYSTEMS MANAGEMENT

GENERAL OBJECTIVES FOR RESIDENCE HALL EXPERIENCE

APPENDIX A

ADMISSION REQUIREMENTS FOR THE MSU GENERAL DIETETICS COORDINATED STUDY PLAN

The General Dietetics Coordinated Study Plan has a limited enrollment of twenty students per year. This limitation is imposed by the quantity and quality of facilities and clinical faculty available for the essential field experiences which are integral components of the curriculum. In order to be eligible for admission to the Coordinated Study Plan, students must meet the following criteria:

1. Have declared a major in dietetics at the time of application.

2. Have not previously earned a Bachelor's degree in Foods, Nutrition, or Dietetics.

3. Have successfully completed (assumes a grade 1.0, credit, pass or waiver) a minimum of 24 credits at MSU prior to the application deadline for admission to the GDCSP.

4. Have achieved a minimum overall GPA of 2.75 (in reference to a 4.0 scale) on all MSU credits earned (a) prior to the application deadline for admission to the GDCSP and (b) prior to the first term of enrollment in the GDCSP.

5. Have achieved a minimum overall undergraduate GPA of 2.75 on all credits earned irrespective of the institution attended.

6. Have completed a minimum of 90 credits acceptable toward MSU graduation requirements prior to the first term of enrollment in the GDCSP.

7. Have successfully completed the following minimum requirements for Groups I, II and III (with no course having been repeated for credit more than once) prior to the first term of enrollment in the GDCSP.

Group I General Education	Term Credits
American Thought and Language	9
Humanities	4
Social Science	4
Introductory Psychology	4
Sociology of Anthropology	4

Group II Supporting Science Courses	
Inorganic Chemistry	5-8
Organic Chemistry	3-10
Biochemistry	5
Algebra	5
Anatomy	5
Physiology	8

Group III Beginning Professional Courses	
Elementary Food Preparation	4
Basic Nutrition	3
Food and the Consumer	3
Laboratory for Food Management	2
Family in Its Near Environment	3

8. Have submitted application materials by designated due date with all supporting documents attached.

From the pool of applicants meeting all the stated eligibility requirements, 20 students will be selected for tentative admission and the remaining students will be listed as alternatives. Tentative appointees will be granted final appointment to the program only if all admission requirements are fulfilled prior to the first term of requested enrollment in the GDCSP. Selection will be made using a computerized random number procedure which provides all eligible applicants an equal opportunity for selection. This procedure of selection does not discriminate on the basis of sex, age, religion, ethnic origin, race, color, creed, and/or familial or marital status.

APPENDIX A

HNF 480 FOODSERVICE SYSTEMS MANAGEMENT

Evaluation Strategies

COMMUNICATOR 1.1

Applies principles of professional communication to communicate with clients, employees, and colleagues.

1.1.1 In preparing written reports and assignments, and writing exams, use acceptable written communication skills, meeting the stated performance criteria.

1.1.7 Using a completed layout design, present project to foodservice manager and instructor, meeting the stated performance criteria.

COMMUNICATOR 1.2

Applies principles of interpersonal communication to communicate with clients, employees, and colleagues.

1.2.4 In a workshop session, give and receive feedback, meeting the stated performance criteria.

1.2.5 Using a communication problem you have identified in a foodservice facility, describe and analyze the problem, meeting the stated performance criteria. (elective)

1.2.6 Using a foodservice facility to which you are assigned, draw a sociogram of the interpersonal communication, meeting the stated performance criteria. (elective)

1.2.7 Using the foodservice facility to which you are assigned, design a communication network, meeting the stated performance criteria. (elective)

FACILITATOR 2.1

Applies principles of problem-solving to solve personal and professional problems.

2.1.3 Using professional problems you have identified in your assigned facility and a selection of readings, describe a solution and the process by which you arrived at that solution, according to the stated performance criteria. (elective)

2.1.4 Given a folder of related readings, write a list of tasks to be accomplished on the first day as a consultant to a nursing home, meeting the stated performance criteria. (elective)

FACILITATOR 2.2

Applies principle of interviewing to interview clients and employees.

2.2.5 Using a selection of readings on employee interviewing, describe and analyze an observed or hypothetical situation related to interviewing, meeting the stated performance criteria. (elective)

2.2.6 Given an assigned role, participate in a role-play on employee interviewing, meeting the stated performance criteria. (elective)

2.2.7 Given simulated employee interview situations, conduct the interview, meeting the stated performance criteria.

FACILITATOR 2.3

Applies principles of group process and learning to facilitate group achievement.

2.3.2 Given a selection of readings on the change process, describe and analyze in writing a real or hypothetical situation related to change, meeting the stated performance criteria. (elective)

2.3.3 Given a selection of assigned roles and guidelines for the role-play, facilitate a role-play in class dealing with implementing change, meeting the stated performance criteria. (elective)

2.3.4 Using assigned projects, participate as a contributing group member, meeting the stated performance criteria.

2.3.5 In foodservice assignments, interact effectively with the foodservice personnel, meeting the stated performance criteria.

FACILITATOR 2.6

Applies principles of evaluation to provide quality assurance in nutritional care.

2.6.3 In class, give an oral review of JCAH standards for dietetic services, meeting the stated performance criteria. (elective)

2.6.4 In class, report on OSHA guidelines and your assigned residence hall's methods of compliance, meeting the stated performance criteria. (elective)

FACILITATOR 2.7

Utilizes knowledge of the computer as a tool and theory of information systems to facilitate dietetic services.

2.7.1 Using a recipe of your choice, code your recipe for inclusion in the Sentry System, meeting the stated performance criteria.

2.7.2 Using employee schedules, evaluate the computerized production sheets, meeting the stated performance criteria.

2.7.3 Using the facility to which you are assigned, outline uses of Sentry computer systems in that facility, meeting the stated performance criteria. (elective)

FACILITATOR 2.9

Uses knowledge of merchandising, quantity production and nutritional needs to plan menus for various institutional settings.

2.9.6 Using cookbooks or any source of recipes, select a recipe which complements one of the 3 meals for which you are assigned responsibility, meeting the stated performance criteria.

2.9.7 Using selected references, standardize a given recipe for 100 servings, meeting the stated performance criteria. (elective)

2.9.8 In the MSU test kitchen, extend and test a recipe to be used at a meal, meeting the stated performance criteria.

2.9.9 Present an oral review of The Ready Foods System For Health Care Facilities by Gordon Friesen in class, meeting the stated performance criteria. (elective)

2.9.10 Given a choice of foodservice operation types and a folder of related readings, write a two week cycle menu for the facility, meeting the stated performance criteria. (elective)

FACILITATOR 2.10

Applies knowledge of purchasing and inventory control to procure, receive, store and distribute food and non-food items in a foodservice system.

2.10.1 Using the percentage guide for forecasting, forecase for a minimum of three meals in your assigned facility, meeting the stated performance criteria.

2.10.2 In the foodservice facility, using the production sheet and menus, prepare production sheets for each area: cooks, salads, bakery, meeting the stated performance criteria.

2.10.3 Using master order forms, receive and assist in the storing and issuing of food and non-food items, meeting the stated performance criteria.

2.10.4 Using master order forms and physical inventory reports, order all food and non-food items for at least three meals, meeting the stated performance criteria.

2.10.5 Using a specified reference, explain in writing the procedures for purchasing in a facility in the absence of a computer system, meeting the stated performance criteria. (elective)

FACILITATOR 2.11

Uses knowledge of foods, environmental safety and equipment maintenance to assist in the development of safety and sanitation programs.

2.11.3 In the foodservice facility, complete at least one temperature check study on selected food items, using form provided.

2.11.4 In an assigned foodservice facility, evaluate the facility using the Department of Public Health Sanitation checklist on at least two occasions, meeting the stated performance criteria.

2.11.5 Using a folder of assigned readings, write an outline of a safety program to be implemented in a facility, meeting the stated performance criteria. (elective)

FACILITATOR 2.12

Utilizes knowledge of purchasing, space design, equipment and work simplification to design a foodservice subsystem.

