6-1979

Assessment of Learning Climate in Dietetic Clinical Facilities: An Evaluation of Instrument

Elizabeth Lee Sowell
University of Tennessee, Knoxville

To the Graduate Council:

I am submitting herewith a dissertation written by Elizabeth Lee Sowell entitled "Assessment of Learning Climate in Dietetic Clinical Facilities: An Evaluation of Instrument." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Human Ecology.

Betty L. Beach, Major Professor

We have read this dissertation and recommend its acceptance:

Grayce E. Goertz, John R. Ray, Charles A. Chance, Mary Jo Hitchcock

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

To the Graduate Council:

I am submitting herewith a dissertation written by Elizabeth Lee Sledge Sowell entitled "Assessment of Learning Climate in Dietetic Clinical Facilities: An Evaluation Instrument." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Home Economics.

Betty L. Beach, Major Professor

We have read this dissertation
and recommend its acceptance:

Accepted for the Council:

Vice Chancellor
Graduate Studies and Research

ASSESSMENT OF LEARNING CLIMATE IN DIETETIC CLINICAL FACILITIES: AN EVALUATION INSTRUMENT

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Elizabeth Lee Sledge Sowell

June 1979

ACKNOWLEDGMENTS

On completing a doctoral dissertation, the single page for acknowledgments is not sufficient to express appreciation to all who assisted in the achievement. However, within these limitations, recognition and gratitude are given to the following persons.

Dr. Betty L. Beach, as committee chairman, gave needed guidance and support in the development of the research.

Dr. Grayce E. Goertz, Dr. Mary Jo Hitchcock, Dr. John Ray, and Dr. Charles Chance served as committee members and contributed to my goal, with Dr. John Lounsbury assisting with statistical analysis.

The faculty and students of the Coordinated Undergraduate Program in Dietetics at the University of Tennessee and Auburn University contributed their time and assistance in the collection of data.

The Food Science, Nutrition, and Food Systems Administration Department in the College of Home Economics at the University of Tennessee, Knoxville, and the administration of Jacksonville State University gave financial support and assistance throughout the period of time involved to obtain the degree.

Special friends in Knoxville, who always made me welcome and assisted in conduction of the research were Ms. Wanda Dodson, Mrs. M. T. Gowder, Mrs. Jack Witherspoon, Mr. Charles Tindall, Dr. Karen Fiedler, Dr. Yvonne Jackson, Ms. Debbie Burton, Mr. Charles Brooks, Mr. Erskine Smith, Ms. Beverly Hammond, and Ms. Audrey Hay.

Special friends in Jacksonville, who assisted in numerous ways, were Dr. Elsie Wright, Dr. Tom Padgett, Ms. Margaret Williams, Ms. Hilda Norton, Ms. Sarah Aderholdt, and Dr. Louise Clark and the faculty of the Home Economics Department at Jacksonville State University, particularly Dr. Jerriane Meadows who encouraged and aided me continuously.

My husband, Donald L. Sowell, supported me constantly throughout my education by his assistance with our children and his understanding attitude.

My children, George and Katy, assisted with the research paper and helped in the home.

My family and friends assisted in numerous ways to relieve me of duties which allowed me to conduct the research, especially my father and step-mother, Mr. and Mrs. L. Lee Sledge, and my mother-in-law, Mrs. Bessie Sowell.

ABSTRACT

Assessment of learning climate in major clinical facilities utilized in Coordinated Undergraduate Programs in Dietetics by graduating seniors assists the faculty of the program and the personnel in the facility in determining the course of study and in planning experiences for the future students. An instrument was developed to assess learning climate by identifying, classifying, and validating the learning incidents or climate indicators that affect the students' ability to apply concepts learned from both didactic and clinical experiences.

The identification process was accomplished through the use of Nominal Group Technique meetings. Six groups of graduating seniors and graduates of one year were utilized from two university coordinated programs in dietetics to identify 120 experiential incidents. Use of individual brainstorming with group discussion and prioritization are the main features of Nominal Group Technique.

Three clinical instructors from one university program classified the incidents as supportive (successful) or nonsupportive (unsuccessful or not allowed) of student learning, to areas of subject matter, and as to duplication of incidents previously identified. This classification was used as the basis for a checklist developed for the assessment of learning climate.

The checklist was reviewed by the three clinical instructors and four 1977 Coordinated Undergraduate Programs in Dietetics graduates who made suggestions for revisions. For validation, the revised

checklist was mailed to 158 of the 1978 graduates from 11 selected accredited coordinated dietetic programs. The return rate was 82%.

In summarizing the results, some commonalities were found in the climate indicators that lead to success including: (a) confidence of the registered dietitian in the student and/or support and backing of the registered dietitian; (b) receptiveness and/or cooperation of employees; (c) support of the administration, confidence of the administration in the student, and/or necessity for the experience as seen by the administration; (d) cooperation of supervisors; and (e) self-confidence of the student. Indicators leading to unsuccessful incidents were the opposites of the ones for successful experiences noted above with the addition of an indicator showing lack of student authority. Concomitantly, indicators relating to incidents where experiences were not allowed included: (a) lack of administrative confidence in the student; (b) lack of cooperation of the employees; and (c) necessity for the experience for the students not seen by the administration. Benefits to the students indicated by the incidents were increased ability to take responsibility, increased variety of experiences, increased confidence in decision making ability, and possible practical application of previously learned concepts. Problems that the students found related to the incidents were lack of communication with clinical instructors, lack of professional supervision, and lack of application of concepts.

In conclusion, the Nominal Group Technique was considered an effective method of identifying incidents affecting learning climate in

clinical facilities and comments in response to the checklists indicated that the students did not accept the role of motivating patients or employees to make desirable behavior changes. Additional training for the dietetic students in understanding and application of principles of motivation should be incorporated in the curriculum. The developed instrument could be of general use in all coordinated programs with a generalist emphasis. The clinical instructors can assist the students to utilize their perceptions of the clinical facilities to further development as effective dietitians.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FORMS

CHAPTER I

INTRODUCTION

The organization and administration of dietetic education has been changed with the advent of Coordinated Undergraduate Programs in Dietetics (CUP), (Wilson, 1972; Hart, 1974). Concurrent education in both didactic and clinical components of the study of the field of dietetics is based on the educational principle that practice in the professional environment enhances learning (American Dietetic Association, 1976a). The coordination of didactic and clinical activities early in the training program provides greater opportunities for development of competent practitioners in the delivery of nutritional care than traditional programs. Knowledge and understanding of fundamentals in social sciences, communication skills, and principles of nutrition are provided in the coordination (American Dietetic Association, 1971).

Selection of clinical facilities to provide the learning experiences for the dietetic students that will allow maximum coordination of dietetic principles is imperative for the development of competent practitioners. Clinical facilities for coordinated programs are selected on the basis of the location related to the area where the didactic coursework is taught, available experiences for the students in the facilities, and willingness of personnel to assist dietetic students in practicing concepts learned. Dietetic students learn from all the people and experiences in the clinical facilities in addition to

the learning that takes place in dietetic courses. Since the dietetic educators, both didactic and clinical, cannot control all the experiences in the clinical facility, the facility must be evaluated according to the educational philosophy and types of experiences available to the student. Ideally, each of the dietitians in the clinical facility should be a good role model for the students and all of the facility staff should be committed to beneficial educational principles as exhibited by the staff's attitudes and behavior (Study Commission on Dietetics, 1972; American Dietetic Association, 1976a).

I. PROBLEM

The clinical experience is of greatest value to the student when the learning is tutorially conducted and the student feels prepared to cope with the demands of the realities in the clinical area. The clinical instructor is responsible ultimately for the students' learning opportunities and must become objectively aware of factors which may impede or facilitate desired learning and to discover ways to cope with those factors (Wiedenbach, 1964; Fahy, 1977). Clinical experiences include both the means by which the student may prepare for the experience and the means by which the instructor may facilitate the student's learning (Wiedenbach, 1969; Schweer and Gebbie, 1976). The instructor must plan in advance for the clinical experiences by developing an effective plan for orienting the students to the facility and for initiating the establishment of constructive working relationships with personnel (Smith, 1968; Aiken, 1977; Allen, 1977).

Both students and personnel must be motivated to work together successfully in the learning process. Motivation, to attempt a new learning task, in part is determined by the individual's perception of success or failure with previous learning tasks which are believed to be similar or related, even though the new task may be in no way directly related to previous learning tasks (Bloom, 1976). The variables in the learning environment affect the learning opportunities in two possible directions. The student may experience supportive transfer of learning (productive or retroactive facilitation) or nonsupportive transfer of learning (nonproductive or retroactive inhibition). The persons responsible for implementing the learning process must plan the activities and select the facilities utilized in providing successful experiences in making the process of learning a success (Mager, 1968).

The potential for establishing constructive working relationships through which learning can occur could be related to the organizational climate within the clinical facility. The organizational climate reflects the satisfaction of the workers in relation to work environment and the method of task implementation. All clinical facilities have an organizational climate which continues when students are placed in a facility to work and to learn specific tasks. Therefore, students learn skills or competencies within the role and function of the organizational climate which becomes the learning climate or conditions conducive to student learning. How each person in the organization including program faculty perceive her/his role as related to the role of others in the education of students determine the learning climate

as related to educational philosophy and attitude of people within the organization. The learning of tasks by the students must then be accomplished within the organizational climate as well as the learning climate of a clinical facility. Instruments developed for evaluating organizational climate measure the satisfaction of workers with tasks implementation in relation to conditions of work. A learning climate instrument would assess the student's perception of opportunity to perform tasks to be learned in relation to her/his perceived role to the role of others in the organization.

Dietetic internship graduates' perceptions of the learning experiences in training programs were studied in relation to various administrative elements of entry-level employment as a dietitian (Sanford et al., 1973a; Sanford et al., 1973b). Fifty-nine administrative elements were identified as a part of the graduates' first positions of fifty percent or more of the graduates. Some examples of these elements were departmental organization and management, personnel management, methods improvements, temperature control in food storage, and the educational programs. A larger percentage of the graduates perceived the preparation received as less than adequate for conceptual and human skills when compared to technical skills training. Technical skills were perceived as being adequate. A recommendation was to investigate the relationship of the learning incidents in the students' educational program to the adequacy of preparation for employment by the graduates.

The Essentials for a Coordinated Undergraduate Program in Dietetics (CUP) are used as the basis for self-study and evaluation by dietetic

programs in the site visits required at least every five years by the American Dietetic Association. The empirically oriented Essentials are helpful for decision making in planning the future of the CUP being evaluated; however, one additional dimension—students' perceptions of the clinical facilities as professional learning environments—would give strength to the existing evaluation process. Feedback from students as to their perceptions of the effectiveness of the learning experiences and the learning environment could be utilized in the determination of improving experiences in the clinical facilities for present and future students in the dietetic program. Utilization of an instrument that assesses student perceptions of clinical experiences would be a valuable contribution to the total evaluation of the Coordinated Undergraduate Programs in Dietetics as required by the American Dietetic Association (American Dietetic Association, 1976a).

II. PURPOSE OF THE STUDY

The purpose of this study was to develop a valid instrument, based on identified incidents by coordinated dietetic program students, for use by program faculty to assess the learning climate of a major clinical facility for a generalist coordinated dietetics program.

Based on data received, a modified checklist was developed for general use in assessing learning climate of generalist programs.

CHAPTER II

REVIEW OF LITERATURE

I. EDUCATION OF DIETITIANS

Goals of Education of Dietitians

The goals for the lifetime education of the dietitian were identified by the Committee on Goals of Education for Dietetics to provide the basis for professional and continuing education and personal development of dietitians. The Committee was established by the Dietetic Internship Council (now Council on Educational Preparation) of the American Dietetic Association (ADA) to determine the characteristics common to all dietitians, not specialty areas. The goals were expressed in terms of achievements and can be summarized as (1) working with individuals and groups to provide nutritional care in all areas of human development and environment, (2) sharing responsibility of health care with other professionals, and (3) continuing to improve in competence as a dietitian through personal commitment and education. The American Dietetic Association accepted this set of goals in 1969 for all in the profession of dietetics and dietitians continue to seek attainment of the goals today (American Dietetic Association, 1969).

American Dietetic Association Position Paper on Education

The position paper on education for the profession of dietetics, adopted by the executive board of the American Dietetic Association in

1971, established four practitioner areas in dietetics: (1) a generalist dietitian; (2) a management specialist; (3) a clinical specialist; and (4) a community specialist. Basic to all four dietetic practitioners is a need for knowledge of principles of nutrition, communication skill, conceptual skill, and research orientation. If these needs are common for all dietitians, the knowledge areas giving students the competencies required must be included in the basic education for the profession (American Dietetic Association, 1971). Competencies for the entry-level generalist dietitian were proposed by the Council on Educational Preparation, formerly the Dietetic Internship Council (1974), based on the common needs stated in the position paper on education. The competencies were utilized in the development of the Requirements for ADA Dietitian Membership—Minimum Competencies—Plan IV. These have been translated by each training program in dietetics into Minimum Academic Requirements.

Coordination of Didactic and Clinical Experiences

The report of the Study Commission on Dietetics (1972) recommended that coordination of didactic and clinical experiences be designed into the curriculum for the students studying dietetics as a profession. The practice of coordination involves more than integration. Coordination gives unity of purpose and decreases the number of years required for the preparation of the professional dietitian. Integration is achieved when the traditional college curriculum is rearranged to incorporate

experiences in the professional environment. During coordination, experiences in the clinical facilities are performed at the same time that didactic study is achieved in the classroom. The academic and clinical areas are under the supervision of one person, or a team of persons, and learning experiences in the clinical facilities are directly related to the theories presented in the classroom (Doherty, 1973; and Beaudette, 1977).

Clinical experience, meshed with classroom learning, has been found as an effective and efficient method of producing a competent dietetic practitioner. The dietetic educator is responsible for providing such coordinated experiences through well-planned practical application of skills and knowledge practiced in a variety of circumstances (Watson, 1976). Attachment learning or a humanistic approach to the educational process was the approach utilized, involving a one-to-one relationship between a dietetic student and a dietitian in a clinical facility. This was the final practicum experience for the dietetic student prior to graduation from the dietetics program. The experience placed the student in real-life situations to gain proficiency in the competencies expected of the entry-level dietitian (Unklesbay and Spears, 1975).