2.12.1 Using your assigned facility and a specified reference, analyze equipment requirements, meeting the stated performance criteria. (elective)

2.12.2 Given a menu, list the equipment necessary to produce it, meeting the stated performance criteria. (elective)

2.12.3 As a two-member team, select a layout and design problem area in the facility and re-design the area, meeting the stated performance criteria.

2.12.4 Given a selection of readings on alternative foodservice delivery systems, compare the residence halls system with one other delivery system, in writing, meeting the stated performance criteria. (elective)

FACILITATOR 2.13

Applies principles of financial management to evaluate the financial performance of the facility.

2.13.1 Using the form provided, gather and evaluate data to use in controlling the foodservice operation, according to the stated performance criteria.

2.13.2 Using Sentry Consolidated Storeroom Sheets and standardized recipes, determine the total food cost for three meals, meeting the stated performance criteria.

2.13.3 Using the daily personnel cost print out and other cost information, determine average cost per individual client for three meals, meeting the stated performance criteria.

2.13.4 Using schedules and daily personnel cost print out, determine the total hours and labor costs for three meals, meeting the stated performance criteria.

2.13.5 In your assigned facility, develop and implement a practical plate waste reduction campaign, meeting the stated performance criteria.

2.13.6 Outline accounting procedures used in your assigned facility, meeting the stated performance criteria. (elective)

2.13.7 Given selected readings, list factors considered in developing an institutional budget, meeting the stated performance criteria. (elective)

2.13.8 Write recommendations for your assigned facility to conserve energy, meeting the stated performance criteria. (elective)

FACILITATOR 2.14

Utilizes principles of personnel management and labor relations to select, supervise and develop personnel.

2.14.1 Report on an assigned text on personnel management in class, meeting the stated performance criteria. (elective)

2.14.2 Using the folder of assigned readings, describe and analyze in writing a motivational situation, meeting the stated performance criteria. (elective)

2.14.3 Using the folder of assigned readings, describe and analyze an employee evaluation situation, meeting the stated performance criteria. (elective)

2.14.4 Write personal goals and evaluation strategies for HNF 480, using MBO model, meeting the stated performance criteria.

2.14.5 Facilitate "employee qualities" game in the classroom, meeting the stated performance criteria. (elective)

2.14.6 Using the folder of assigned readings, describe and analyze personnel problems, meeting the stated performance criteria. (elective)

2.14.7 Facilitate a role-play in class concerning a personnel problem, meeting the stated performance criteria. (elective)

2.14.8 Using the folder of assigned readings, describe and analyze a labor relations problem, meeting the stated performance criteria. (elective)

2.14.9 Facilitate a role-play in class concerning a labor relations problem, meeting the stated performance criteria. (elective)

2.14.10 Facilitate a role negotiation role-play in class using role negotiation, meeting the stated performance criteria. (elective)

2.14.11 Given a folder of readings related to personnel management, write an analysis of the "Bob Knowlton" case study, meeting the stated performance criteria. (elective)

2.14.12 Develop a Scanlon-Model plan for increasing productivity in the foodservice facility, meeting the stated performance criteria. (elective)

EDUCATOR 3.1

Applies principles of teaching and learning to provide educational programs for clients, employees and colleagues.

3.1.2 Selecting a topic, plan, construct, test and evaluate a simulation to teach an aspect of foodservice management, meeting the stated performance criteria.

3.1.3 In a simulated planning group, plan overall training programs for a fiscal year in a defined foodservice facility, meeting the stated performance criteria.

MANAGER 4.2

Applies principles of management in foodservice systems to manage a foodservice system.

4.2.2 In your assigned foodservice facility, evaluate three meals, meeting the stated performance criteria.

4.2.3 Using a folder of assigned readings on merchandising and consumerism, write a management plan for addressing consumer's needs, meeting the stated performance criteria. (elective)

4.2.4 Given a site visit, complete a site evaluation form and participate in class discussion of the foodservice subsystems, meeting the stated performance criteria.

4.2.5 Having completed a site evaluation of all foodservice sub-systems, describe both orally and in writing the sub-systems and their functioning, meeting the stated performance criteria.

ADVOCATE 5.1

Applies principles of advocacy to serve as an advocate for improved nutritional care.

5.1.2 Using current publications, orally present information concerning local, state and national issues in nutritional care, meeting the stated performance criteria.

5.1.5 In class, report on the future trends in foodservice, meeting the stated performance criteria. (elective)

PROFESSIONAL 6.1

Utilizes knowledge of professional behavior to function as a professional dietitian.

6.1.3 Using observations of daily events in foodservice facilities, complete at least 20 anecdotal records, meeting the stated performance criteria.

6.1.4 Using a folder of readings on management styles, assess in writing your leadership style and describe the difference between management and leadership, meeting the stated performance criteria. (elective)

6.1.6 Demonstrate professional behaviors by consistently performing in a professional manner in the food-service facilities, clinical settings and classroom, meeting the stated performance criteria.

PROFESSIONAL 6.2

Utilizes knowledge of the profession of dietetics to develop as a professional dietitian.

6.2.1 Given an outline, compile an information resource file, meeting the stated performance criteria.

6.2.2 Given a written comprehensive examination, meet 75% of the stated performance criteria.

APPENDIX A

HNF 480 FSM

General Objectives for Residence Hall Experience (In addition to specific assignment objectives)

1. Gain large quantity food production experience by:

   a. Preparing a variety of food items in the following categories:

      1. meats, eggs, cheeses
      2. vegetables
      3. pasta
      4. sauces and gravies
      5. soups
      6. vegetable salads
      7. fruit salads
      8. entree-type salads
      9. desserts (if any are prepared on-premise)

   b. Planning production schedules for residence hall menus.

2. Increase knowledge of foodservice equipment by:

   a. Using all types of equipment in the facility.

   b. Cleaning all types of equipment in the facility.

3. Increase knowledge of foodservice sanitation and safety by:

   a. Evaluating the facility using the sanitation checklist.

   b. Practicing safe and sanitary procedures.

4. Increase knowledge of computerized information systems by:

   a. Using Sentry forms in the facility.

b. Preparing information required to produce Sentry forms.

5. Gain experience in managing foodservice personnel by:

   a. Working on the job with foodservice personnel in a variety of jobs.

   b. Working with foodservice supervisors and observing their activities.

   c. Analyzing routine and critical employee incidents in the facility.

   d. Participating in employee time scheduling.

   e. Observing employee interviews when possible.

   f. Managing employee or other meetings if possible.

6. Increase knowledge of the foodservice manager's role by:

   a. Analyzing the foodservice manager's interface with the foodservice facility.

   b. Applying management principles to situations occurring during the experience.

   c. Reading policy and procedure manuals, employee handbooks, etc.

   d. Becoming involved with setting standards and controlling to meet those standards.

APPENDIX B

PROGRESS INTERVIEW UNIT:

1. Objectives and Test Items for Expert Review

2. Selected Items from Progress Interview Unit

MICHIGAN STATE UNIVERSITY

DEPARTMENT OF FOOD SCIENCE AND HUMAN NUTRITION
HUMAN ECOLOGY BUILDING

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September 20, 1978

Thank you very much for agreeing to contribute your expertise in employee interviewing to assist with this research project. We hope to develop instructional materials in the area of employee interviewing that will be a help to many people in the profession.

Please review the progress interviewing module objectives first and rate them. The second task is to rate the test items which have been designed to measure the objectives. The checklist which will be used to evaluate the final objective--the student actually performing an evaluation interview--is also included. Please make comments on it as well.

I would appreciate your returning the materials to me as soon as you have completed them.

Sincerely,

Deon Gines, R.D., M.S.
Instructor

PROGRESS INTERVIEW MODULE OBJECTIVES

Please rate each objective using the scale provided. Space has been left between each objective for comments or suggestions; please feel free to make suggested changes on this sheet.

1. This objective is very important.
2. This objective is important.
3. This objective is important but needs revision as indicated.
4. This objective is not important and should be deleted.

	1	2	3	4
1. The student will demonstrate knowledge of motivation theory by discriminating between contingency and expectancy theory, by choosing more than one theory to apply in dealing with employees, and by applying motivation theory in the interview setting according to the stated performance criteria.				
2. The student will demonstrate effective feedback techniques by listing characteristics of good feedback and by using effective feedback techniques in the interview situation according to the stated performance criteria.				
3. The student will demonstrate knowledge of employee evaluation theory by stating reasons for employee evaluation, by describing employee evaluation techniques including use of anecdotal records, and by applying this knowledge in an interview setting according to the stated performance criteria.				
4. The student will list the effects of the interviewer's attitude about performance appraisal on the outcome of the appraisal.				
5. The student will demonstrate knowledge of problem-solving skills by defining problem-solving steps and by applying problem solving skills in an interview setting.				
6. The student will demonstrate knowledge of job specifications by stating their purposes and utilizing the job specification information in an interview setting.				
7. The student will list the major component parts of the progress interview.				

1. This objective is very important.
2. This objective is important.
3. This objective is important but needs revision as indicated.
4. This objective is not important and should be deleted.

	1	2	3	4
8. Given a scenario and anecdotal records, the student will determine objectives for an employee progress interview.				
9. Given a scenario and anecdotal records for an employee, the student will be able to discriminate between important and unimportant events to discuss with an employee.				
10. Given a scenario and anecdotal records for an employee, the student will be able to discriminate between the items to discuss with the employee and the items which represent training needs within the department.				
11. Given anecdotal records, a planning guide, and a scenario, the student will preplan an employee progress interview.				
12. The student will state four criteria for an appropriate interview location.				
13. The student will describe the advantage of making advance appointments for progress interviews.				
14. The student will state reasons for employee self-assessment and will assist an employee to generate a self-assessment in the interview setting according to the stated performance criteria.				
15. The student will state reasons for using time lines and will generate a time line given data to graph.				
16. The student will list uses of interview records (documentation).				
17. Given a scenario, the student will demonstrate discriminating employee strengths by listing them and by discussing them with the employee in an interview setting, meeting the stated performance criteria.				

1. This objective is very important.
2. This objective is important.
3. This objective is important but needs revision as indicated.
4. This objective is not important and should be deleted.

	1	2	3	4
18. Given a scenario, the student will demonstrate discriminating the counterparts of employee weaknesses by listing them, and by discussing them with the employee in an interview setting, meeting the stated performance criteria.				
19. The student will evaluate a progress interview meeting the stated performance criteria.				
20. The student will conduct a progress interview in a simulated setting meeting the performance criteria as stated on the evaluation checklist.				

TABLE B1

TALLY OF REVIEWERS' RATINGS OF OBJECTIVES

Objective	Mean Rating*	Objective	Mean Rating*
1	2.67	11	1.17
2	1.83	12	2.0
3	1.67	13	2.67
4	2.0	14	1.3
5	1.67	15	3.0
6	1.83	16	2.17
7	1.50	17	1.83
8	1.67	18	2.67
9	1.83	19	1.67
10	2.3	20	1.5

*Scale Descriptors:

1: This objective is very important
2: This objective is important
3: This objective is important and needs revision as indicated
4: This objective is not important and should be deleted.

PROGRESS INTERVIEW MODULE TEST ITEMS

Please rate each of the test items using the scale provided. Space has been left between sections of items for comments or suggestions; please feel free to make suggested changes on this sheet. The numbers on each section refer to the objective number which the test items measure.

1. This test item is appropriate to measure the objective.
2. This test item is appropriate to measure the objective, but needs revision as indicated.
3. This test item is not appropriate to measure the objective and should be deleted.

	1	2	3
1. States and applies motivation principles and theories.			
a. T F Every manager should choose the one particular motivational style to use with employees which works best for him.			
b. Since the manager deals with a variety of individuals, rather than choosing only one motivational theory to implement, he must be _____.			
c. Expectancy theory states that behavior is a function of _____ the person holds about likely outcomes of a behavior and the _____ or individual preference for an outcome.			
d. A management application of reinforcement theory is that it may be possible to _____ some behaviors and to _____ others by controlling _____ of the behaviors.			
e. In relation to determining consequences for meeting/not meeting objectives, you should: a. Suggest what you think is a good reward for the employee. b. Never use money since it isn't a good motivator. c. Have some suggestions in mind, but wait and ask the employee what consequences she would like. d. Wait for the employee to suggest a reward, then try to negotiate downward.			

1. This test item is appropriate to measure the objective.
2. This test item is appropriate to measure the objective, but needs revision as indicated.
3. This test item is not appropriate to measure the objective and should be deleted.

	1	2	3
2. States and applies effective feedback techniques.			
a. List six characteristics of good feedback.			
3. States and applies knowledge of employee evaluation theory.			
a. List three reasons for job behavior appraisals.			
b. The purpose of giving the employee feedback regarding job performance is to: a. Let the employee know that the manager is interested in him. b. Let the employee know where he stands. c. Improve work performance. d. Meet union demands.			
c. The best way to evaluate the employee's performance is in relation to: a. Other employees' performances. b. The employee's job analysis. c. His/her potential. d. Departmental policies and procedures.			
d. The focus of discussion should be the _____ rather than _____ of the employee.			
e. T F Employee appraisals should cover personal characteristics as well as job performance since both are crucial to doing a good job.			
f. List three major problems with "trait" employee evaluations.			

1. This test item is appropriate to measure the objective.
2. This test item is appropriate to measure the objective, but needs revision as indicated.
3. This test item is not appropriate to measure the objective and should be deleted.

	1	2	3
g. List one advantage of goal-oriented performance appraisal.			
h. T F It is important to link the interview directly with decisions such as salary changes and promotions so that the employee knows his efforts are being rewarded.			
i. The major reason why employee appraisal is unreliable is: a. Only one supervisor does the rating. b. Rating scales include unobservable characteristics. c. The evaluator hasn't been trained to do evaluations.			
j. List one disadvantage of goal-oriented performance appraisal.			
k. In order to keep a record of the employee's performance, it is recommended that the supervisors keep _____.			
l. To be effective in employee evaluation, anecdotal records should be: 1) _____, and 2) _____.			
m. Anecdotal records should be relative to _____performance, not _____ qualities.			
4. Identified effects of the interviewer's attitude about performance appraisal.			
a. List at least five positive aspects of employee interviewing.			
b. List at least three problems you might anticipate in interviewing employees.			

1. This test item is appropriate to measure the objective.
2. This test item is appropriate to measure the objective, but needs revision as indicated.
3. This test item is not appropriate to measure the objective and should be deleted.

	1	2	3
c. T F The interviewer's attitude about the importance of the appraisal interview probably won't affect the employee's performance on the job.			
5. States and applies knowledge of problem-solving skills.			
a. A problem is the difference between what _____ and what _____.			
b. List two benefits from problem-solving interviews.			
c. It is the manager's responsibility to suggest solutions for the problems encountered with individual employees. T F			
d. The basic component parts of problem-solving are: a. Describing a variety of solutions, determining their acceptability from personnel, implementing the solutions. b. Defining the problem, generating multiple solutions, selecting a solution to try, implementing and evaluating the solution. c. Defining the problem, generating solutions, implementing a combination of several of the best solutions. d. Defining several solutions, assessing relative costs, implementing the most cost/effective solution.			
6. States purposes for, and utilizes job specifications.			
a. Name two purposes of job specifications.			
b. T F Job specifications are written primarily for the use of the manager who does employee hiring.			

1. This test item is appropriate to measure the objective.
2. This test item is appropriate to measure the objective, but needs revision as indicated.
3. This test item is not appropriate to measure the objective and should be deleted.