Experiences in different situations prepare the student to apply different levels of knowledge to a variety of problems, for example, to utilize information learned in the procedure for planning menus in the classroom. The next step is to develop a set of menus for a facility, and to implement the planned menus to see the outcome.

Another example is to utilize information learned in the process of counseling patients on therapeutic diets as in planning the diet and in the actual counseling of the patients by following through with the patient to determine the effect of the diet on the patient (Wiedenbach, 1969). Students need to see the relation between different situations and to generalize the information from one situation to another. Unless the student has the ability to transfer learning, learning probably has not taken place. Content and instruction must be structured for the student to gain knowledge and to learn to use the information in meeting situations and solving problems. Time must be spent with the student in guiding the application of knowledge in a given setting (Rines, 1963; Kreutz, 1971).

Students must be allowed to apply theory to practice within a short time period after learning the theory or the students' ability to apply the theory will be reduced (Wiedenbach, 1969; Infante, 1975). Nursing education has utilized the clinical facilities in which nursing is practiced to train students in nursing principles. For many years this profession has practiced the idea that emphasis in training students is best placed on the use of knowledge. Assisting the students to learn and to have an understanding of widely applicable concepts is considered more important than a total knowledge of each concept (Fahy, 1977).

Dietetic Program Evaluation

Dietetic educational programs need to be evaluated to determine the effectiveness of the program and to identify areas where adjustments

can be implemented to make the program meet the current needs of the dietetic profession.

Evaluation was defined as the determination of worth of a thing and includes gathering information for the judgment of the worth of a program, product, procedure, or objective (Worthen and Sanders, 1973). Persons engaged in education should utilize both formative and summative evaluation. Formative evaluation is conducted during the planning and implementation stages of the program whereas summative evaluation is conducted only at the conclusion of a particular project. Therefore, in summative evaluation the product is being judged but too late for modification of behavior by the students and in formative evaluation feedback is given for the improvement of the process (Bell, 1973; Scriven, 1973).

Purposes of assessment or evaluation include assessing the readiness of students to move to the next step of learning, diagnosing the group operation for stimulating learning, providing guidance for the individual for future learning, and assessing innovations and learning materials and procedures to determine the degree of transfer of learning (Rines, 1963; Tyler, 1971). Evaluation of teacher effectiveness in the clinical nursing setting has been conducted under three broad categories or approaches: (1) student evaluation of teacher effectiveness, (2) teacher self-evaluation, and (3) teacher-teacher evaluation (Clissold, 1962; Litwak et al., 1972; Schweer and Gebbie, 1976; Kemp, 1977).

As individuals, dietitians have seen the need for self-assessment in order to maintain high standards in the practice of the dietetics

profession. Professional Standards Review Organizations (PSRO) were created in the field of medicine and allied health to focus on peer review or evaluation with the established criteria utilized in the identification and correction of problems in the specific health care field. The Professional Standards Review Committee of the American Dietetic Association (1976b) made a report delineating guidelines for evaluating the practice of dietetics.

In relation to dietetic educational program evaluation, the Essentials for Coordinated Undergraduate Programs in Dietetics were established for the evaluation process during a required site visit. Specifically, the Essentials were created for the development and maintenance of education in coordinated programs and are to be utilized in the initial and periodic review process for accreditation. Also the Essentials are designed to provide the basis for the program's graduating persons who will successfully assume entry-level dietary positions and who can successfully complete the registration examination in dietetics. Therefore, the students graduating from these accredited dietetic programs should be in a position to give valuable assistance to the faculty and facilities in the evaluation of each CUP (American Dietetic Association, 1976a).

II. ATTITUDE TOWARD LEARNING

An individual's attitude toward learning, both positive and negative as well as planned and unplanned, is developed during all learning experiences. This development of an attitude toward learning leads to

establishment of self-concept and evaluation of the attitude for future learning capability by adaptation of learning according to the situation. Much of the management of the learning environment is designed to aid the student in finding that learning is psychologically stimulating. A strong value orientation is one objective of education for the student, i.e., the student should care enough to be motivated to do the best job possible, but it must be the student's idea (Mager, 1968; Kreutz, 1971).

Development of Attitude

Most teachers agree that the goal of teaching should prepare the student to use the skills and knowledge learned and should stimulate the student to learn more about the subjects taught. The learning experience includes subjective as well as experiential objective occurrences in addition to the subjective perceptions of the student relating to the subject. Sources of influence are many and varied, and all circumstances, whether supportive or nonsupportive, influence attitude and behavior of the students (Mager, 1968).

Much of the management of the learning environment has been planned to aid the learner in finding learning motivating to that person. How the student perceives her/his relation to the learning situation influences the response that the student makes to the learning tasks. If the situation assists the learner in developing a positive self-concept, then the student will be motivated to strive for the knowledge related to the learning tasks. However, the

individual's perception is the important factor, even though the previous experiences with the learning tasks or similar ones may or may not be related (Bloom, 1976).

For many years teachers were taught that if a student learned the material advanced by the information objectives of a course, the student would be able to acquire the competencies of the objectives related to problem solving as a direct result of learning the information (Krathwohl, et al., 1964). Serious questions about the tenability of this assumption were found. Results of a study by Jacob (1957) showed no evidence that college experiences produce a significant change in students' values, beliefs, or personalities. Education through experience also was considered in Jacob's summary of educational research. The conclusions were that experiences of value must be found outside the classroom, and often outside the campus. Accordingly, the coordinated concept of education in dietetics should be sound.

Evaluation of Student Learning

Two kinds of student evaluation, process and results, are considered in developing attitudes toward learning and in predicting school achievement. Process evaluation provides information on how improvement might be made in the future; results evaluation provides information on how well the learning has been achieved. Comparison of established standards with those standards being practiced is conducted for a process evaluation. Actual practice is changed to conform to established standards in order to improve the student's attitude toward

learning. For implementing results evaluation, two indicators of attitude are what the student says and what the student does (Mager, 1968). Therefore, a process evaluation using dietetic students' perceptions of the learning climate in the clinical facilities is compared with the ideal learning climate to assist dietetic educators in evaluation of a dietetic program.

Evaluation of the conditions needed for the student nurse to learn nursing has been studied by nursing educators. Studies included a content analysis of written responses of teachers to various questions pertaining to the teaching of nursing and gathered information from students on their development and performance in nursing. Student evaluations of teaching effectiveness have been utilized in nursing education for many years to advantage, when evaluations were properly obtained and when all involved persons understood the qualifications of the students to make the evaluations (Clissold, 1962; Rines, 1963; Fivars and Gosnell, 1966; Litwak, et al., 1972; Schweer and Gebbie, 1976; Rezler and Stevens, 1978). Clinical experience is an absolute essential for students in programs of nursing education, and students gain this experience in hospitals or health agencies of various kinds. Inherent in each clinical area are some common understandings and skills to be learned or applied in new relationships from one clinical area to another. Nursing educators must plan and implement a clinical nursing program to meet the specific desired behavioral outcomes in an environment that fosters interdepartmental communications leading to cooperative, coordinated, and creative teaching in clinical nursing (Clissold, 1962;

Wiedenbach, 1964; Schweer and Gebbie, 1976; Allen, 1977). Close parallels should be drawn by the clinical educators in dietetic education to nursing since dietetic training techniques are or should be similar. The critical incident technique was utilized in evaluation of student performance in a course in the curriculum of a CUP and plans are being made for student performance evaluation by critical incident in other courses in the future (Ingalsbe and Spears, 1979).

Competency-based Dietetic Programs

The recent emphasis on competency-based education in dietetic programs has brought into focus the need for coordination of theory and practice to develop professional competence. An important factor to remember in planning a coordinated dietetics program is the number of hours spent in a clinical facility by a student; however, the quality of experience gained is even more important (Lewis and Beaudette, 1977). A model was designed for implementing and evaluating a competency-based dietetic program in terms of competencies expected of the graduate. The model was planned for a coordinated program and learning experiences were designed to facilitate students' progress toward the specified competencies. Evaluation instruments relevant to the stated competencies were constructed and administered throughout the program. The instruments indicated that activities in the didactic phase emphasized the development of basic skills and knowledge necessary to perform the competencies. The clinical component of the program provided opportunities for the students to apply knowledge and basic skills. Thus,

coordination of didactic and clinical activities is essential if students are to receive the most from a coordinated dietetics program (Shanklin, 1976).

In all competency-based education, ample learning opportunities must be given the students; a learning opportunity refers to a designed situation to assist the student in practicing the desired behavior. In designing learning opportunities, educators must remember that a prediction is made that when students become actively involved in designated learning opportunities, specific objectives will probably be achieved. The success of the learning opportunity must then be evaluated as to success by obtaining feedback from an individual student in an actual situation (Bell, 1975a; Bell, 1975b; Bell, 1975c).

III. CONCEPT OF CLIMATE

The potential for developing a positive learning environment in a specific clinical facility is directly proportional to the quality of the faculty, the level of understanding by the faculty of the goals of the facility, the degree to which the personnel in the facility accept the students, the degree to which the personnel understand the students' educational program, and the quality of care that is in practice in the facility (Schweer and Gebbie, 1976). The development of a favorable climate for learning could depend upon the organizational climate provided to allow creativity in teaching and the working relationship of the clinical instructor with students and facility personnel concerned with the educational process. Definitions of organizational climate,

the concept of learning climate or atmosphere, and the measure of climate were considered for clarification of terminology.

Organizational Climate

Organizational climate as described by Tagiuri and Litwin (1968) is the atmosphere in an organization as felt by the workers. It influences their actions in terms of the values of the organization. Another definition related to a systems model of organizational climate defined organizational climate as a multi-faceted perception of the working relationships in an organization (Evan, 1968). Furthermore, the organizational climate also has been conceptualized in terms of a set of qualities relating to an organization and the way that the organization manages the workers in the organization according to persons outside the organization (Hellriegel and Slocum, 1974). Howe (1977) described the organizational climate as a model of the atmosphere of an organization quantified by consensual perceptions of the workers. Commonalities of these definitions included the use of the perceptions of the workers of the organization and characteristics of the organization as perceived by outsiders in that many times the organization was described by an outside person, who did not understand the climate as perceived by the workers in the organization.

Learning Climate

Climate of the classroom was considered as the feelings created in the students by the teacher. By increasing the awareness of and a concern for feelings by the teacher, important changes in the classroom

climate are created. An experiment in which disadvantaged students reacted positively to teacher expectations is a good example of this change in climate and how students respond to change (Rosenthal and Jacobson, 1968). A new intelligence test that was unfamiliar to the teachers was administered to all of the children in the school. The experimenters randomly assigned children either to a control group and/or to an experimental group for the study. The teachers had no knowledge of the test or the experiment. The experimenters told the teachers that specific children had done well on the test and would probably do well in the classroom in the coming year. The children were tested several times with the same test at the appropriate level and children from whom teachers expected greater gains actually made a gain. Although the teacher had not spent more time with the experimental group, the experimental children did gain more in intelligence. Concomitantly, intellectual gains were generalized to other students within the same classroom. These gains were explained in terms of the learning environment brought about by teacher behaviors such as the tone of voice, facial expression, and possibly touch and posture, and that these behaviors communicated the expectations to the children. This experiment emphasized that the climate for learning could affect or influence the amount learned by the students and student attitudes toward the subject being learned.

The use of the T-group or sensitivity training for developing a teacher change and a better learning climate was suggested by Beatty (1969). This type of training should produce higher teacher expectations

of students leading to a warmer, more individualized, and more vital climate in the classroom.

The clinical facility in a CUP is an informal classroom and an appropriate environment for learning with planned clinical experiences for the dietetic students. The setting must be favorable to, and supportive of, teachers and students engaged in the teaching-learning process. An important factor in the selection of clinical experiences for students is the quality of the environment for learning, but the instructor must monitor students' actions to prevent incidents that decrease the motivation (Allen, 1977).

Experimentation is another point that a profession must consider in the implementation of climate improvement for learning because the profession must be willing to change as needs indicate and not be tied to a set climate which cannot be changed. Experimentation is a fundamental need for all professions and experimentation in education must be derived from and contribute to the nature and the scope of the profession's practice. It must actively facilitate extension of the profession's services to society. Any experimentation is dependent upon the social, economic, and political forces of the times. Therefore, the profession must not only understand and influence these forces, but must become a social, professional, and political force itself. The profession must become a determinant of, rather than simply a respondent to, the climate. Society's decision that health care is a national priority gives impetus to a climate for experimentation more conducive than ever (Welch, 1977). This idea was written relating

to experimentation in nursing, but the dietetic profession also should consider its implications.

The nursing profession has training programs which are similar to coordinated dietetic programs, for example, the four-year nursing degree curricula. For years, nursing education has used the real-life nursing situation as a laboratory in order for the student to learn in the same surroundings in which the graduate nurse works. This laboratory experience can provide a rewarding learning situation for the student as well as an opportunity for the instructor to observe how the student reacts in the clinical setting. Educators must consider the instructor's capabilities in helping students of diverse backgrounds achieve success. Factors to be considered include understanding human characteristics in the translation of plans into action, the activity, the location and facilities, and persons to be involved in the activities and the people's perceptions of the activities (Rines, 1963; Aiken, 1977; Merkel, 1977).

Measurement of Climate

The climate of schools was measured by Halpin (1966) through considering the characteristics of the schools. The thesis was that every organization had specific characteristics that described the atmosphere within which people work. An Organizational Climate Description Questionnaire was constructed that permitted the portrayal of the organizational climate of an elementary school.

The organizational climate also was measured in an experimental study that created distinct organizational climates by varying leadership

styles in a business (Litwin and Stringer, 1968). Each of the three experimentally induced climates aroused a different motivational pattern, i.e., power, affiliation, and achievement. Such climates were shown to be created in a short period of time, and their characteristics were stable. Once created, these climates have a significant, often dramatic, effect on motivation, and correspondingly, on performance and job satisfaction.