	1	2	3
c. T F Since the personnel office may be responsible for initial screening of employees, and may not be familiar with foodservice management, the job specification should be general in nature.			
d. T F Appraisals can be considered to be discriminatory if they are not based on job analysis.			
7. Lists the major component parts of the progress interview.			
a. Choose the item which includes the major component parts of the employee progress interview: a. Giving the employee an increase in pay (if deserved), letting the employee know his weaknesses, filling out an evaluation form for documentation. b. Developing objectives with the employee, letting the employee know what he has done right in relation to the job, determining consequences of meeting/not meeting objectives, documentation of the interview, giving the employee a promotion if deserved. c. Developing objectives with the employee, telling the employee his strong and weak points in relation to the job, telling the employee what he should have done in relation to his weak points, determining consequences of meeting/not meeting objectives, documentation of the interview.			
8. Generates objectives for a progress interview.			
a. You are preparing for a progress interview with an employee of sixty days. She has learned the job quickly, appears to have potential for doing a good job, and is well-liked by the employees. What should you have as an objective for the interview?			

1. This test item is appropriate to measure the objective.
2. This test item is appropriate to measure the objective, but needs revision as indicated.
3. This test item is not appropriate to measure the objective and should be deleted.

	1	2	3
a. Compliment the employee on her excellent work, tell her you're happy to have her as an employee, and that you would like to see her advance in the organization. b. Tell the employee specifically what is good about her performance within the department and set goals with the employee to improve performance. c. Tell the employee you'd like her to move into a position of more responsibility and a larger salary.			
b. You have scheduled a progress interview with a one-year employee in the salad department and are reviewing his file. There are no events of a significant nature either good or bad. You have also reviewed the job analysis. What would you suggest as an objective for the interview: a. Recommend the employee for a raise. b. Find out what the employee wants to do in his job to make it better or more challenging. c. Recommend the employee for a transfer. d. Tell the employee what he needs to do to make a better impression on his supervisor so that his ratings will improve.			
c. Look at the following example scenario and draw some specific objectives for yourself as the interviewer:			
9. Discriminates between important and unimportant issues and sets priorities for interview discussion.			
a. It is more effective to focus on one problem which is important than to discuss several problems in the short time allotted. T F			

1. This test item is appropriate to measure the objective.
2. This test item is appropriate to measure the objective, but needs revision as indicated.
3. This test item is not appropriate to measure the objective.

	1	2	3
b. Prioritize the following items by numbering them, one being the most important: _____Employee out of uniform. _____Employee frequently doesn't wear hair restraint. _____Employee takes excessive break and lunch time. _____Employee tastes items with fingers during preparation. _____Employee is often late.			
c. Which of the following items would you choose to discuss with an employee during a routine progress interview: a. Two late arrivals in the last six months. b. Not wearing a hair restraint when supervisor isn't around. c. An argument in the kitchen between the employee and a salad maker over a parking place.			
10. Discriminates between appraisal issues and training issues.			
a. T F If the employee doesn't follow good sanitation procedures, the appraisal interview is an appropriate time to give a short refresher course in sanitation techniques.			
b. T F If the employee has been trained to make coffee and consistently makes errors, the interview is an appropriate time to seek solutions to the problem.			

1. This test item is appropriate to measure the objective.
2. This test item is appropriate to measure the objective, but needs revision as indicated.
3. This test item is not appropriate to measure the objective.

	1	2	3
c. Which of the following events would you choose to discuss with the employee during a routine progress interview? a. Occasionally misses items on trays during trayline operation. b. Makes minor changes in special diet recipes if the item on the recipe isn't available. c. Doesn't organize his work table set up efficiently.			
11. States reasons for pre-planning and planning guides and pre-plans interviews.			
a. Which of the following includes all items which should be planned <u>before</u> the interview: a. Interviewer's objectives, interviewee's objectives, major points to be discussed, review dates. b. Interviewee's objectives, consequences if objectives are met, and review date. c. Interviewer's objectives, major points to be discussed.			
b. The following job specification and scenario will be used as a case for which to pre-plan. As you read through the example, try to develop your own objectives for the interview and pick out the employee's strengths and weaknesses.			
c. Pre-plan interviews for each of the two following scenarios.			

1. This test item is appropriate to measure the objective.
2. This test item is appropriate to measure the objective, but needs revision as indicated.
3. This test item is not appropriate to measure the objective and should be deleted.

	1	2	3
12. States criteria for location of the interview.			
a. T F The manager's office is a good place for a progress interview since it is usually relatively quiet and can be made private.			
b. The interview environment should: a. Not be the manager's office since this may be threatening to the employee. b. Be quiet, private, comfortable. c. Include a desk between the manager and the employee to create a feeling of formality. d. Never be in the employee's work area since there may be interruptions.			
13. States reasons for advance appointments.			
a. T F It is a good idea not to make advance appointments for progress interviews so that the employee doesn't have time to worry and get upset.			
b. T F The employee should be informed of the objectives of the interview in advance.			
14. States reasons for and assists the employee to generate a self-assessment.			
a. T F The manager should try to find people to fit into jobs as they are delineated rather than change the job to fit the individual employee.			

1. This test item is appropriate to measure the objective.
2. This test item is appropriate to measure the objective, but needs revision as indicated.
3. This test item is not appropriate to measure the objective and should be deleted.

	1	2	3
b. If the employee's self-assessment varies a great deal from your assessment of him, there may be a different perception of what is _____ and _____ in relation to the job.			
15. States reasons for use of time lines and generates a time line.			
a. The major reason for completing a time line in an interview setting is: a. To display the contracted events and provide a reference. b. To organize the interview data for documentation purposes. c. To make the information public.			
b. Given the following information, draw a time line for its completion: a. In two weeks, the employee will begin an eight-week long diet therapy class. b. Employee will train new assistant trayline supervisor beginning tomorrow. c. Employee will revise policy and procedures manual for trayline supervisor in the next three months.			
16. States uses of the interview records.			
a. Interview documentation (records) will be used primarily for: a. Government (NLRB, EEOC) investigations of personnel procedures. b. Making promotion, transfer, salary, termination decisions. c. Writing letters of recommendation for employees.			

1. This test item is appropriate to measure the objective.
2. This test item is appropriate to measure the objective, but needs revision as indicated.
3. This test item is not appropriate to measure the objective and should be deleted.

	1	2	3
17. Discriminates employee strengths.			
a. List at least five positive items about John, considering the job specification and anecdotal records provided.			
18. Discriminates the counterparts of weaknesses.			
a. You have an employee who forgets to wash his hands after they have been soiled. What would you tell him he should do? a. Wash his hands frequently because they get dirty. b. Wash his hands frequently because it is a department of health requirement. c. Wash his hands because contaminated hands are a common cause of food poisoning.			
b. The employee you are interviewing is late too often. What would you tell her that she should do? a. Stop coming in late. b. Call when she's coming in late. c. Don't come in at all if she can't be on time. d. Be on time, or call before the shift begins, as stated in the policy and procedures.			
19. Generates an evaluation of the interview process and results.			
a. T F If the employee does not reach his objectives, the interview must be regarded as a failure.			

1. This test item is appropriate to measure the objective.
2. This test item is appropriate to measure the objective, but needs revision as indicated.
3. This test item is not appropriate to measure the objective and should be deleted.

	1	2	3
b. What should the interviewer use as a measure of the success of the interview? a. His own objectives for the interview. b. The employee does not become upset. c. At least three objectives are set with the employee for improving his work performance.			
20. Originates an employee interview. The student will conduct a progress interview in a simulated setting meeting the performance criteria as stated on the evaluation checklist. (See attached checklist)			

TABLE B2

TALLY OF REVIEWERS' RATINGS
OF TEST ITEMS

Objective	Test Item	Mean Rating*	Objective	Test Item	Mean Rating*
1	a	1.83	7	a	1.3
	b	1.5	8	a	1.13
	c	1.83		b	1.13
	d	1.8		c	1.13
	e	1.5	9	a	1.5
2	a	1.17		b	1.83
3	a	1.2		c	1.83
	b	1.17	10	a	1.0
	c	1		b	1.3
	d	1.67		c	1.13
	e	1.5	11	a	1.0
	f	1.67		b	1.3
	g	1.67		c	1.6
	h	1.3	12	a	2
	i	1.67		b	1.13
	j	1.0	13	a	1.5
	k	1.8		b	1.3
	l	1.3	14	a	2
	m	1.5		b	1.83
4	a	1.5	15	a	1.5
	b	1		b	1.13
	c	1.3	16	a	1.67
5	a	1.8	17	a	1.4
	b	1.17	18	a	1.5
	c	1.17		b	1.3
	d	1.3	19	a	1.6
6	a	1.17		b	2.16
	b	1.17	20	a	1.0
	c	1.5			
	d	1.5			

*Rating Scale Descriptors:

1: This test item is appropriate to measure the objective.
2: This test item is appropriate to measure the objective, but needs revision as indicated.
3: This test item is not appropriate to measure the objective and should be deleted.