Other methods have been employed in the measurement of climate, including continuum scales, anecdotal records, questionnaires with multiple choice answers, role assignment, and checklists. Each of these has both advantages and disadvantages when used separately, but when used in combination with methods like the critical incident technique, all of the methods can provide a clear picture of the climate which is being measured (Clissold, 1962; Fivars and Gosnell, 1966; Likert, 1967; Dowd and West, 1969; Heins, et al., 1971; Allen, 1977; Wiley, 1978).

IV. NOMINAL GROUP TECHNIQUE (NGT)

New techniques to increase rationality, creativity, and participation in problem-solving for various situations are being sought by practicing administrators and professionals. However, none of the possible methods which could be utilized are a panacea for all group meetings. Nominal Group Technique (NGT) is a special-purpose technique useful for situations where individual judgments must be tapped and combined to arrive at decisions which cannot be calculated by one person. Routine

meetings such as bargaining, negotiations, and interacting groups are concerned with members of the group agreeing upon a desired goal and technologies existing to achieve this goal. But routine meetings are leader-centered instead of having all group members participating equally. Bargaining involves opposing factions with strong value differences. The Delphi technique can be used to elicit individual opinions and then pooled for a group decision, but the group never interacts as accomplished through NGT groups. With increasing frequency, program planners face situations where problems are present and judgments must be elicited and combined in order to solve the problems; thus the use of NGT groups was initiated to overcome problems which occur with the use of other types of problem-solving techniques (Delbecq, 1967).

Both individual and group input is used as the basis for the NGT meeting. The process of decision making in the nominal group is completed according to the following sequence: (1) production of ideas in writing by individuals; (2) rotating contribution of ideas by each group member with each idea summarized in a terse phrase on a blackboard or flipchart; (3) discussion of recorded ideas for group evaluation; and (4) silent individual selection of priorities or rank-ordering (Van de Ven, 1974). Objectives of this process are (1) to assure different processes for each phase; (2) to balance participation among all members of the group; and (3) to utilize mathematical voting techniques in the aggregation of group judgments (Delbecq et al., 1975).

Uses of NGT

The Nominal Group Technique has been used in many different applications in program development. The most common uses have been citizen participation in local government problems, utilization of multidisciplinary experts to consider all possible solutions to a problem, proposal review to lead to the development of detailed and refined documents, and research method for the determination of data to include in questionnaires and field interviews. Before the research instrument is constructed, the areas of the problems for research are identified and the exact terminology for utilization in the questions or scales required for analysis are determined. A thorough understanding of the problem area before data are selected for instruments such as surveys or questionnaires can be found with the use of the NGT (Van de Ven and Delbecq, 1972).

Three methodological difficulties often are encountered when utilizing NGT for exploratory research: (1) selection of group members for problem identification, (2) determination of the question or questions to be used in the NGT meetings, and (3) transformation of ideas identified into research data. The selection of group members can be a problem because appropriate target groups must be utilized in the identification and interpretation of problems. A valid assessment of a problem area can be realized by the utilization of different groups with a variety of people who are all related to the problem but with different perspectives. Differences in the perspectives of group members on a problem will cause variations from group to group (Hoffman,

1965). Groups of not less than 5 or more than 9 were found to be most effective. In conducting NGT meetings with different groups, the researcher wants ideas produced by the group members to relate to the insight of each member based on the individual's experiences. The determination of the questions to be used in the meetings for eliciting ideas from the people in the groups has to be decided and general questions that allow many different replies or ideas are considered better than a specific question which limits the replies or ideas generated. The final procedure that the researcher must resolve is the process of changing the ideas obtained in NGT meetings into meaningful information for program evaluation. Analyzing and classifying the ideas according to the use to be made of the information is the first step toward the changing of the items into research data (Huber and Delbecq, 1972; Delbecq et al., 1975).

Flanagan's approach to data analysis was suggested for use in the transformation of the raw data. In the Critical Incident methodology, Flanagan (1954) advised that each idea be written onto a separate card for the ideas to be categorized and the process of analysis begun by the sorting of a small sample of ideas. After initial categories are established and defined, the remaining ideas are classified. Throughout the analysis process, redefinition of categories and the establishment of new categories occurs frequently to accommodate all ideas. The definitions for all the categories then should be checked with relation to the actual ideas classified in the category. If desired, the categories may be subdivided so similar ideas are placed together. The

classification bias, which might affect the analysis of the data, is reduced as the number of persons categorizing the ideas increases (Delbecq et al., 1975).

V. VALIDATION AND RELIABILITY

An effective evaluation instrument measures what the evaluator wants to measure. Different types of validity determine various instruments' effectiveness. Content validity is accomplished by judging whether each item and item distribution covers the subject being measured as desired (Cronbach, 1960).

Coefficient-alpha is a standard method used for calculations in estimating the reliability of attitude scales which contain no "right" or "wrong" answers, but assess the degree of agreement of the respondents on the answers given. The coefficient obtained in calculating Cronbach's alpha is a measure of internal consistency or homogeneity of the test material. If the items on the test measure the same attribute, then the reliability coefficient will be high; but if the items measure different attributes, then the coefficient will be low (Ferguson, 1966; Cronbach et al., 1972; Anastasi, 1976; Lounsbury, 1978).

CHAPTER III

PROCEDURES

An instrument to assess students' perceptions of the learning climate was designed in three stages to be used by the faculty in program evaluation and improvement of the learning climate for future students. It was authenticated by asking all 1978 CUP graduates of 11 accredited generalist programs to complete the instrument.

The process for the development and validation of the learning climate instrument is outlined in Figure 1. A three-stage process was adopted to determine students' perceptions of incidents that affected their ability to implement previously learned theories in clinical situations. The stages were (1) identification process of clinical experience incidents or climate indicators; (2) classification process of clinical incidents or climate indicators; and (3) validation process of the identified climate indicators, as perceived by graduates of eleven generalist programs in coordinated dietetics.

I. IDENTIFICATION PROCESS

The Nominal Group Technique (NGT) was selected as the process to identify experiential incidents or climate indicators perceived by graduates of Coordinated Undergraduate Programs (CUP) in Dietetics as supporting or not supporting learning in the major clinical facilities. The perceived incidents were the basis for developing a learning

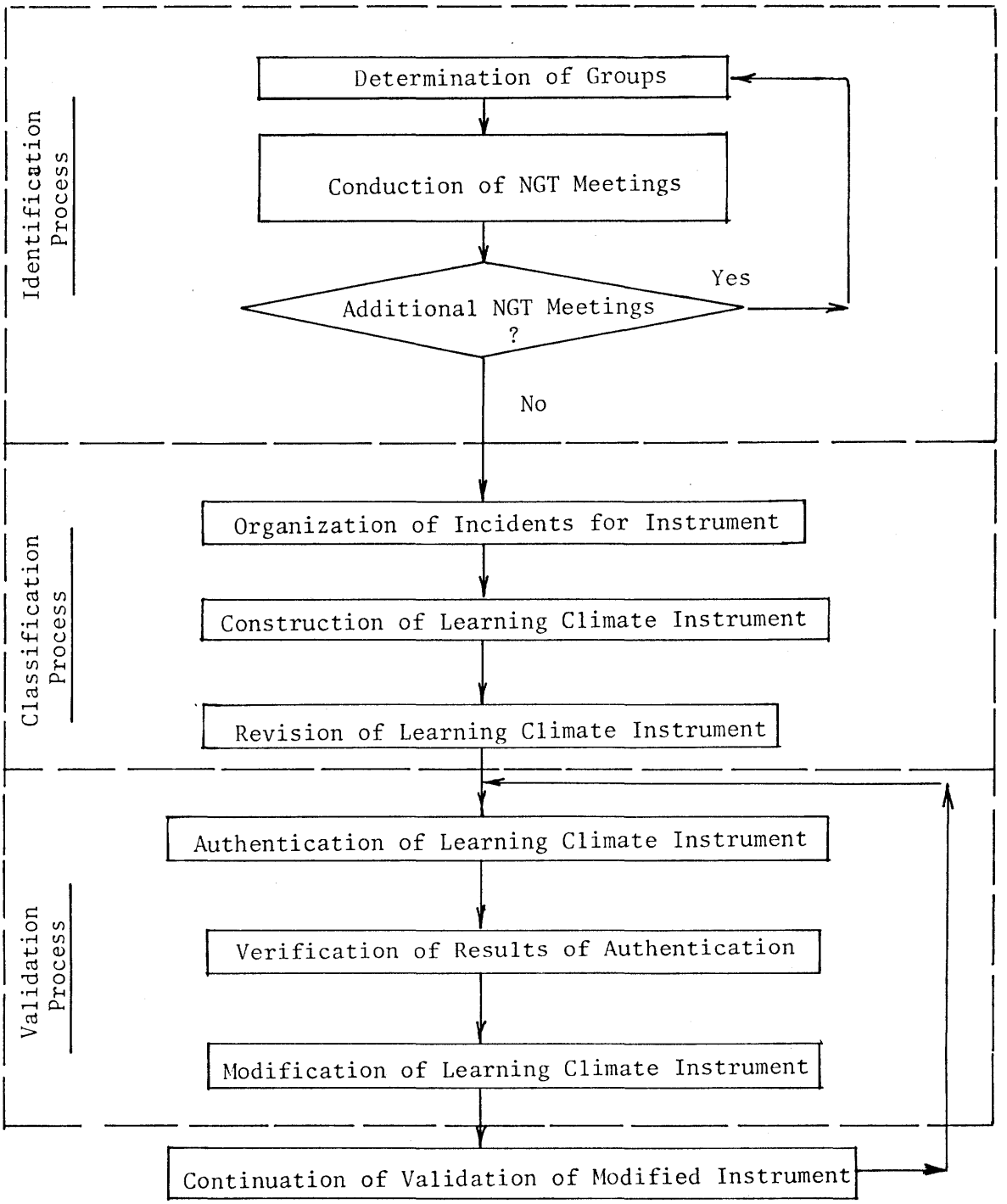

Figure 1. Process for Development of an Instrument to Measure Learning Climate in Clinical Facilities for Coordinated Dietetic Programs with a Generalist Emphasis.

climate instrument to be used by dietetic programs to assess the learning climate.

Determination of Groups for NGT

Six groups of five to nine seniors and graduates of one year in the coordinated dietetic programs at two southeastern universities were asked to participate in the NGT process to identify clinical experience incidents that affected the students' implementation of learning in the major clinical facilities. Two schools were selected as representative samples regarding types of clinical facilities used in a generalist CUP.

Program I. The CUP in Auburn University was developmentally accredited by ADA, graduating the second class of 14 students in June 1978. Major clinical facilities used were one large hospital located in the university area, two hospitals 40 miles from the university, three hospitals 50 miles from the university and the university food-service. Thus, the students traveled 80 to 100 miles twice a week until the last quarter of the senior year when the trip was made four times a week. The NGT process was conducted with two groups of seniors the third week of May 1978, four weeks prior to graduation June 1978.

Program II. The generalist CUP in University of Tennessee, Knoxville (UTK), was fully accredited by the American Dietetic Association (ADA), having graduated five classes. Three large general hospitals were utilized to provide in-depth clinical experiences for 14 of the 1978 senior students in one city and three 1978 seniors in two large teaching hospitals in a city 100 miles from the campus, where the

students resided. Data were collected from the NGT groups in a three week period at the end of May 1978, or approximately two weeks before CUP seniors graduated. Program II graduates of the 1977 class also were utilized in two groups to provide a different perspective to the graduating seniors.

Conduction of NGT Meetings

The participants were given name tags as she/he arrived for the meeting and the NGT process was explained to the prospective participants. The students were allowed to question the researcher relating to each one's role in the meeting. A consent form (Appendix A, Form A.1), as approved by the committee on Human Subjects, was signed by each person. All of the students participated.

Generation of learning incidents. Four open-ended questions (Appendix A, Form A.2) were constructed considering opportunities of the students for learning experiences in the clinical facilities, as supportive or nonsupportive of the student's learning, and for learning the various subject areas; also included were experiences for coordination of theory and practice by students in relation to the entry-level competencies needed by the dietitian. Worksheets with the four questions were distributed for use during the silent generation of ideas as the first step in the NGT process. Each question was read aloud for clarity and to assure that students understood the questions. The participants were informed that all four questions requesting incidents did not have to be answered. However, students were asked to record all of

the incidents that they remembered in relation to any one of the questions. The students worked silently for five minutes to recall incidents in response to the four questions. In addition, participants were asked to cite a reason for each incident's occurrence.

Discussion and clarification of incidents. Following the silent generation of ideas, group members reported each incident in round robin fashion, one at a time. If duplication of incidents was found, the duplicate was not reported; but if the incident was different in the student's view, it was included. The incidents were reworded in terse phrases for ease in recording on a flip-chart. When reporting the incidents, members of the groups felt the need to explain the incidents in order to refine the incident for listing. Since this discussion occurred concurrently with generation of the incidents, steps two and three of the NGT process were combined.

Prioritization of incidents. Individual members determined relative importance of individual incidents by selecting the five incidents perceived as having the most impact on the development of a dietitian. After selecting the five priority incidents, each participant recorded an incident per card. To rank-order the incidents, each student spread the five cards on the table to see all five incidents at once. The card with the incident considered the most important by the student was given the highest rank of five. The number five was written in the lower right-hand corner of the card and it was turned over. Of the remaining four cards, the student selected the incident which was

considered the least important or which had the least effect on clinical training. This card was marked with a number one and turned over. The students were asked to determine which one of the remaining three incidents was the most important and to mark the card with a number four in the lower right-hand corner, and to mark the least important one with a number two. The remaining card was marked with a number three. The ranking was conducted without discussion among the students. The prioritized incidents were recorded on a tally sheet to determine if the incidents tended to cluster in terms of the ranking.

Need for Additional Meetings

To assure a comprehensive list of supportive and nonsupportive incidents, NGT meetings were conducted until no new incidents representing basic ideas were reported. As each meeting was held, increasing duplication was noted. The incidents generated by the last group consisting of 1977 graduates of UTK resulted in no new incidents reported. To verify that new incidents were not occurring, three clinical instructors with UTK were asked to review individually all incidents with relation to results from the last group. A consensus was reached that no new incidents occurred at the last NGT meeting, and no additional meetings were recommended by the instructors.