APPENDIX B

PROGRESS INTERVIEW MODULE

Target Audience: Junior or Senior Dietetics students; Junior or Senior Hotel/Restaurant students with interest in institutional foodservices.

Prerequisites: Interpersonal communication skills training; introduction to psychological principles of motivation; introduction to employee evaluation objectives and types.

Enabling Objectives: On a written examination, the learner will:

A. Demonstrate knowledge of motivation theories by:
   1. Matching theories with examples of them.
   2. Indicating which technique the interviewer should use.
   3. Indicating the variance between perceptions of desired consequences.

B. Demonstrate knowledge of employee evaluation by:
   1. Choosing the appropriate criteria for evaluation.
   2. Choosing items which effect evaluation reliability.
   3. Choosing reasons for job performance evaluation.
   4. Choosing the purposes of job specifications.
   5. Choosing reasons for making advance appointments.
   6. Choosing a primary use of interview records.
   7. Indicating an affect of attitude on the outcomes of interviews.

C. Demonstrate knowledge of problem-solving skills by:
   1. Choosing a list of problem-solving components.
   2. Indicating the employee's role in problem-solving.

D. Demonstrate knowledge of feedback techniques by:
   1. Choosing statements which meet the criteria.
   2. Indicating the effect of making salary decisions in a progress interview.

E. Demonstrate knowledge of criteria for interview locations by:
   1. Choosing a list of criteria.

F. Demonstrate knowledge of interview components by:
   1. Choosing a list which includes the major component parts of a progress interview.
   2. Choosing a list of items to plan before the interview.
   3. Determining objectives for an employee progress interview.
   4. Discriminating between important and unimportant events to discuss with an employee.
   5. Discriminating between items to discuss with an employee and items which represent training needs within the department.
   6. Choosing criteria to use in evaluating the interview.
   7. Choosing a reason for completing a time line during the interview.
   8. Choosing reasons for employee self-assessment.

Terminal Objectives: Given a scenario, job specification, and anecdotal records, the learner will:

A. Conduct a progress interview meeting the performance criteria as stated on the evaluation checklist.

B. Evaluate their own interview using the evaluation checklist.

INTERVIEWER'S PLANNING GUIDE

Objectives: (concise, understandable, measurable)
1.
2.
3.

Strong Points:
1.
2.
3.
4.

Weak Points:	Should Be Doing:
1.	1.
2.	2.
3.	3.
4.	4.

Our Objectives:	Review Dates:	Completion Dates:
1.	1.	1.
2.	2.	2.
3.	3.	3.
4.	4.	4.

What Will Happen If Objectives Are Met?
1.
2.
3.

Interviewer: _____

Interviewee: _____

Date: _____

ROLE PLAY CASES - PROGRESS INTERVIEWING

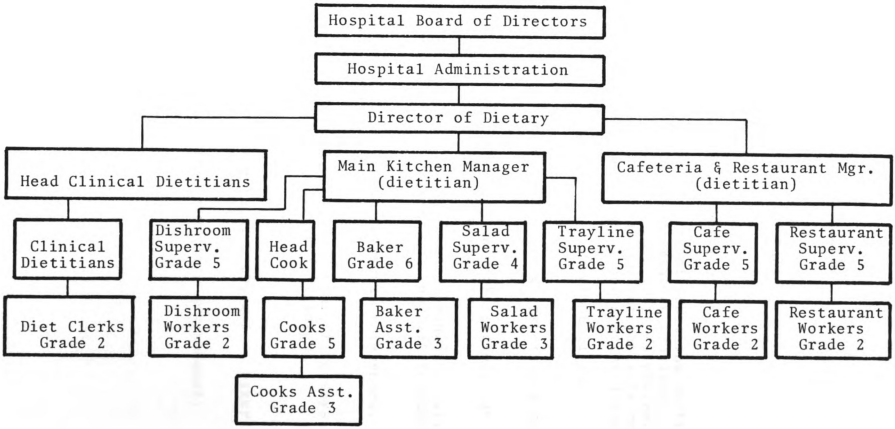
The following are four cases to use with the module on progress interviewing. They were written to be challenging, but simple, and realistic. Four cases were developed so that one could be chosen as a pretest; one or two can be chosen as practice cases in the classroom for role play; and one can be chosen as the final practical examination. The placement on the pages was designed to allow students to make strategy and planning notes as they prepare for the interview.

There is introductory information for the manager, the employee, and an evaluator's guide which can be used as suggested criteria for use with the general interview checklist, but which can also be given to students to evaluate their own interviews after the interview. A job specification is included for each of the four jobs and an organizational chart to help the students visualize the organization.

To prepare for role-playing the scenarios, distribute the following information.

	Role Instructions	Job Specification	Organizational Chart	Evaluation Guide
Manager	X - Manager's	X	X	
Employee	X - Employee's	X	X	
Evaluator	X - Both	X	X	X

TABLE OF ORGANIZATION



JOB SPECIFICATION

TRAYLINE ASSISTANT

(Case # 1)

Payroll Title:	Trayline Assistant
Department:	Production
Supervised by:	Trayline Supervisor
Job Summary:	Works a variety of positions on trayline, sets up and dismantles trayline, sets up and delivers late trays to patients, prepares nourishments for patients on a variety of general and special diets.
Educational Status:	Reads, writes, speaks English.
Experience Required:	Previous foodservice experience desirable, but not required.
Knowledge and Skills:	Ability to plan work, legible handwriting, good manual dexterity.
Physical Requirements:	Standard physical examination; will stand, stoop, walk, bend and lift throughout the day.
References Required:	Two work and personal references.
Hours:	6:00 a.m. to 2:30 p.m., five days weekly with two days off arranged.
Wage Scale:	Grade 2
Promotion to:	Trayline Supervisor, salad, baker, cook, cafeteria server.
Advantages and Disadvantages of the Job:	Location, security, environment.
Tests:	None

Case #1

Manager's Instructions

In general, Jean, 34 years old, has been a steady, dependable worker for the past year. Jean is a high school graduate and seems bright and intelligent. Jean is a trayline worker, but you have heard from the salad area supervisor that s(he) enjoys working in the salad area and s(he) has been helpful in that department.

Structurally, Jean's supervisor is the trayline supervisor and that position is a possibility for advancement. However, functionally, Jean has contact with the cafeteria, salads and cooks area, and with the diet clerks. Any of these positions would help Jean develop skills required for a supervisory job. Presently, there are no openings in any of these areas. A salad position requires training in special diets and some on-the-job training in salad preparation.

Training programs currently available in the department include safety and sanitation, basic nutrition, meat cookery, and a 6-week series about the various special diets. Jean has attended the safety and sanitation courses since they are required of all employees.

The following notes have been entered in the employee's file during the past 6 months:

Jean was 15 minutes late for work this morning. Jean explained that the car wouldn't start and s(he) had to catch a bus.

Jean volunteered to help in salads for this morning when we needed assistance. Jean finished his/her own work, too, before leaving for the day.

We've received several complaints from nurses about late trays which Jean delivered without a hot pellet to keep the food warm.

Jean spent a lot of time this afternoon in a personal conversation with one of the cafeteria servers. Both were behind in their work.

Case #1

Employee Instructions

Jean (34 years old)

You have worked as a trayline worker in the dietary department for a year and have an appointment for a progress interview. You feel satisfied that you've done a good job, but are interested in making a move. The area in the department which interests you the most is the salad area and you would like to work there.

You know that you have been late infrequently and that once your supervisor was a little angry that you spent so much time talking to a cafeteria server, but you don't think these events are important to the job.

In the interview, try to imagine that you are a real employee in an interview with the dietitian. Follow the directions given here, but if something else comes up, react as you imagine you would normally react in this situation.