II. CLASSIFICATION PROCESS

Organization of Incidents for Instrument

Form C.1 (Appendix C) was used by three clinical instructors from UTK to organize incidents generated by the NGT groups. Incidents were

organized into three groups reflecting type of support and six areas of professional development. The third step was to determine duplication of incidents and to consolidate the duplicates.

Support for learning. The definition of the term supportive, used in the classification process, was "encouraging or helpful" as indicated in the incidents reported. The clinical instructors determined whether each incident had been supportive, nonsupportive, or neutral in its effect on the students. To make this classification easier, each of the one hundred and twenty incidents was typed onto a separate three-by-five card; then the cards were separated into three groups—supportive, nonsupportive, and neutral. If there was disagreement among the instructors these were discussed.

Professional development. The instructors then categorized the incidents according to six areas of professional development; personnel management, patient contact, team approach, inservice education, resource utilization, and general development (Appendix C, Form C.1). The tentative categories were established by determining the general areas with which the identified incidents were concerned. During the categorization, the instructors separated the cards by category before recording the results. The results were consolidated and 16 experience categories were identified for the construction of the questions.

Determination of duplicates. The final step was determining the duplication of concepts or similarities of incidents that had been

identified by the NGT groups. The duplicate incidents were consolidated for the construction of learning climate instrument.

Construction of Learning Climate Instrument

A checklist was constructed utilizing the categories and the incidents identified by the NGT groups. A general question was developed for each of the 16 experience categories with several possible reasons for its occurrence from the identified incidents. Since it was possible that the incident had occurred both successfully and unsuccessfully at different times in the student's training, both successful and unsuccessful incidents might be checked. Some of the identified nonsupportive incidents related to the students' not being allowed to perform rather than being unsuccessful. If no reasons or incidents were identifed by the NGT groups for a particular subject, the respondents were asked to write in reasons on the checklist.

Respondents were allowed multiple responses and the respondents were encouraged to add a reason in the "other" blank that was included on all formats. Thus, the responses could total more than the number of respondents. In addition, the students were asked to indicate whether the incident had an effect on their development, and if so to state briefly what the effect was.

Revision of Learning Climate Instrument

The instrument was reviewed by three instructors in Program II to determine if the checklist included all of the incidents. Suggestions for revisions in format and wording were incorporated. To determine understanding of terminology, ease in completion, and time required

for completion, the checklist was field-tested by four 1977 graduates of UTK. The results of the field-test were considered in finalizing the learning climate instrument.

III. VALIDATION PROCESS

Authentication of Learning Climate Instrument

The learning climate instrument was authenticated by asking all 1978 CUP graduates of 12 accredited generalist programs to respond to the checklist. Respondents were selected by contacting 12 directors of generalist coordinated dietetic programs including the two used for NGT Groups, who were asked for the names and permanent addresses of the 1978 graduates of the programs with which the directors were associated. These twelve programs were fully accredited or were eligible to become fully accredited by the American Dietetic Association by the end of 1978. A letter (Appendix D, Form D.1) was sent to the directors explaining the objectives of the research and eleven of the programs responded to the letter with a list of each program's 1978 graduates. The checklist, a letter explaining the study, instructions for completing the checklist, and a stamped, self-addressed postcard and envelope for return of the checklist was mailed to each graduate. The postcard was returned with the respondent's name on it and the unsigned checklist form was returned in the envelope. This procedure permitted identification of the nonrespondents for a follow-up reminder, but guaranteed anonymity for the respondents' answers on the checklists. The checklists were coded only by the program from which the student

was a graduate. A total of 158 graduates were mailed the checklists on July 14, 1978, and return was requested by July 31, 1978. Cards to remind fifty nonrespondents were sent on August 14, 1978.

Verification of Results of Authentication

The Statistical Package for the Social Sciences (SPSS) was utilized to compute frequencies of responses and statistical analysis of all the responses (Nie, et al., 1975). A multiple response program also was employed to determine the number of respondents checking more than one response to the same question. Reliability was computed by SPSS using the alpha-Cronbach formula that tested for interitem consistency of responses. The standard method for computing Cronbach's coefficient-alpha is used for estimating the reliability of attitude scales which contain no "right" or "wrong" answers, but assess the agreement of the respondents on the answers given. In the computations used on this instrument, the yes answers were weighted two and the no answers were weighted one but when both yes and no answers were given by the same respondent, the answers were averaged or weighted with 1.5. Coefficient-alpha was computed as follows:

$$\alpha = \frac{n}{n - 1}\left(\frac{s_t^2 - \sum_{i=1}^{n} s_i^2}{s_t^2}\right)$$

where:

n = number of items

s_t^2 = variance of the total scores (derived by summing individual test scores for each student)

s_i^2 = variance of item 1 (derived by summing all item variances, i.e., $s_1^2 + s_2^2 + s_3^2 + \ldots s_n^2$).

Modification of Learning Climate Instrument

Following the analysis of results, the learning climate instrument was modified for general use by incorporating changes based on responses obtained from students in selected dietetic programs. Utilization of the instrument by all coordinated programs for program evaluation would continue validation by indicating changes required for authentication of the instrument.

CHAPTER IV

RESULTS

Six groups of dietetic students from 2 university dietetic programs and graduates from 1 university dietetic program identified 120 experiential incidents which were assigned to 6 categories and placed into 16 subcategories during the organization and construction processes of the instrument. The 16 subcategories were modified to form the sections on the developed checklist. The incidents were used as reasons for successful, unsuccessful, or not allowed experiences. The checklist was designed to assess the students' perceptions of the learning climate in clinical facilities utilized in coordinated dietetics programs.

I. IDENTIFICATION PROCESS

Nominal Group Technique (NGT)

The Nominal Group Technique (NGT) consisted of two phases: (1) generation or identification of learning incidents with classification among group members and (2) prioritization of incidents or climate indicators by each member of the group. The six groups (Table 4.1) utilized for identification of experiential incidents were established from two generalist Coordinated Undergraduate Programs in Dietetics in the Southeast. During the NGT meetings participants identified 120 experiential incidents (Appendix B, Tables B.1-B.6) perceived as affecting their ability to practice previously learned concepts in the clinical

TABLE 4.1

Composition of Nominal Group Technique Groups Identifying Experiential Incidents or Climate Indicators in Clinical Facilities of Two Coordinated Dietetic Programs

Group	Program Number	Number of Incidents Generated	Number of Members in Each Group	Composition of Group
A	I	21	6	Graduating CUP Seniors
B	I	20	7	Graduating CUP Seniors
C	II	24	9	Graduating CUP Seniors
D	II	19	5	Graduating CUP Seniors
E	II	21	5	2 1977 CUP Graduates 3 Graduating CUP Seniors
F	II	15	5	1977 CUP Graduates

Groups were coded with letters, Groups A and B from Auburn University and Groups C - F from University of Tennessee, Knoxville. A combination of letter codes and numbers were used to indicate the incidents identified by each group; for example, the first incident identified by Group A was coded A-1, the second incident A-2, etc.

The final phase of the NGT process was prioritizing incidents generated by each group. A summary of the prioritization showing supportive and nonsupportive categorization of the incidents is shown in Table 4.2. Students indicated no difficulty in selecting the five incidents most affecting learning in the facility. However, most participants had difficulty in placing the five incidents in rank-order. Many stated that the top five were equal in value. The tally sheet with the record of the responses for each NGT group indicated that most students selected the same top five incidents within each group as important in the learning which occurred in the clinical facility although the rank-ordering of the five incidents by the students varied. Performance of time and temperature studies was the only category not ranked by the students in the NGT groups.

A notation was made that the students discussed incidents that were uppermost in their minds at that point in time and the students' perceptions of the situation reflected that student's own frame of reference. This finding is in agreement with that of Hoffman (1965). For example, the students in one of the NGT groups expressed the opinion that the clinical facility personnel did not want dietetic students

TABLE 4.2

Rank-Order of Categorized Incidents as Prioritized by 37 Students Participating in Nominal Group Technique Meetings and Number of Incidents in Each Category Classified as Supportive or Nonsupportive by Three Clinical Instructors

Survey Question Number	Experience Subcategory	Number of Students Prioritizing in Top Five	Classification of Incidents	
			Number Supportive	Number Nonsupportive
3	Projects Implementation	28	5	23
16	Utilization of Concepts	27	23	4
10	Student Authority	20	3	17
1	Patient Counseling	19	12	7
9	Interviewing Skills	16	16	0
11	Health Care Team	16	4	12
4	Responsibility for Patients	12	12	0
15	Student Placement	11	4	7
6	Dietary Change Suggestions	9	8	1
14	Medical Educational Activities	7	7	0
7	Employee Counseling	6	6	0
2	Inservice Education	5	1	4
5	Performance of Time and Motion Studies	4	3	1
13	Being Away from Campus	4	2	2
8	Employee Evaluations	1	1	0
12	Performance of Time and Temperature Studies	0	0	0

in the facility. This perception of the students influenced the learning climate in the organization. Students in several of the groups did not understand the attitudes of the medical doctors toward dietitians and dietetic students; the students believed that the doctors had little respect for the dietetic profession. One group expressed concern about the dietitian's lack of understanding of roles of student and dietitian in a training situation. Another group perceived conflict between the head of the dietetic unit in a clinical facility and the clinical instructor who directed the students in the facility. The importance of the role of the instructor for optimal learning by the student is discussed by Wiedenbach (1964) and Fahy (1977).

II. CLASSIFICATION PROCESS

Three clinical instructors classified the 120 incidents identified by the 6 nominal groups in relation to degree of support in the clinical facility, the subject matter area to which the incident was assigned, and the duplication of incidents among the groups (Appendix C, Form C.1). Flanagan's (1954) approach was appropriate. All of the identified incidents were used in the construction of the checklist (Appendix C, Table C.1). Researchers (Delbecq et al., 1975) have said that classification bias is reduced as the number of persons categorizing the ideas increases.

Organization of Incidents

Support for learning. When the incidents were classified according to the support indicated by the statement of the incident, the

instructors agreed on the classification (Appendix C). For example, the clinical instructors classified incident C-1 as a supportive incident for the category of utilization of concepts listed as question 16—"Applied concepts about diseases in facilities in work with patients and with support of the staff." An example of a nonsupportive incident was D-19 for question 2 under the category of inservice education—"Did inservice education for employees, but had no follow-through by the employees because of lack of motivation and supervision."

Professional development. Categories were established initially by consideration of the experience areas required in the training of the dietetic student as outlined in the competencies suggested as requirements for dietitians. Examples of the subject matter areas that were utilized in the establishing of categories were personnel management, patient contact, team approach, inservice education, resource utilization, and general development.

Determination of duplicates. Duplication of incidents, as identified by the nominal groups, also were determined by the instructors with reference to specific terminology used by the NGT groups instead of basic ideas. An example of this type of duplication was the enumeration of the A-6, C-11, and F-3 as being nonsupportive and being incorporated in question 5 which was concerned with time and motion studies.

Construction of Learning Climate Instrument

The organization of incidents that was utilized in the construction of the instrument is summarized in Table C.1 (Appendix C). Terminology used by the students in the NGT meetings was transferred to the checklist; therefore, some words were used that would be considered synonomous by persons completing the checklist.

Revision of Learning Climate Instrument

Following review of the checklist by the clinical instructors and field-testing by four 1977 CUP graduates of UTK, the researcher discussed the clarity of terminology used and amount of time required for completion of the instrument with the instructors and the graduates. Minor changes in format and wording were made, but the consensus was reached that the terminology was clear and easy to follow by the persons asked to complete the checklist. All of the graduates required less than 30 minutes to complete the form and stated that the form was reasonable and understandable.

III. VALIDATION PROCESS

Authentication of Learning Climate Instrument

The revised learning climate instrument was mailed to 1978 graduates of 11 selected coordinated dietetic programs with the generalist emphasis. Within a four-week period 106 of the 158 mailed instruments and response cards were returned and four others were returned undeliverable. A total of 50 follow-up postcards were sent

to the nonrespondents reminding the graduates to return the instrument. Four people requested a second form (three had not received the original mailing and the other one had misplaced the form in moving.) A total of 126 or 82% of the survey instruments from a possible 154 respondents were returned and used for analysis.

Verification of Results of Authentication

A checklist item analysis (Appendix D, Table D.1) was conducted on the responses considering each of the sixteen general questions and the reasons checked for successful, unsuccessful, or not allowed experiences. Multiple responses to the reasons or climate indicators were allowed and various respondents checked from one up to all of the reasons listed. The effects of the experiences on the students were recorded when written in by the respondents. Responses written in by over 10% of the students concerning the effects of successful, unsuccessful, or not allowed experiences were added to the modified checklist developed for future use (Appendix E, Form E.1). Some of the responses written in by less than 10% of the students are discussed herein to indicate both sides of the question, but were not added to the modified checklist.

Most of the respondents answered the sixteen general questions, developed from the identified categories, yes or no as requested in the instructions and shown in the example. However, 56 of the 126 completed checklists (44%) included both yes and no answers on at least one question. The students reported that the incidents had occurred in some facilities and not others during the entire training period. Therefore, some of the percentage responses total more than

100% as the number and percent of students responding to each varies. The following paragraphs discuss the analysis of the instrument question by question from the checklist as responded to by the 126 students.

1. Patient counseling. All of the persons (99%) responding to the checklist had given diet instructions (one person's form had a blank page for question 1), although 2% had not given instructions under certain conditions (Appendix D). Successful diet instructions had been performed according to 72% of the multiple responses with 28% being performed unsuccessfully. Students said that successful instructions depended upon patients' cooperation and the dietitian's support and assistance to the student. Unsuccessful instructions were blamed on insufficient time allowances and problems with the patients. Deficiencies of the patients (apathetic, unreceptive, or uneducated) reflected the need for incorporation of sociocultural ideas into the instructions. Only 7% said that sociocultural ideas were not incorporated into diet instructions, but 61% of the students' responses indicated deficiencies on the part of the patients were among the reasons for unsuccessful diet instructions. The importance of self-concept and evaluation of attitude for future learning capability was recognized by Kreutz (1971) and Mager (1968), and said that the student should care enough to be motivated to do the best job possible. In response to the question relating to effect on student development as a dietitian, a large percentage (96%) indicated that successful diet instructions affected their development. Written-in responses such as increasing self-confidence

(58%) and knowledge (10%) and by providing practice (13%) indicated necessity for developing skills needed for doing diet instructions. Unsuccessful diet instructions influenced the development of 38% of the respondents. Fourteen percent attributed the effect to increasing their awareness of each patient's level of receptiveness. The three effects of successful diet instructions and the one effect of unsuccessful instructions were included on the modified form, since these were indicated by more than 10% of the respondents.