1. Tell the dietitian about your interest in salads if s(he) asks you about your career interests. Be non-committal if s(he) suggests training in another area.

2. If he/she brings up the tardiness or long conversation with the cafeteria server, tell the dietitian that you think it didn't affect your performance and that you still did your work.

3. If the dietitian suggests steps for you to prepare for a salads position, respond favorably and agree to them. Suggest scheduling yourself for a few half or whole days in the salad area for training when this is possible during the next few months.

4. A problem has been that often in the last few weeks there are no pellets heated for use on late trays. You think it's because the house count has been higher than normal and there aren't enough pellets in stock. Tell the dietitian what the reason is if she asks what the problem is. If s(he) just tells you that you must use hot pellets, be silent for a few moments and don't offer to help solve the problem until the dietitian asks you to help solve it.

PROGRESS INTERVIEW UNIT

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PROGRESS INTERVIEW UNIT

INSTRUCTOR'S GUIDE

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PERSONAL INFORMATION SHEET

Name _____ Student Number _____

Age: 20 ___ 21 ___ 22 ___ 23 ___ 24 ___ 25 ___

Other (specify) ____

Academic Status: Junior ___ Senior ___

Grade Point Average:

MSU: 2.0-2.9 ___; 3.0-3.49 ___; 3.50-4.00 ___
Transfer: 2.0-2.9 ___; 3.0-3.49 ___; 3.50-4.0 ___

Number of terms at MSU: 4 ___ 7 ___ 10 ___

5 ___ 8 ___ 11 ___

6 ___ 9 ___ 12 ___

Other (specify) ___

Academic Training: (Please indicate those you have had with a check)

Communications Course ___

Psychology Course ___

Management Course ___

Foodservice Administration Course ___

Labor Relations Course ___

Education Course ___

Work Experience:

a. Foodservice worker: less than 6 months ___
6 months to 1 year ___
1 to 2 years ___
more than 2 years ___

Work Experience: (Continued)

b. Foodservice supervisor

less than 6 months ___
6 months to 1 year ___
1 to 2 years ___
more than 2 years ___

c. Other work experience:

APPENDIX C

INTERVIEWING MODULE

Please do not put your name on this survey. Indicate with which group you participated.

UNIT WITH WRITTEN RESPONSES ___ ROLE PLAYER ___ DIRECTED OBSERVER ___

UNIT WITH REQUIRED WRITTEN RESPONSES ___ OBSERVER ___

Student's Attitude Survey

Please be frank and honest in answering the following questions--it will not affect your grade on the unit in any way. The data will be useful in improving the instructional methods.

	1 Strongly Agree	2 Agree	3 Uncertain	4 Dis-agree	5 Strongly Disagree
1. I was often unsure of what was supposed to be learned.					
2. The unit was well-organized.					
3. There was too much information in the unit.					
4. I learned a lot in comparison with a usual method such as a lecture.					

Student's Attitude Survey (Cont'd)

	1 Strongly Agree	2 Agree	3 Uncertain	4 Dis-agree	5 Strongly Disagree
5. I learned a lot from the role play session.					
6. I enjoyed the role play session.					
7. I think that the unit was worth the amount of time spent on it.					
8. There should be more written information or lecture on important concepts.					
9. Parts of the unit were unclear.					
10. I had to ask a lot of questions to clarify it.					
11. The objectives of this unit were clear.					
12. The objectives of this unit were reasonable.					
13. I feel that I will use what I learned in this unit.					
14. I didn't get much instructor feedback on how I was doing during the unit.					
15. I would like to have more instructor feedback during the role play session.					

Student's Attitude Survey (Cont'd)

	1 Strongly Agree	2 Agree	3 Uncertain	4 Dis-agree	5 Strongly Disagree
16. The instructor's discussion was helpful in learning the material.					
17. I would recommend modification of the unit before using it with other students.					

18. What suggestions would you make for improvements?

19. What was the best feature of the unit?

20. What was the worst feature of the unit?

APPENDIX C

PROGRESS INTERVIEW CHECKLIST

Items A through F are intended as reminders for the student interviewer. Raters begin evaluation with number one on the reverse side.

BEFORE THE INTERVIEW:

A. Review job analysis data for the job of the employee to be interviewed.

B. Review employee's performance records; determine specific situations to be discussed.

C. Write objectives for the interview and complete planning guide.

D. Make an appointment with the employee in a non-threatening manner and arrange the appropriate environment.

DURING THE INTERVIEW:

E. Use listening responses:

Silence when appropriate
Non-verbal encouragement
Verbal encouragement
Open-ended questions
Clarification
Empathy
Check to see if things are understood by the employee

Avoid communication pitfalls:

Leading questions
Verbal crutches (and-uh, you know, etc.)
Non-verbal distractions

AFTER THE INTERVIEW:

F. Evaluate the interview.

	1	2	3	4	5
1. Develops rapport with non threatening, social questions	Begins with content.	Says hello only.	Several social comments.	Real effort to create ease.	N.A.
2. Encourages participation.	Employee only answers questions.	Asks employee to express himself only once.	Continues to ask employee to talk.	Employee talks half the time.	N.A.
3. States own objectives for the interview.	No objectives stated.	Objective is to do interview.	States general objectives.	Objectives on Eval. Guide.	N.A.
4. Asks employee for self-assessment.	Doesn't ask.	Asks how he feels about the job.	Asks several related questions.	Guides to discuss strengths and weaknesses.	N.A.
5. Focuses on employee's strengths; states them.	Doesn't address.	General strengths expressed.	Specific items in the file.	Several discussed.	N.A.
6. Discusses employee's specific weak points; uses good feedback techniques.	Doesn't address.	Some weaknesses expressed.	Weaknesses in the file.	Weak points discussed.	N.A.
7. Chooses appropriate events to discuss.	No items discussed.	Discusses unimportant item.	Discusses some items.	Covers items on Eval. Guide.	N.A.
8. Problem-solves with employee what should have been done in relation to problems.	No problem-solving.	Interviewer suggests solutions.	Employee asked for solutions.	Good problem-solving process.	N.A.
9. Employee objectives are set for next period.	Not addressed.	General objective stated by interviewer.	Employee suggests some objectives.	Specific, developed by employee.	N.A.
10. Consequences of meeting goals are determined.	Not addressed.	Inappropriate for progress interview.	Consequences stated by interviewer.	Consequences discussed with employee.	N.A.
11. Next review date is set.	Not addressed.	Future interview mentioned.	Says objectives will be reviewed.	Specific time set.	N.A.
12. Checks out employee's understanding of interview.	Not addressed.	Asks - but no follow through.	Interviewer summarizes.	Employee summarizes.	N.A.
13. Requests employee's reaction to the interview.	Not addressed.		Employee states general feelings.	Guides employee to state specifics.	N.A.
14. Documentation of the interview completed - signatures.	Not addressed.			Signatures obtained.	

APPENDIX C

PROGRESS INTERVIEW UNIT

Name _____
Date _____

1. Choose the item which includes the major component parts of the employee progress interview:
   a. Giving the employee an increase in pay (if deserved); letting the employee know what his weaknesses are; filling out an evaluation form for documentation purposes.
   b. Developing objectives with the employee; letting the employee know what he has done right in relation to the job; determining consequences of meeting/not meeting objectives; documentation of the interview; giving the employee a promotion if deserved.
   c. Developing objectives with the employee; telling the employee his strong and weak points in relation to the job; telling the employee what he should have done in relation to his weak points; determining consequences of meeting/not meeting objectives; documentation of the interview.

2. Which of the following includes all items which should be planned before the interview?
   a. Interviewer's objectives, employee's objectives, major points to be discussed, review dates.
   b. Employee's objectives; consequences if objectives were met, and review date.
   c. Interviewer's objectives, major points to be discussed.

3. T F Information concerning salary increases and promotions should be shared during the evaluation interview so that the employee knows his efforts are being rewarded.

4. T F Employee appraisals should cover personal characteristics in addition to job performance since both are crucial to doing a jood job.