2. Inservice education. The students' perceptions of success in performing inservice education were related to the employees' receptiveness (90%) and the support of the student by the dietitian (61%). When students reported that inservice education was not successful, lack of employee motivation (20%) and lack of time (14%) were considered the primary reasons for failure. Provision of inservice education was not allowed for 8% of the respondents with lack of time being blamed as the key factor for the students' nonparticipation; however, 94% did perform inservice education. An interesting note was made that 70% of those not allowed to perform inservice did not report an effect on development as dietitians. However, students reported that effects of successful experiences included increased ability to deal with people (17%), increased self-confidence (14%), increased teaching skills (14%), and being given good experience (10%). These successful effects on students were added to the modified checklist.

3. Projects implementation. Respondents said that 81% were allowed to implement projects and 27% were not. To implement projects

successfully, students reported a need for the project to be supported by the administration (60%), and the dietitian in the clinical facility (67%). The biggest effect on the student with successful implementation of projects was increased self-esteem (21%). The main reason for unsuccessful implementation of projects as perceived by the students was that employees in the clinical facilities considered the projects as perceived by the students was that employees in the clinical facilities considered the projects as educational for the students' benefit, not beneficial to the employees (13%). When students were not allowed to implement projects, reasons cited were that the time element did not allow the implementation (29%) or that the administration did not want changes (26%). Several effects of successful implementation were added to the modified checklist, such as increased self-esteem (21%), increased amount of experience (13%), increased creativity of the individual (11%), and seeing benefits of projects performed (10%).

4. Responsibility for patients. Most of the students (94%) were given the responsibility for a certain number of patients or clients on a floor, ward, or clinic, but a few (8%) were not. The self-confidence of the student was the leading factor in producing success (92%) in assuming responsibility with 90% having counseled, instructed, and done follow-through with the patients as the second factor. The confidence of the dietitian in the student (81%) and administrative support for the dietitian (77%) were also factors considered affecting success. Responsibility for patients was not successful when follow-through was not possible (10%) and the dietitian lacked confidence in the student (8%). One of the reasons for responsibility not being

given to the students was that some dietitians were not responsible for certain floors or groups of patients. It was interesting to compare that 92% believed that the students possessed self-confidence which allowed them to be successful in accepting responsibility for the patients, yet 33% also believed that the experience of having responsibility for the patients affected them by increasing their self-confidence. Other effects of successful experience, which also were added to the modified instrument, were increased ability of the students to take more responsibility (17%) and students' being given experience in the actual working atmosphere (45%).

5. Performance of time and motion studies. The majority of the students (69%) had performed a time and motion study in the clinical facility, but 32% had not performed the study. Various factors seemed to affect the success of the performance including employee cooperation (55%), the support of the administration (45%), the benefit seen by employees (29%), and the change being enforced by the supervisors (20%). Unsuccessful performance of time and motion studies was blamed on lack of student authority (24%), supervisors not enforcing the studies (23%), and the benefit not seen by the employees (20%). Major reasons given for not performing a time and motion study included lack of opportunity (35%), no reason given to the student (20%), and the study was simulated in the laboratory (20%). Successful performance of time and motion studies affected 51% of the students whereas 45% of the students who were not allowed to perform a time and motion study did not believe it affected their development. Additional reasons written

in on not performing a time and motion study were added to the modified checklist as indicated above.

6. Dietary change suggestions. Seventy-nine percent of the students reported being allowed to make dietary change suggestions to the medical doctor whereas 21% did not. Successful suggestions were related to the communications that the health care staff had with the dietitian (59%) and the health care team relations (61%), but the most important factor was the receptiveness of the medical doctor to change (68%). Twenty-four percent responded that the medical doctor was not receptive to change suggestions, whereas 17% said that the medical doctor had a difference of opinion, that the medical doctor lacked respect for dietetic professionals and had poor communication with the dietetic staff. Suggestions were not made to the medical doctors by 37% of the students because students lacked opportunity and this reason, "lack of opportunity," was added to the modified instrument as were the successful effects such as increased self-confidence (24%), gave better relations with medical doctor (23%), and felt part of health care team (15%).

7. Employee counseling. Only 33% of the respondents were allowed to do employee counseling with 69% not being allowed to do so. Students did employee counseling successfully (66%) when there was a need seen for the students to gain the experience by management and when there was cooperation from the employees. Students (5%) did not do employee counseling successfully when employees were unreceptive,

when administration would not give authority to the student, when the employees still treated the student as a student, or when there was no opportunity for the students to perform the counseling. Students did not perform employee counseling when the necessity of the experience for the student was not recognized by the administration (66%), when the administration lacked confidence in the student (16%), or when there was a lack of opportunity (23%). Respondents who completed the revised checklist indicated that one effect of successful counseling was ability to develop better relations with employees (35%). One effect of not doing the counseling reported was a belief by the students that experience in counseling was limited (13%). These effects of successful counseling and not doing counseling were included in the modified checklist.

8. Employee evaluations. Responses indicated that 31% of the students conducted employee evaluations whereas 68% did not. Students did employee evaluations successfully when the administration recognized the need for the students to gain experience in performing employee evaluations (78%). Confidence of the administration in the student (56%) and cooperation of the employees (51%) also contributed to the students' successful performance. Students' responses indicating effects of successful evaluations that needed to be added to the modified checklist (over 10%) were increased recognition of others' values, gave needed experience, and increased rapport with employees. Employee evaluations were not done successfully when contacts with

employees were limited (7%) and when there was no opportunity (4%). Students were not allowed to perform employee evaluations when the necessity for the experience was not recognized by management (58%) or when there was no opportunity (19%). The effect of "being denied the experience" was added to the modified checklist when 22% of the respondents wrote in that effect as a result of not being allowed to perform employee evaluations.

9. Interviewing skills. Participation in interviewing prospective employees was allowed with 31% of the students whereas 68% were not allowed to participate. Approximately two-thirds of the students were not allowed to participate in employee interviewing, evaluation, or counseling. According to Infante (1975) and Wiedenbach (1969), the students' ability to apply the theory learned in the classroom at a later time will be reduced because they were not allowed to practice it soon after learning the theory. Studies done by Sanfort et al. (1973a and 1973b) indicated that these administration competencies are important for the entry-level dietitian. Participation was perceived to be successful when the student exhibited self-confidence (56%), when the dietitian backed the student (49%), and when the manager had confidence in the student (41%). Effects of successful interviewing cited by students, that were included in the modified checklist, were that the students saw qualifications needed for interviewing (38%) and were given experience (15%). Fifteen percent were allowed observations only, but considered the observations as successful participation in

interviewing prospective employees. According to the checklist responses, students were not allowed to participate in interviewing prospective employees when management lacked confidence in the student (21%) or when there was no opportunity (46%). It was interesting to note students' perceptions about the influence of participation in interviewing with 74% of the successful experiences having an influence on development and 29% of the not allowed experiences affecting development. When the modified checklist was developed, no opportunity was added as a reason or climate indicator for not participating in interviewing prospective employees. Students' beliefs that not participating limited their experience or ability to develop skills of interviewing was added as an effect on the instrument because 25% had listed it.

10. Student authority. Students were given authority to accomplish assigned responsibilities (94%), but 15% reported not being given needed authority. Authority was given to students successfully with the backing of management (85%) and the cooperation of the employees (85%). Students were not given authority when the opportunity was lacking (89%) or when the time was not sufficient (79%). Positive effects of the successful use of authority on students which were added to the modified checklist were the development of managerial ability (26%), increased self-confidence (22%), and learning to function as a registered dietitian (11%).

11. Health care team. Student responses showed that 91% were allowed to act as members of the health care team and 19% were not

allowed this experience. When the dietitian had respect for the student (83%), when the dietitian contributed to the team (78%), and when the medical doctor had respect for the dietitian (74%), the students acted successfully as members of the health care team. Reasons given for students not being allowed to act as members of the health care team were that the medical doctor did not believe that the dietitian contributed to the team (42%) and that the medical doctor lacked confidence in the dietitian (33%) and in the dietetic student (29%). Lack of administrative support (25%) was another reason given with reference to not being allowed to act as members of the health care team. Positive effects of successful action for the students included on the modified instrument were that the students realized the importance of the team concept (44%) and that the students' self-confidence was increased (17%). Effects of not acting as a health care team member as reported by students were that the health care team should be educated as to the role of the dietitian (13%) and that few persons think of the dietitian as a member of the team (17%). Bloom (1976) stressed the importance of students and personnel being motivated to work together in the learning process for it to be successful.

12. Time and temperature studies. Seventy-five percent of the respondents were allowed to utilize time and temperature study information in the clinical facility, but 25% did not have the experience. Several factors seemed to play a part in the success of students' using this information including satisfactory equipment

(71%), support of the dietitian for the student (70%), and receptiveness of the employees (59%). Time and temperature information was not utilized successfully when the employees did not consider the study important (13%) or when there was a lack of supervision of the employees (9%). Reasons given for not being allowed to utilize the information from a time and temperature study were reported as no time or opportunity (29%), the dietitian did not see value (16%), or no reason was given to the student (16%). These reasons for not utilizing time and temperature study information were added to the modified checklist. The importance of the use of the information gained from a time and temperature study was impressed upon the students who were allowed to utilize the information in the clinical facility (26%) and this effect also was included in the modified instrument under effects of successful experiences.

13. Being away from the main campus. The subject of students' being in clinical facilities away from the main campus for extended periods of time was included in the checklist for the students' response, if applicable. If not applicable to them, the students were to skip the question and move to answer question 14. However, when the responses were analyzed, it was believed that some respondents interpreted incorrectly the question and conditions for answering the question. The researcher concluded that students interpreted the requirement of going across town for a few hours from the campus as having to be away from campus. Therefore, the terminology in the question and the conditions for answering the question were clarified on the modified

checklist. Students said that being required to be away from the main campus was beneficial (70%) because the students could make more decisions and be independent (74%), students had more individual freedom to learn (72%), and there was more continuity of learning (63%). Having more facilities used was another benefit cited (11%) and was added to the modified instrument. Reasons that being away from the main campus were not beneficial (17%) included lack of communication with the instructor on campus (71%), shortage of references and materials off-campus (29%), and students should not be forced to move off-campus (24%). Effects reported by the students with beneficial experiences were better learning experiences (33%) and increased maturity of the students (15%). These effects were included also on the modified checklist. The main effect of experiences not being beneficial to students was resentment of the students (4 of 21 or 19%) and the experiences being stressful to students (3 of 21 or 14%). The effects of both beneficial and not beneficial experiences on the students were added to the modified form.

14. Medical educational activities. The majority of respondents (93%) participated in medical educational activities such as rounds, surgery, or conferences in the clinical facility, but 11% did not participate. Students reported that successful participation made the dietetics profession more meaningful to the students (85%), made the medical doctors more aware of the dietitian's interest in medicine (79%), and helped the medical doctors recognize the importance of the dietitians' knowledge of the medical profession (73%). Beneficial

effects to the dietetic students, which were added to the modified checklist, were the students' increased awareness of being part of the medical team (25%), and increased knowledge of the medical profession (20%). Students did not attend medical educational activities because no opportunity existed (57%) and this item was included on the modified checklist as a climate indicator. Respondents said the effect of not attending limited their knowledge (36%) and this effect was added to the modified instrument.

15. Student placement. With regard to student placement, approximately half of the students (56%) believed that the faculty considered all of the implications in the placement decision and the other half (52%) did not agree. The numbers indicated that ten students answered both yes and no to this question which affected the percentages. Reasons that some students believed that all implications were considered included a variety of experiences given for them (27%), harmony was achieved in the facility (20%), and the techniques for placement were the best under the circumstances (17%). These implications were placed on the modified checklist as climate indicators. The effect of learning from both good and bad situations was recorded by the respondents and this effect also was added to the modified instrument as an effect of beneficial experiences. The students, who reported that all implications were not considered, cited reasons such as lack of effective professional supervision in the clinical facility (50%), placement of too many students in a facility so that their expertise could not be applied well (38%), and

that the facilities were not educationally oriented to working with students (29%). Effects of all implications not being considered which were reported by the students and included on the modified checklist were a negative effect (15%) and limited experience for the students (12%).

16. Utilization of concepts. All of the students (100%) responded that they were allowed to practice concepts learned in the classroom to gain expertise in the utilization of the concepts. However, some of the students responded that they were not allowed to practice all of the specific concepts listed on the checklist. Of the thirteen concepts listed, 100% of the students practiced some form of nutrition education, 94% utilized charting skills and utilized standardized recipes, 93% were able to utilize specific disease characteristics learned, and 91% used nutritional assessment in the clinical facility. Concepts utilized less often included forcasting techniques (52%) and setting up scheduling patterns (57%). The students reported that being able to put theoretical concepts into practical application had the most important effect on development as a dietitian (37%) and being more prepared for responsibilities was noted as the next most important effect (27%). Another positive effect that the students reported was a better understanding of the field of dietetics (14%). The three recorded effects were added to the modified checklist.

Validity. The modified instrument was based on student responses to the checklist. When 10% or more wrote in a reason or an effect on

the checklist, it was added to the modified instrument in Appendix E. Four additional reasons for successful experiences in the clinical facilities were added. More than 10 percent said that they were not allowed to perform 12 of the experiences listed and these reasons were added to the modified instrument. If less than 10 percent checked the reason, it was deleted from the modified instrument. Five reasons were deleted for unsuccessful experiences and three deleted for experiences not being done. If 10 percent or more wrote in effects, these were added to the instrument. Twelve effects were added for successful experiences, four for unsuccessful, and four for not being done. Items added are noted with an asterisk on the modified instrument (Appendix E).