5. Interview documentation (records) will be used primarily for:
   a. Government (NLRB, EEOC) investigations of personnel procedures.
   b. Making promotion, transfer, salary, termination decisions.

c. Writing letters of recommendation for employees.

6. The best way to evaluate the employee's performance is in relation to:
   a. Other employees' performances.
   b. The employee's job specification.
   c. His/her potential.
   d. Departmental policies and procedures.

7. T F Appraisals can be considered to be discriminatory if they are not based on job analysis and specifications.

8. T F Every manager must choose the one particular motivational style which works best for him to use with all his employees.

9. A major reason why employee appraisal is unreliable is:
   a. Every employee's needs are unique.
   b. The evaluator hasn't been trained to do evaluations.
   c. There often is no formal evaluation program.

10. The purpose of giving the employee feedback regarding job performance is to:
   a. Let the employee know that the manager is interested in him.
   b. Let the employee know where he stands.
   c. Improve work performance.
   d. Meet union demands.

11. T F Job specifications are usually used only by the manager who does employee hiring.

12. T F It is the manager's responsibility to initiate solutions for the problems encountered with individual employees.

13. The basic component parts of problem-solving are:
   a. Describing a variety of solutions, determining their acceptability to personnel, implementing the solution.
   b. Defining the problem, generating possible causes, generating solutions, selecting, implementing, and evaluating the solution.
   c. Defining the problem, generating solutions, implementing a combination of several of the best solutions.
   d. Defining several solutions, assessing relative costs, implementing the most cost/effective solution.

14. The interview environment should:
    a. Not be the manager's office since this may be threatening to the employee.
    b. Be quiet, private, comfortable, informal.
    c. Include a desk between the manager and the employee to create a feeling of formality.
    d. Never be in the employee's work areas since there may be interruptions.

15. T F It is better to focus on one problem which is important than to discuss several problems in the short time allotted.

16. T F The manager's office is always the best place for a progress interview since it is usually quiet and can be private.

17. T F It is a good idea not to make advance appointments for progress interviews since it may worry and upset the employee.

18. T F If the employee does not reach his objectives, the interview must be regarded as a failure.

19. What should the interviewer use as a measure of the success of the interview?
    a. His own objectives for the interview.
    b. The employee doesn't get upset.
    c. At least three objectives are determined for the employee.

20. Which one of the following items would you choose to discuss with an employee during a routine progress interview:
    a. Two late arrivals in the last six months.
    b. Not wearing a hairnet whenever the supervisor isn't around.
    c. An argument in the kitchen between the employee and a salad maker over a parking place.

21. Which of the following events would you choose to discuss with an employee during a routine progress interview?
    a. Occasionally misses items on trays during trayline operation.
    b. Makes minor changes in special diet recipes if the item on the recipe isn't available.
    c. Doesn't organize his work table set up efficiently.

22. You have scheduled a progress interview with a one-year employee in the salad department and are reviewing his file. There are no recorded events of a significant nature either good or bad. You have also reviewed the job specification. What would you suggest as an objective for the interview?
    a. Recommend the employee for a raise.

b. Find out what the employee wants to do in his job to make it better or more challenging.
c. Recommend the employee for a transfer.
d. Tell the employee what he needs to do to make a better impression on his supervisor so that his ratings will improve.

23. You are preparing for a progress interview with an employee of sixty days. She has learned the job quickly, appears to have potential for doing a good job, and is well-liked by the employees. What should you choose as an objective for the interview?
a. Compliment the employee on her excellent work, tell her you're happy to have her as an employee and that you would like to see her advance in the organization.
b. Tell the employee specifically what is good about her performance within the department and set goals with the employee.
c. Tell the employee you'd like to move her into a position of more responsibility and a larger salary.

24. The employee you are interviewing is often late. What would you tell this employee that s(he) should do?
a. Stop coming in late.
b. Call when she's going to be late.
c. Don't come in at all if she can't be on time.
d. Be on time, or call before the shift begins, as stated in the policy and procedure manual.

25. You have an employee who forgets to wash his hands after they have been soiled. What should you tell him to do?
a. Wash his hands frequently because they get dirty.
b. Wash his hands frequently because it is a health department sanitation requirement.
c. Wash his hands because contaminated hands are a common cause of food poisoning.

26. In relation to determining consequences for meeting/not meeting objectives, you should:
a. Suggest what you think is a good reward for the employee.
b. Never use money since it isn't a good motivator.
c. Have some suggestions in mind, but wait and ask the employee what consequences s(he) would like.
d. Wait for the employee to suggest a reward, then try to negotiate downward.

27. T F The interviewer's attitude about conducting the appraisal interview probably won't affect on-the-job performance of the employee.

28. T F Since the personnel office may be responsible for initial screening of employees, and may not be familiar with foodservice management, the job specification should be general in nature.

29. T F If the employee doesn't follow appropriate sanitation procedures, the appraisal interview is an appropriate time to give a short refresher course in sanitation techniques.

30. T F If the employee has been trained to make coffee and consistently makes errors, the interview is an appropriate time to seek solutions to the problem.

31. T F The employee should be informed of the objectives of the interview in advance.

32. T F The manager should try to find people who fit into jobs as they are delineated rather than change the job to fit the individual employee.

33. The major reason(s) for completing a time line in an interview is:
    a. To display the contracted events and provide a reference.
    b. To organize the interview data for documentation purposes.
    c. To make the information public.

34. An example of reinforcement motivation theory is:
    a. If the manager gives the employee praise (the reward) for being on time, then the employee will be on time more often.
    b. If the employee thinks that a promotion (the reward) is desirable, and attainable, s(he) will take certain steps to reach that goal.
    c. If the employee doesn't have any goals within the organization, the manager will not be able to motivate him/her.

35. Employee self-assessment should be encouraged because:
    a. It relieves the manager of responsibility for doing the whole evaluation and encourages the employee to assume some of it.
    b. It will help the manager and employee to discover differences in their perceptions of what is important on the job.
    c. It will let the manager know the underlying reasons for problems in the employee's performance.

36. Choose the item which is the best suggestion as a method to increase reliability of evaluations:
    a. Schedule evaluations more frequently.
    b. Have the employee's immediate supervisor do the evaluation.
    c. Train the evaluators about how to do the evaluation interview.

37. An example of expectancy motivation theory is:
    a. If the manager gives the employee praise (the reward) for being on time, then the employee will be on time more often.
    b. If the employee thinks that a promotion (the reward) is desirable, and attainable, s(he) will take certain steps to reach that goal.
    c. If the employee doesn't have any goals within the organization, the manager will not be able to motivate him/her.

APPENDIX D

STUDENT ATTITUDINAL COMMENTS

APPENDIX D

STUDENT ATTITUDINAL COMMENTS

Junior Students' Comments on the Feedback Given by the Actress

The following comments were taken directly from the students' post-test evaluation rating scales:

I enjoyed the experience but it needs much improvement. It is a hard role for me to be in.

I enjoyed the experience.

Talking afterwards was really helpful.

The feedback from the actress was very good.

Overall, the whole assignment was worthwhile.

I felt that this method of learning was excellent.

I feel that I have come a long way since we first started. I understand the format better.

I feel this was one of the most worthwhile projects in class this term and I really benefited from it.

I thought the videotape was much better with the actress. It was less structured because she was not going by guidelines. It made it more challenging because you really didn't know what she was going to say.

Felt the interview was a very important part of class this term. I feel that I learned a lot and was given a lot of good points.

What hit me the most was even though we had gone through what I had on my agenda, I have to realize that they (the employee) also have things they will want to discuss.

Very helpful and enlightening with gaining insight to interaction of people.

The problem-solving was a hard point. Overall, I got a lot out of this interview and received some key points to look at in terms of further interviews.

I feel that video recall is a very good approach to learning interviewing. The discussion following the interview was helpful.

Senior Students' Comments on the Feedback Given by the Actress

I recognize a need to listen to employee comments and not be so concerned with just accomplishing topics in the assignment. Shelley was very helpful and I learned a lot.

Terry was very helpful in her comments about the interview. She gave both good and bad points that need improving. She played a role that gave good experience to someone learning to interview.