Reliability. A reliability coefficient was computed on the yes-no answers of the checklist using Cronbach's coefficient-alpha according to the calculations of the Statistical Package for the Social Sciences (Nie et al., 1975) and was found to be 0.2411. The coefficient was not expected to be high unless items were specifically designed to be similar in nature.

Summary of Findings. The climate indicators common to two or more experience categories or questions on the survey are summarized in Table 4.3. The relation of the climate indicators to experience outcomes as perceived by the surveyed students was shown as percentage of multiple responses for each incident. The reasons or climate indicators that were more nearly alike in meaning were combined in Table 4.3, but reasons which might be questionable as to similarity were kept separate. For example, climate indicators such as cooperation of employees and receptiveness

TABLE 4.3

Summary of Climate Indicators Common to Two or More Checklist Questions and Relation to Experience Outcomes as Perceived by Graduates of Eleven Generalist Coordinated Undergraduate Programs in Dietetics

Experience Outcome	Climate Indicator or Experiential Incident	Checklist Question Number Using Indicator	Percent* Multiple Responses
Successful	Confidence of R.D. in student	1,4,11	84
	Support and backing of R.D.	1,2,3,4,9,12	79
	Self-confidence of student	1,4,9	89
	Receptiveness of employees	2,3,5,12	68
	Support of administration	3,5,10	80
	Cooperation of supervisors	5,10,12	59
	Cooperation of employees	5,7,8,10	78
	Confidence of administration	7,8,9	58
	Necessity for experience seen by administration	7,8	85
Unsuccessful	Lack of confidence of R.D. in student	1,4	22
	Lack of aid and support by R.D.	1,12	18
	Lack of self-confidence by student	1,4,11	30
	Lack of employee interest	2,3,5,12	61
	Lack of administrative support	3,5,10	44
	Lack of cooperation of supervisors	2,3,5,10,12	36
	Lack of cooperation of employees	3,5,10	38
Not Allowed	Lack of administrative confidence	7,8,9	21
	Lack of cooperation of employees	7,8,10	4
	Necessity for experience not seen by administration	7,8	75
Beneficial	Increased ability to take responsibility	13,14,16	62

*Percent multiple responses for experience outcome.

of employees could be interpreted with similar or different meanings. The climate indicators for successful experiences were the opposites of climate indicators for unsuccessful experiences. Responses indicated that the dietitians and the personnel in the clinical facilities played important roles in students' having successful or unsuccessful learning experiences in the clinical facilities. Cooperation, confidence, and receptiveness were shown to be key factors in success, but these characteristics must be merited by the students. A summary of responses indicated that the majority of students surveyed were satisfied with the training received in the coordinated dietetic programs. All of the multiple responses on Table 4.3 were above 50% for successful experiences and only one was above 50% for unsuccessful experiences (lack of employee interest) and for not allowed experiences (necessity for experiences not seen by administration). The responses indicate that the coordinated programs need to evaluate the training given students in a specific program to determine needed changes for future students.

Modification of Learning Climate Instrument

The learning climate instrument was modified for general use by all coordinated undergraduate programs in dietetics with a generalist emphasis. The modification process in changing the initial instrument involved eliminating the items that had received less than 10% response and adding items that more than 10% of the students had written in on the blanks provided in the instrument. The modified instrument (Appendix E) indicates the items added. All deleted reasons were under the unsuccessful category of indicators for Questions 1, 2, 3, 10, and 12. These incidents included

"M.D. lacked confidence in student," "techniques taught were not realistic," "administration feared poor public relations," "quality of the projects was poor," "unable to apply class concepts of managements," and "R.D. didn't think it would be accepted." Reasons for nonperformance which were deleted were "lack of self-confidence of the student" and "students saw other students ridiculed for mistakes in their efforts by management" under Question 9, and "R.N. didn't feel that R.D. contributed to team" on Question 11. The modified instrument was designed to be administered to the seniors in coordinated dietetic programs during the month prior to graduation in improvement of the learning climate in the clinical facilities for the future students.

CHAPTER V

CONCLUSIONS, IMPLICATIONS, AND SUMMARY

I. CONCLUSIONS

The Nominal Group Technique (NGT) was utilized advantageously to identify incidents affecting the learning climate in clinical facilities for dietetic training. NGT was an effective methodology for generation of ideas from a group of persons for development of this instrument.

The evaluation instrument developed for use by coordinated undergraduate dietetic programs with a generalist emphasis was considered of general use in assessing the learning climate and could be used advantageously in all Coordinated Undergraduate Programs in Dietetics with a generalist emphasis.

According to the responses on the instrument, students were not willing to accept the responsibility for motivation of employees and patients to make desired changes in behavior. The need for motivation was recognized in the responses, but the students did not accept the responsibility as being that of the dietitian or student dietitian.

II. IMPLICATIONS

Many studies have indicated the importance of the learning climate (Rines, 1963, Aiken, 1977; Allen, 1977). The learning climate instrument

was found an effective assessment tool for use by coordinated dietetics programs. It is recommended that the modified instrument be utilized in all coordinated undergraduate programs in dietetics with a generalist emphasis. The checklist should be administered to the seniors in the generalist CUP in the last month of the students' training prior to graduation. Additional validity and reliability tests should be conducted on each year's results with the graduating seniors. Modifications should be made as deemed necessary to individualize the instrument for each coordinated program. It is recommended that follow-up research with the respondents to this instrument be made to determine any change of opinion after five years' work experience. Additional research should be done to determine the possibility of use of the instrument for specialized coordinated dietetics programs and for dietetics internships since the instrument might be utilized to advantage in these dietetic programs.

It is recommended that students' training include greater emphasis on the understanding of their role and the development of their skills in motivation of patients and employees to make desirable behavior changes. Students do not recognize the need for their motivation of patients and employees to make behavior changes and tend to blame unsuccessful experiences, due to lack of motivation, on the patients and employees. Therefore, the dietetic instructors and students, must understand and apply principles of motivation in all aspects of the experiences in clinical facilities. Inservice education should be planned and provided to medical and allied health personnel in clinical

facilities to familiarize the persons with the role of the dietetic student with the health care team. Additional training of dietetic personnel in the procedures for establishing and maintaining relationships with medical and allied health personnel would be beneficial to the dietetic student.

Since approximately two-thirds of the students were not allowed to participate in employee interviewing, evaluating, or counseling, further investigation as to the influence of this upon their performance in these areas needs to be undertaken. Methods of providing and promoting experiences in these areas need to be found.

III. SUMMARY

Coordinated undergraduate programs in dietetics utilize clinical facilities in day-to-day operations to provide learning experiences for the dietetic students and for the students to practice theoretical concepts in the actual working environment as part of the learning experiences. The organizational climate in the clinical facilities then becomes a form of classroom or professional learning environment for the dietetic student. The nonverbal behavior utilized by the dietitians and personnel in the clinical facilities are thought to affect the learning of the dietetic students who are attempting to apply concepts learned in the classroom didactic situation. Therefore, the evaluation instrument developed assesses students' perceptions of the learning climate in order for the faculty to improve the climate for future programming.

Nominal Group Technique (NGT) was used to identify incidents that affected the learning in the clinical facility by the dietetic students and three clinical instructors classified the incidents generated to assist the researcher in the development of the instrument. The classification process involved a grouping by the clinical instructors of the generated incidents with reference to (1) the incident's supportive or nonsupportive status of the student's ability to utilize concepts learned; (2) the major subject area of the incident; and (3) the duplication of incidents found. The instrument was developed utilizing sixteen basic questions as identified in the classification of major categories of subject area. The identified incidents from the NGT meetings were used as reasons for support or nonsupport under each question. Reasons for the students' lack of experiences and the effects of the experiences on the respondents were included.

Following the revision and refinement of the instrument, the checklist was mailed to 158 of the 1978 graduates of eleven selected coordinated dietetics programs to validate the instrument. There was an 82% response rate and all of the eleven programs were represented in the return.

The responses were analyzed for commonalities and differences and the evaluation instrument was modified for future use in all coordinated dietetics programs with a generalist emphasis. Four additional reasons for successful experiences in the clinical facilities and 12 reasons for not being able to perform the experiences were added to the modified checklist, as indicated. Six reasons for unsuccessful

experiences and three reasons for nonperformance were deleted. No effects were on the original checklist; therefore, twelve effects were added to the modified instrument for successful experiences, four for unsuccessful experiences, and four for experiences not being done.

This study has demonstrated the importance of proper orientation of facility personnel to the role of the CUP student in the facility. The student needs to be made aware of the working situation in which the training will occur. The clinical instructors can help the students to utilize the perceptions of the clinical facilities to further their development as effective dietitians. In addition, the clinical instructors should use the information to assist the clinical facilities in making changes that will enhance future students' learning experiences. The didactic faculty of the university might use this type of information effectively in teaching their courses. Assessment of the climate by personnel and professionals in the clinical facility and clinical instructors related to the facility might be accomplished in the future to correct the students' perceptions that might be erroneous.

LIST OF REFERENCES

LIST OF REFERENCES

Aiken, E. 1977. Determinants that affect the learning process of people of diverse backgrounds. In "Productivity," National League for Nursing, New York.

Allen, M. 1977. "Evaluation of Educational Programs in Nursing." World Health Organization, Geneva.

Anastasi, A. 1976. "Psychological Testing." Macmillan Publishing Company, New York.

American Dietetic Association. 1969. Goals of the lifetime education of the dietitian. J. Am. Dietet. A. 54:91.

American Dietetic Association. 1971. Position paper on education for the profession of dietetics. J. Am. Dietet. A. 59:372.

American Dietetic Association. 1976a. "Essentials of a Coordinated Undergraduate Program in Dietetics Leading to a Baccalaureate Degree." Am. Dietet. Assn., Chicago.

American Dietetic Association. 1976b. "Guidelines for Evaluating Dietetic Practice." American Dietet. Assn., Chicago.

Beatty, W. H. 1969. Emotion: missing link in education. In Beatty, W. H., ed., "Improving Educational Assessment and An Inventory of Measures of Affective Behavior." Association for Supervision and Curriculum Development, Washington.

Bell, C. 1973. The role of evaluation in curriculum development. In "Proceeding of the Seventh Conference, Foodservice Systems Management Education Council." San Antonio, Texas.

Bell, C. 1975a. Competency-based education: the state of the art. In "Proceedings of the Eighth Conference, Foodservice Systems Management Education Council." Denver, Colorado.

Bell, C. 1975b. Competency-based education: role competencies versus entry-level competencies. In "Proceedings of the Eighth Conference, Foodservice Systems Management Education Council." Denver, Colorado.

Bell, C. 1975c. Evaluation of competency-based education. In "Proceedings of the Eighth Conference, Foodservice Systems Management Education Council." Denver, Colorado.

Bloom, B. S. 1976. "Human Characteristics and School Learning." McGraw-Hill, New York.

Clissold, G. K. 1962. "How to Function Effectively as a Teacher in the Clinical Area." Springer Publishing Company, Inc., New York.

Cronbach, L. J. 1960. "Essentials of Psychological Testing." Harper and Row, New York.

Cronbach, L. J., Glesser, G. C., Nanda, H., and Rajaratnam, N. 1972. "The Dependability of Behavioral Measurements: Theory of Generalizability for Scores and Profiles." Macmillan Company, New York.

Delbecq, A. L. 1967. The management of decision making within the firm: three strategies for three types of decision making. Acad. of Mgt. J. 10(4):329.

Delbecq, A. L., Van de Ven, A. H., and Gustafson, D. H. 1975. "Group Techniques for Program Planning." Scott, Foresman and Company, Glenview, Illinois.

Dietetic Internship Council. 1974. Competencies of the entry-level generalist dietitian. Unpublished paper. Am. Diet. A., Chicago.

Doherty, E. 1973. Educating the dietetic technician. J. Am. Dietet. A. 62:421.

Dowd, D. J. and West, S. C. 1969. An inventory of measures of affective behavior. In Beatty, W. H., ed., "Improving Educational Assessment and an Inventory of Affective Behavior." Association for Supervision and Curriculum Development, Washington, D.C.

Evan, W. M. 1968. A systems model of organizational climate. In Tagiuri, R. and Litwin, G. H., ed., "Organizational Climate." Harvard University, Boston.

Fahy, E. T. 1977. Baccalaureate education in nursing. In Fitzpatrick, M. L. "Present Realities/Future Imperatives in Nursing Education." Teachers College Press, Columbia University, New York.

Ferguson, G. A. 1966. "Statistical Analysis in Psychology and Education." McGraw-Hill, New York.

Fivars, G. and Gosnell, D. 1966. "Nursing Evaluations: The Problem and The Process." The Macmillan Company, New York.

Flanagan, J. C. 1954. The critical incident technique. Psy. Bull., 51(4): 327-358.

Halpin, A. W. 1966. "Theory and Research in Administration." Macmillan Company, New York.

Hart, M. 1974. Dietetic education—past, present, and future. J. Am. Dietet. A., 64-612.

Heins, M. J., Hawks, T. L., Busch, J. C., DeRidder, L. M., Flitter, H. H., and Ray, J. R. 1971. "Evaluation and Prediction of Clinical Performance in a School of Nursing." St. Mary's Memorial Hospital School of Nursing, Knoxville, Tennessee.

Hellriegel, D. and Slocum, J. W., Jr. 1974. Organizational climate: measures, research, and contingencies. Acad. of Mgt. J., 17:255-280.

Hoffman, L. R. 1965. Group problem solving. In Berkowitz, L., ed., "Advances in Experimental Social Psychology, Part II." Academic Press, New York.

Howe, J. G. 1977. Group climate: an exploratory analysis of construct validity. Org. Behav. and Human Perf., 19:106-125.

Huber, G. and Delbecq, A. L. 1972. Guidelines for combining the judgements of individual group members in decision conferences. Acad. of Mgt. J., 15(2):1454.

Infante, M. S. 1975. "The Clinical Laboratory in Nursing Education." John Wiley, New York.

Ingalsbe, N. and Spears, M. C. 1979. Development of an instrument to evaluate critical incident performance. J. Am. Dietet. A. 74:134.