This was an excellent opportunity for me to see what I can act like when given the opportunity to play the supervisory role. The entire thing was very beneficial to me and Shelley was able to show me some weaknesses in my communication skills that might affect other interviews. Shelley was a good evaluator--honest in showing areas in need of improvement.

In general, this was very helpful and showed me that I should listen a little more in the future.

Shelley gave me excellent feedback and made me aware of areas that I could work more to improve.

I felt pretty good about the interview--slightly nervous about being videotaped. Terry did a good job as interviewee.

I enjoyed getting some real good suggestions from Terry afterwards. I also feel I learned so much from doing this unit and that I will use this information in the future.

Shelley gave me excellent feedback as to my interview and made me feel good about my interviewing technique. She gave me both positive and negative comments as well as some very interesting theories on manager-supervisor relationships.

I have learned how a supervisor needs to be very sensitive to his employees and everything happening in his life. A good interviewer needs to imagine himself in the employee's position and work from that point of view. These guidelines are very helpful and have given me a framework for interviewing.

Enjoyed the session. Shelley was very helpful and gave a lot of constructive advice.

Good experience. Very valuable for me. I got good feedback and will work on making the appropriate changes.

I think this exercise was helpful in preparing us to interview. I learned a lot of my own weak points that need work.

Student Comments from Progress Interview
Unit Attitude Survey

Junior Students

Unit with Written Responses, Role-Player:

1. What suggestions would you make for improvements?

More preparation on the part of role-players for practice.

Instructor summarize material before role-play.

There was a lot of material--possibly break the unit into two parts, then the third part could be practice.

Students should be able to be role-player or observer beforehand, so that preparation is better.

2. What was the best feature of the unit?

I did learn how to conduct an interview properly.

I did learn what steps are necessary for an effective progress interview.

Role-playing allows a very clear understanding of all the problems involved in a real interview.

Role-playing--to actually see some interviews being done.

Critique and gradual improvement during practice session.

I learned a lot about employee interviewing that I will be able to apply.

3. What was the worst feature of the unit?

Playing a role.

Length of the module (reading material)

Everyone should be able to play a role.

As a role-player, I was being judged. I was really put on the spot.

Unit with Written Responses, Observer:

1. What suggestions would you make for improvement?

Unclear about the importance of this unit.

Review pre-test tapes afterwards before moving on.

2. What was the best feature of the unit?

Asking questions throughout the unit.

Practicing of interviews was helpful.

Pre-test and interviews in the classroom--very interesting and helpful. I know they will come in handy.

3. What was the worst feature of the unit?

All the reading on our own. Cut down slightly.

Unit with Written Responses, Directed Observer:

1. What suggestions would you make for improvements?

I found this to be a very effective way to learn.

Improve scenarios to include more problem-solving.

Allow more time for reading materials.

2. What was the best feature of the unit?

Active role-playing with the use of evaluation checklists. I feel that as a directed observer, I understood the purpose of the material better.

To be able to take part--either role-playing or as directed observer.

Actual practice on videotape. Also guidelines to interviewing.

3. What was the worst feature of the unit?

I wish that we all could have experienced the role-playing.

Unit with Required Written Responses, Role Player:

1. What suggestions would you make for improvements?

More time to discuss the unit before practicing.

Write a more hostile role for the employee so we can learn ways to handle them.

Don't have other role-players present during other interviews--they pick up ideas from the first ones.

2. What was the best feature of the unit?

Practical application. I always learn a lot more by doing than by simply listening to a lecture.

Everything was outlined.

Evaluation was the best part. Allowed me to see a lot of mistakes I would have skipped over. It is good to get feedback about your performance.

3. What was the worst feature of the unit?

Have to write in answers.

Took a long time to read.

The feeling of being unprepared.

Unit with Required Written Responses, Observer:

1. What suggestions would you make for improvements?

Include more real life situations. It's hard to imagine what to do in different circumstances.

A scenario where employee was not agreeable.

Explain more before starting role-plays.

2. What was the best feature of the unit?

Role-playing helped bring the information together and showed me where I needed more help.

Open discussions after role-plays. Helped clarify the concepts.

Role-playing--also writing in answers.

3. What was the worst feature of the unit?

Pre-test -- it confused me because I can't remember what I did.

Questions in unit came too soon after the information.

Unit with Required Written Responses, Directed Observer:

1. What suggestions would you make for improvements?

More discussion about material in the unit.

2. What was the best feature of the unit?

Role-playing -- good use of concepts.

Having to rely on ourselves to provide answers, comments, and reasons for them.

I didn't have to listen to a lecture. I think I retained a lot of the information.

3. What was the worst feature of the unit?

A lot of written material.

Too many pages.

Senior Students

Unit with Written Responses, Role-Players:

1. What suggestions would you make for improvements?

Answers to questions in the unit aren't reinforced enough in the material.

Correct typos.

Add more examples.

Add more questions, answers.

Show a model of the interview.

2. What was the best feature of the unit?

Examples were good.

Well-organized, self-explanatory.

Instructor feedback while role-playing.

3. What was the worst feature of the unit?

Lack of interaction with the instructor while learning the material.

Prefer lecture-discussion type of session.

Too lengthy.

Unit with Written Responses, Observer:

1. What suggestions would you make for improvements?

Instructor clarify material before role-playing.

Model of interview before role-playing.

Give feedback on the pre-test interview.

2. What was the best feature of the unit?

Instructor feedback on role-plays.

Module was concise, read easily, implemented immediate feedback for more positive learning.

Steps in the interview and what areas to emphasize.

3. What was the worst feature of the unit?

More specific and more examples (cases).

Too much information.

Unit with Written Responses, Directed Observer:

1. What suggestions would you make for improvements?

Demonstrate interview before role-play.

Give examples of key phrases.

Give specific examples of problem-solving.

Lecture rather than the unit.

Want feedback on the VTR pre-test.

2. What was the best feature of the unit?

Seeing role-play and getting feedback.

Objectives stated and easily read.

Written tests helped me to realize what I had to learn and did learn.

Good scenarios.

3. What was the worst feature of the unit?

Not seeing an example of an interview.

Some misspelled words.

Lecture rather than unit.

Too long.

Unit with Required Written Responses, Role-Player:

1. What suggestions would you make for improvements?

A lot of material was repetitive--condense some parts.

Have everyone role-play.

Clarify difference between general and specific objectives for the interview and which to discuss with employee.

2. What was the best feature of the unit?

Allowing practical application during the role-play.

Role-playing helpful--you really must organize your thoughts before conducting this type of interview.

Descriptions of the components of the model.

Flowchart helped me the most to pull all the steps together.

3. What was the worst feature of the unit?

Too long.

Having to do an interview in front of the class and camera, but I realize it's helpful.

Interview planning sheets don't contain as much information as I would like.

Unit with Required Written Responses, Observer:

1. What suggestions would you make for improvements?

I really enjoyed learning from the module and feel I learned a lot from it.

Possibly including more people in role-play because by the second time through, the four may have been too familiar with fresh input, and may have been more beneficial for discussion.

Receive feedback after post-test. Would liked to have been an interviewer in role-play to get feedback.

2. What was the best feature of the unit?

Having the answers in the back for reference.

Discussion of role-plays was good--honest and helpful.

The module was good and not too time consuming.

Test (objective one) was excellent. An objective evaluation of the information in the self-study guide.

3. What was the worst feature of the unit?

The pre-test.

Self-study module was too long.

It's hard to read and write on the module especially without a table.

Unit with Required Written Responses, Directed Observer:

1. What suggestions would you make for improvements?

The unit was well-organized and objectives were clear.

It gets tiring seeing a lot of interviews, yet everyone should have a chance to practice them through role-playing.

More introductory information before starting the unit--clarify purpose of the pre-tests and give feedback on pre-test.

2. What was the best feature of the unit?

Ability to do on own time.

Good to have for future reference. Case studies were good to have. Good to have answers to questions to refer to, to see how you're doing.

Booklet was well-organized.

3. What was the worst feature of the unit?

Difficult to determine exact wording of answers to questions.

Tests--some questions didn't have clear-cut answers.

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