Jacob, P. E. 1957. "Changing Values in College." Harper, New York.

Kemp, J. E. 1977. "Determining the Plus and Minus Outcomes of Innovation in Nursing Education." National League for Nursing, New York.

Krathwohl, D. R., Bloom, B. S., and Masia, B. B. 1964. "Taxonomy of Educational Objectives—Handbook II: Affective Domain." David McKay Co., N. Y.

Kreutz, S. 1971. Organizing the components of curriculum. In "Proceedings of the Sixth Conference, Foodservice Systems Management Education Council." Columbus, Ohio.

Lewis, M. N. and Beaudette, T. M. 1977. Coordinated education in dietetics. J. Am. Dietet. A. 70:596.

Likert, R. 1967. "The Human Organization." McGraw-Hill, New York.

Litwack, L., Sakata, R., and Wykle, M. 1972. "Counseling Evaluation and Student Development in Nursing Education." W. B. Saunders, Philadelphia.

Litwin, G. H. and Stringer, R. A., Jr. 1968. "Motivation and Organizational Climate." Harvard University, Boston.

Lounsbury, John. 1978. Private communication. University of Tennessee, Knoxville.

Mager, R. F. 1968. "Developing Attitude toward Learning." Fearon Pub., Belmont, California.

Merkel, J. 1977. Variables that hinder learning. In "Instructional Innovations: Ideals, Issues, Impediments." National League for Nursing, New York.

Nie, N. H., Hull, C. H., Jenkins, J. G., Steinbrenner, K., and Bent, D. H. 1975. "Statistical Package for the Social Sciences." 2nd ed. McGraw-Hill, New York.

Rezler, A. G. and Stevens, B. J. 1978. "The Nurse Evaluator in Education and Service." McGraw-Hill Book Company, New York.

Rines, A. R. 1963. "Evaluating Student Progress in Learning the Practice of Nursing." Bureau of Publications, Teachers College, Columbia University, New York.

Rosenthal, R. and Jacobson, L. 1968. Teacher expectations for the disadvantaged. Scientific American, 218(4):19-23.

Sanford, J. P., McKinley, M. M., and Scruggs, M. 1973a. Graduates of hospital dietetic internships-I. Employment and administrative content of first positions in hospital dietetics. J. Am. Dietet. A. 63:254.

Sanford, J. P., McKinley, M. M., and Scruggs, M. 1973b. Graduates of hospital dietetic internships-II. Perceptions of administrative experiences in internships. J. Am. Dietet. A. 63:259.

Schweer, J. E. and Gebbie, K. M. 1976. "Creative Teaching in Clinical Nursing." The C. V. Mosby Co., St. Louis.

Scriven, M. 1973. The methodology of evaluation. In Worthen, B. R. and Sanders, J. R. "Educational Evaluation: Theory and Practice." Wadsworth Publishing Company, Belmont, California.

Shanklin, C. W. 1976. "The Assessment of the Feasibility for Using the Evaluation Component of a Model for Implementing and Evaluating a Competency-based Dietetic Program." Unpublished doctoral dissertation, The University of Tennessee, Knoxville.

Smith, D. W. 1968. "Perspectives on Clinical Teaching." Springer Publishing Co., New York.

Study Commission on Dietetics. 1972. "The Profession of Dietetics." Am. Dietet. A., Chicago.

Tagiuri, R., and Litwin, G. H. 1968. "Organizational Climate." Harvard University, Boston.

Tyler, R. 1971. "Behavioral Objectives in Curriculum Development." Educational Technology Publications, Englewood Cliffs, New Jersey.

Unklesbay, N. and Spears, M. C. 1975. Attachment learning: A humanistic educational experience. J. Am. Dietet. A. 67:449.

Van de Ven, A. H. 1974. "Group Decision Making and Effectiveness." Kent State University Press, Kent, Ohio.

Van de Ven, A. H., and Delbecq, A. L. 1972. The nominal group as a pilot research instrument. Am. J. of Pub. Health. 62(3):337-342.

Watson, D. R. 1976. Coordination of classroom and clinical experience. J. Am. Dietet. A., 69:621.

Welch, C. 1977. The climate for experimentation. In Fitzpatrick, M. L., ed., "Present Realities/Future Imperatives in Nursing Education." Teachers College Press, Teachers College, Columbia University, New York.

Wiedenbach, E. 1964. "Clinical Nursing a Helping Art." Springer Publishing Co., Inc., New York.

Wiedenbach, E. 1969. "Meeting the Realities in Clinical Teaching." Springer Publishing Co., Inc., New York.

Wiley, J. W. 1978. "Using Organizational Climate to Account for Differential Effects of a Management Training Program." Unpublished doctoral dissertation, The University of Tennessee, Knoxville.

Wilson, M. A. 1972. Undergraduate education in dietetics. J. of Nutr. Ed. 4:132.

Worthen, B. R. and Sanders, J. R. 1973. "Educational Evaluation: Theory and Practice." Wadsworth Publishing Company, Belmont, California.

APPENDIXES

APPENDIX A

FORM A.1

STUDENT CONSENT FORM

We would like your help in devising an evaluative instrument which may be used for self-evaluation by clinical facilities of coordinated dietetic programs. This would involve meeting with a group of fellow students to identify organizational incidents which supported or did not support your dietetic training in your major clinical facility.

If you would like to participate in this determination of incidents for such an evaluation instrument, please sign the consent form below. Your identity will remain anonymous since coding on the forms is to identify program only and no names will be used on the instruments developed.

CONSENT FORM FOR PARTICIPATION IN NOMINAL GROUP TECHNIQUE SESSIONS FOR IDENTIFICATION OF LEARNING INCIDENTS

I, _____, the undersigned agree to participate in identifying learning incidents for development of a program evaluation instrument. I voluntarily agree to participate and understand that I may withdraw my consent at any time without penalty. I have been informed to my satisfaction as to the nature of the project in which I will participate, and understand that I have the right to ask questions regarding the project prior to my participation. I further understand that my identity as a participant will remain anonymous in the instrument development and in any analysis or publication.

Signature _____ Phone _____

Address _____ Date _____

_____

FORM A.2

WORKSHEET FOR STUDENTS IN NOMINAL GROUPS

Questions to be considered:

1. Think of an occasion in the clinical facility when you used something you had learned in the classroom. If it worked to the benefit of you and the clinical facility, what was it about the organization that caused it (or allowed it) to be successful?

2. If you tried to apply something you had learned in the classroom and it did not have desirable consequences, what was it about the clinical facility that made this application unsuccessful?

3. Think of an occasion when you tried to apply or use something you had learned in the classroom and you couldn't use or apply what you had learned. What was it about the clinical facility that prevented the application of what you had learned?

4. Think of a situation where you wanted to apply something you had learned and you did apply it, but nothing happened. What prevented the successful application of the skills or concepts you wanted to apply?

APPENDIX B

TABLE B.1

Incidents Generated by Nominal Group A

No.	Incident	Classification	Question Number on Form
A-1.	Knowledge of specific disease learned in class and presented in case study form to R.D. who was receptive to the idea.	Supportive	16
A-2.	SOAP techniques were allowed to be carried out in the facility successfully.	Supportive	16
A-3.	Life cycle nutrition information related to and adapted to specific individual needs in the facility was helpful.	Supportive	16
A-4.	Information learned on nutritional assessment related directly to nutritional counseling which administration encouraged.	Supportive	16
A-5.	Interviewing techniques learned in the classroom were used successfully in patient visitation.	Supportive	9
A-6.	Time-motion study was tried to be effected in the facility with no visible results due to lack of interest or not wanting to change.	Nonsupportive	5
A-7.	Facility manager was unwilling to allow the student to put into practice classroom experiences.	Nonsupportive	10
A-8.	Through the foodservice, learning experiences were able to be applied in public schools with the manager's backing.	Supportive	10

TABLE B.1 (Continued)

No.	Incident	Classification	Question Number on Form
A-9.	Class experiences in menu planning and nutrition education were allowed to be put into practice in the private facility.	Supportive	10
A-10.	Portion control information was developed into a project and administration of the facility visibly disregarded the information.	Nonsupportive	3
A-11.	Layout design information presented as a project to the facility which incorporated the project results partially.	Supportive	3
A-12.	Failure of the M.D. and R.D. to allow the student to become a part of the health care team was due to failure of professional staff to recognize the importance.	Nonsupportive	11
A-13.	Placement of too many students in a small facility so that their expertise was not applied well.	Nonsupportive	15
A-14.	Nonresponse of patient following more than ample dietary counseling due to apathy and lack of education of the patient.	Nonsupportive	1
A-15.	Student restricted to observation rather than participation due to R.D.'s lack of information as to student's role.	Nonsupportive	10
A-16.	Sanitation and safety used in inservice education in a facility class with information well utilized.	Supportive	2

TABLE B.1 (Continued)

No.	Incident	Classification	Question Number on Form
A-17.	Sanitation and safety used in inservice education in a facility class with information not well utilized because it was scheduled during a break.	Nonsupportive	2
A-18.	Class information enabled student to make a recommendation to the M.D. concerning a product use.	Supportive	6
A-19.	Class presentation in a facility was not well attended due to poor communication with M.D.	Nonsupportive	11
A-20.	Student development of visual aides for facility use now used nationally.	Supportive	2
A-21.	Time and motion studies information learned in class effected a visible change in the facility when presented due to backing of administration.	Supportive	5

TABLE B.2

Incidents Generated by Nominal Group B

No.	Incident	Classification	Question Number on Form
B-1.	Worked on project but employees would not cooperate to make successful.	Nonsupportive	3
B-2.	Worked with clients who were receptive due to benefit to them and last year's students.	Supportive	2
B-3.	Used charting skills learned in class with backing of administration.	Supportive	16
B-4.	Did time and motion study that caused a change in procedure done by employees and was considered helpful.	Supportive	5
B-5.	Interviewing techniques improved by experience and help of R.D.	Supportive	9
B-6.	Made bulletin board that was well accepted because employees did not have to do it.	Supportive	3
B-7.	Tried to use nutritional assessment and personnel in facilities would not use it.	Nonsupportive	16
B-8.	Were to conduct class with doctor's approval but M.D. failed to tell patients.	Nonsupportive	11
B-9.	Not allowed patient contact because dietitian lacked confidence in students.	Nonsupportive	10
B-10.	Taught sanitation inservice classes using slides of employees which impressed them and effected a change in work habits.	Supportive	2

TABLE B.2 (Continued)

No.	Incident	Classification	Question Number on Form
B-11.	Suggested diet change for patients and M.D. supported the change due to good communication and relations with dietetic staff.	Supportive	6
B-12.	Worked as ward dietitian being given responsibility for counseling, instructing, and follow-up with patients due to confidence of R.D. in students.	Supportive	4
B-13.	Considered patients on diets, but patients were apathetic and/or uneducated which limited effectiveness of counseling.	Nonsupportive	1
B-14.	Tried to act as manager in production area for one week, but the experience was impractical because employees lacked confidence.	Nonsupportive	10
B-15.	Made diet change suggestion that was ignored by M.D. because M.D. had difference of opinion or was not receptive.	Nonsupportive	6
B-16.	Questions were asked of dietary personnel instead of looking in manual due to the personnel's perception of lack of time.	Nonsupportive	11
B-17.	Projects were successful in campus facilities because personnel were educationally oriented.	Supportive	3
B-18.	Suggestions made to student employees were not welcomed because working with peers.	Nonsupportive	10
B-19.	Inservice education was planned but not scheduled correctly for good reception.	Nonsupportive	2

TABLE B.2 (Continued)

No.	Incident	Classification	Question Number on Form
B-20.	Counseling not effective with patients because student and R.D. had fears of doctors.	Nonsupportive	2

TABLE B.3

Incidents Generated by Nominal Group C

No.	Incident	Classification	Question Number on Form
C-1.	Applied concepts about diseases in facilities in work with patients and with support of the staff.	Supportive	16
C-2.	Able to give diet instructions with help of dietitian.	Supportive	1
C-3.	Counseled employees with their cooperation and backing of administration.	Supportive	7
C-4.	Used nutrition education in facilities in the diet classes taught to patients successfully.	Supportive	1
C-5.	Did employee evaluations with administrator's aid.	Supportive	8
C-6.	Planned buffet and meal with application in facility of being responsible for results with backing of management.	Supportive	16
C-7.	Worked with supervisor to straighten out storeroom, but the work had no lasting effect due to lack of education and motivation of the workers.	Nonsupportive	10
C-8.	Applied sociocultural ideas in diet counseling with a change suggestion which M.D. ignored and no change was made.	Nonsupportive	6
C-9.	Applied sociocultural ideas in diet counseling with a change suggestion which M.D. accepted and change was made in the diet ordered.	Supportive	6

TABLE B.3 (Continued)

No.	Incident	Classification	Question Number on Form
C-10.	Unable to apply class concepts in administration due to a lack of authority and opportunity.	Nonsupportive	10
C-11.	Did time and motion study which was explained to employees, but not enforced by supervisor.	Nonsupportive	5
C-12.	Did time and temperature study which R.D. did not think would be accepted but "could try;" therefore results were not enforced and not successful.	Nonsupportive	12
C-13.	Used forcasting techniques in planning but not effectively due to lack of supervision.	Nonsupportive	16
C-14.	Not able to utilize counseling techniques with employees due to lack of confidence by supervisor in student.	Nonsupportive	7
C-15.	Given authority to interview and hire employees due to confidence of supervisor in student.	Supportive	9
C-16.	Allowed to observe surgery with comment and explanation from M.D.	Supportive	14
C-17.	Unable to follow ideal method in a scheduling pattern—unrealistic with reference to class methods.	Nonsupportive	16
C-18.	Utilized interviewing techniques from workshop, although could not understand basis for supervisor's negative attitude until after interview when explanation was made.	Nonsupportive	16

TABLE B.3 (Continued)

No.	Incidents	Classification	Question Number on Form
C-19.	Hard to exercise authority over supervisor because threat was felt by supervisor, but not felt with employees; concluded that supervisors do not know how to supervise.	Nonsupportive	10
C-20.	Developed and initiated a new policy but lacked authority to carry through.	Nonsupportive	10
C-21.	At the beginning of clinical experiences, hard to exercise authority over employees.	Nonsupportive	10
C-22.	Worked with menus in some facilities but not allowed to help with all menus.	Nonsupportive	16
C-23.	Unable to work with development of forms, although allowed to use previously developed forms.	Nonsupportive	16
C-24.	Unable to suggest diet changes to certain M.D.s or M.D.s unopen to suggestions due to lack of respect for dietetic professionals.	Nonsupportive	6

TABLE B.4

Incidents Generated by Nominal Group D

No.	Incident	Classification	Question Number on Form
D-1.	In using forecasting techniques students needed more guidance in implementation and more authority to utilize.	Nonsupportive	10
D-2.	Unable to utilize standardized recipes with employees who lacked motivation and education to implement usage.	Nonsupportive	16
D-3.	Unable to utilize specifications for checking in materials with employees who lack motivation and education to implement usage.	Nonsupportive	16
D-4.	Lack of receptiveness by R.N. and R.D. of students' opinions and knowledge.	Nonsupportive	11
D-5.	Recognized and identified managerial problems with suggested prescription, but unable to implement because of management's negative attitude toward students.	Nonsupportive	3
D-6.	Projects done by students were considered by the employees as educational tools or requirements, not as projects being done for employees' benefit.	Nonsupportive	3
D-7.	Employees and management do not follow through with ideas suggested by students.	Nonsupportive	
D-8.	Lack of coordinator who is employed by the hospital and the university hampered efforts to learn or to become involved in experiences needed by students.	Nonsupportive	15

TABLE B.4 (Continued)

No.	Incident	Classification	Question Number on Form
D-9.	Given responsibility of a floor for a period of time helped develop student's self-confidence with back-up of R.D.	Supportive	4
D-10.	Charting techniques used with cooperation of M.D. to make change in diet.	Supportive	6
D-11.	Charting techniques used without cooperation of M.D. who ignored diet change suggestion.	Nonsupportive	6
D-12.	Need more interaction with the health care team for mutual respect and benefit of the patients; interaction was lacking at present.	Nonsupportive	11
D-13.	Made menus for a facility which were utilized successfully because management needed the menus.	Supportive	16
D-14.	Made specifications and bid sheet for dry goods which were used successfully because specifications were needed by management.	Supportive	16
D-15.	Needed inservice education with professionals in facilities for them to learn to work with students effectively.	Nonsupportive	2
D-16.	Worked successfully with WIC dietitian due to good communication and planning.	Supportive	15
D-17.	Did projects in facilities which were shared with other students allowing more information to be learned by all.	Supportive	3

TABLE B.4 (Continued)

No.	Incident	Classification	Questions Number on Form
D-18.	Learned from case studies due to indepth study by individuals and shared with others.	Supportive	16
D-19.	Did inservice education for employees but had no follow-through by the employees because of lack of motivation and supervision.	Nonsupportive	2

TABLE B.5

Incidents Generated by Nominal Group E

No.	Incident	Classification	Question Number on Form
E-1.	Did inservice education in a facility with backing of R.D. and receptiveness of employees but lack of time prevented enough education and follow-through.	Nonsupportive	2
E-2.	Did inservice education, but all employees weren't contacted to be present and therefore, the class was unsuccessful in changes made.	Nonsupportive	2
E-3.	Did inservice education with some changes but not thorough enough to be totally successful.	Nonsupportive	2
E-4.	Projects done with approval of administration but employees failed to follow through due to lack of supervision or lack of authority.	Nonsupportive	3
E-5.	Projects considered as educational for students by employees, not for benefit of employees.	Nonsupportive	3
E-6.	In doing diet instructions, students felt that if patients were questioned to determine understanding of the diet, this would give confidence to student and make evaluation of student performance, particularly taped diet instructions.	Nonsupportive	1
E-7.	In applying concepts of diet therapy sometimes seemed impractical according to types of diets ordered by M.D.s.	Nonsupportive	16

TABLE B.5 (Continued)

No.	Incident	Classification	Question Number on Form
E-8.	Projects were done with approval of administration, but sometimes considered impractical because the projects might be bad public relations for the facility or changes were not desired in the facility.	Nonsupportive	3
E-9.	Given responsibility of a floor or a certain number of patients with confidence in student shown by R.D.	Supportive	4
E-10.	Prepared training module with the support of the facility in purchase of materials and equipment and use of time.	Supportive	2
E-11.	Did diet instructions with some patients that were not interested or refused dietary help—might need total team approach to get social work help.	Nonsupportive	1
E-12.	Some management theories taught in class were unrealistic.	Nonsupportive	16
E-13.	A recipe that was standardized by the student was incorporated into the new menu cycle by facility.	Supportive	16
E-14.	Did diet instructions with a blind student which helped to emphasize concepts of use of food models to teach the Basic 4 Food Groups.	Supportive	1
E-15.	Worked with students training in other allied health professions which helped learning, since the place was a teaching facility.	Supportive	11
E-16.	Worked with other health professionals without cooperation in nonteaching facility.	Nonsupportive	11

TABLE B.5 (Continued)

No.	Incident	Classification	Question Number on Form
E-17.	Had problems at beginning of training because of lack of communication and time.	Nonsupportive	15
E-18.	More continuity at end of training helped learning in the clinical facility.	Supportive	15
E-19.	Had problems with shortage or references and materials when away from main campus.	Nonsupportive	13
E-20.	Given more individual freedom to learn and make decisions when away from main campus for extended time periods.	Supportive	13
E-21.	Felt that information about being off campus should be given earlier than finals of junior year and students should not be forced to move away from the main campus for extended periods of time.	Nonsupportive	13

TABLE B.6

Incidents Generated by Nominal Group F

No.	Incident	Classification	Question Number on Form
F-1.	Did time and temperature study which could not be applied because of outdated equipment in the facility.	Nonsupportive	12
F-2.	Did role playing in learning diet counseling which helped in giving diet instructions with support of R.D.	Supportive	1
F-3.	Did time and motion study which could not be implemented due to uncooperative employees and lack of student authority.	Nonsupportive	5
F-4.	Employees viewed student projects as educational for students, not for employee benefit.	Nonsupportive	3
F-5.	Relations with the health care team were taught to be important, but implementation was impractical due to M.D.'s and R.N.'s attitudes.	Nonsupportive	11
F-6.	Techniques taught for making inservice education module were not realistic (too technical and too little time).	Nonsupportive	3
F-7.	Lack of communication presented problems without knowledge of background for implementation of administrative projects.	Nonsupportive	3
F-8.	Lacked training in interviewing techniques of prospective employees due to lack of confidence in ability and chiding by administration for mistakes made by others.	Nonsupportive	9

TABLE B.6 (Continued)

No.	Incident	Classification	Question Number on Form
F-9.	Were able to utilize interviewing techniques of prospective employees due to individual student initiative and management support.	Supportive	9
F-10.	Lack of sufficient time to consider all aspects of diet counseling made clinical experience unreasonable or unrealistic to be able to follow through as desired.	Nonsupportive	1
F-11.	Attitudes toward students by administrative personnel did not foster self-development.	Nonsupportive	10
F-12.	Many projects were developed, but not implemented, thereby limiting student development and creativity.	Nonsupportive	3
F-13.	Visiting surgery with M.D. comments increased learning making profession more meaningful.	Supportive	14
F-14.	Community experiences in nutrition were very rewarding and successful.	Supportive	14
F-15.	Going on rounds with M.D. comments increased learning and made the dietetic profession more meaningful.	Supportive	14

APPENDIX C

FORM C.1

FORM FOR CLASSIFICATION OF INCIDENTS BY CLINICAL INSTRUCTORS

Step 1 - Support for Learning

Supportive Incidents	Nonsupportive Incidents	Neutral Incidents

Step 2 - Professional Development

Personnel Management	Patient Contact	Team Approach	Inservice Education	Resource Utilization	General Development

Step 3 - Determination of Duplicates

TABLE C.1

Consolidation of Classification of Incidents from Nominal Groups by Clinical Instructors and Students

Question Number	Experience Category	General Description of Experiences	Incidents Groups Identified	Number Groups Identifying Each N = 6	Number Students Selecting Top 5 N = 37
1.	Patient Counseling	Supportive: Diet instructions were performed successfully with patients cooperation and R.D.'s	B-2, C-2, C-4, E-14, F-2	4	12
		Nonsupportive: Diet instructions were not performed successfully when patients were unreceptive and sufficient time was not allowed.	A-14, B-13, B-20, E-6, E-11, F-10	4	7
2.	Inservice Education	Supportive: Inservice education was provided successfully when employees were receptive and when R.D. backed efforts.	A-16, A-20, B-10, E-10	3	1
		Nonsupportive: Inservice education was not considered successful when employees lacked motivation and sufficient time was not allowed.	A-17, B-19, D-15, D-19, E-1, E-2, E-3, F-6	5	4
3.	Projects Implementation	Supportive: Student projects were considered successful when the R.D. and administration backed the projects.	A-11, B-6, B-17, D-17	3	5

TABLE C.1 (Continued)

Question Number	Experience Category	General Description of Experiences	Incidents Groups Identified	Number Groups Identifying Each N = 6	Number Students Selecting Top 5 N = 37
		Nonsupportive: Student projects were not implemented successfully when employees would not see a benefit to themselves	A-10, B-1, D-5, 6, 7, E-4, 5, 8, F-4, 6, 7, 12	5	23
4.	Responsibility for Patients	Supportive: Responsibility for a certain number of patients was given successfully when R.D. had confidence in the student and follow-through was possible.	B-12, D-9, E-9	3	12
		Nonsupportive: Responsibility for patients was not successful when follow-through was not possible or R.D. lacked confidence in students.	0	0	0
5.	Performance of Time and Motion Studies	Supportive: Time and motion studies were performed successfully with backing of administration and the employees cooperated.	A-21, B-4	2	3
		Nonsupportive: Time and motion studies were not done successfully when students lacked authority and supervisor did not enforce.	A-6, C-11, F-3	3	1

TABLE C.1 (Continued)

Question Number	Experience Category	General Description of Experiences	Incidents Groups Identified	Number Groups Identifying Each N = 6	Number Students Selecting Top 5 N = 37
6.	Dietary Change Suggestions	Supportive: Suggestions from students were utilized successfully by M.D.s when M.D. was receptive to change.	A-18, B-11, C-9, D-10	4	8
		Nonsupportive: Suggestions were not utilized successfully by M.D.s when M.D. was not receptive to changes or lacked respect for dietetic professionals.	B-15, C-8,	4	1
7.	Employee Counseling	Supportive: Students did employee counseling successfully when given authority and opportunity.	C-3	1	6
		Nonsupportive: Students did not perform employee counseling when the necessity for the experience was not recognized by the management, or had lack of confidence in the student.	C-14	1	0
8.	Employee Evaluations	Supportive: Students did employee evaluations successfully with confidence of administration in the student and employees' cooperation.	C-5	1	1

TABLE C.1 (Continued)

Question Number	Experience Category	General Description of Experiences	Incidents Groups Identified	Number Groups Identifying Each N = 6	Number Students Selecting Top 5 N = 37
		Nonsupportive: Students did not perform employee evaluations when the necessity for the experience was not recognized by management.	0	0	0
9.	Interviewing Skills	Supportive: Students participated in interviewing prospective employees and in patient visitation successfully when student had self-confidence and backing of administration.	A-5, B-5, C-15, F-9	4	16
		Nonsupportive: Students were not allowed to participate in interviewing prospective employees when management lacked confidence in the students or there was no opportunity.	C-18, F-8	2	0
10.	Student Authority	Supportive: Students were given authority and used it successfully with backing of management and cooperation of employees.	A-8, 9	1	3

TABLE C.1 (Continued)

Question Number	Experience Category	General Description of Experiences	Incidents Groups Identified	Number Groups Identifying Each N = 6	Number Students Selecting Top 5 N = 37
		Nonsupportive: Students were not given authority when time was not sufficient and opportunity was lacking due to lack of backing by management and employees.	A-7, 15, B-9, 14, B-18, C-7, 10, 19, 20, 21, D-1, F-11	5	17
11.	Health Care Team	Supportive: Students acted as members of the health care team when R.D. had respect for the student and good relations with other health professionals existed.	E-15	1	4
		Nonsupportive: Students were not allowed to act as members of the health care team if there was a lack of confidence among health team members or self-confidence of student.	A-12, 19, B-8, 16, D-4, 12, E-16, F-5	5	12
12.	Time and Temperature Studies	Supportive: Time and temperature study information was utilized successfully when R.D. backed student, employees were receptive, and the equipment was satisfactory.	0	0	0

TABLE C.1 (Continued)

Question Number	Experience Category	General Description of Experiences	Incidents Groups Identified	Number Groups Identifying Each N = 6	Number Students Selecting Top 5 N = 37
		Nonsupportive: Time and temperature study information was not utilized successfully without employee cooperation or students had no opportunity.	C-12, F-1	2	0
13.	Being Away from Campus	Supportive: Students felt that being required to be away from main campus was beneficial to individual freedom and learning.	E-20	1	2
		Nonsupportive: Students felt that being required to be away from the main campus was not beneficial due to less communication with instructor on campus.	E-19, 21	1	2
14.	Medical Educational Activities	Supportive: Students attended medical educational activities with benefits of making profession more meaningful and M.D. recognizing importance of dietitian's knowledge.	C-16, F-13, 14, 15	2	7
		Nonsupportive: Students attended medical educational activities without benefit when information was not related to dietetics or did not attend when no opportunity existed.	0	0	0

TABLE C.1 (Continued)

Question Number	Experience Category	General Description of Experiences	Incidents Groups Identified	Number Groups Identifying Each N = 6	Number Students Selecting Top 5 N = 37
15.	Student Placement	Supportive: Students felt that the placement techniques utilized were the best under the circumstances.	D-16, E-18	2	4
		Nonsupportive: Students did not feel that all implications were considered in student placement.	A-13, D-8 E-17	3	7
16.	Utilization of Concepts	Supportive: Students were allowed to practice concepts learned in didactic classes to experience the practical application of ideas.	A-1, 2, 3, 4, 8, 9, B-3, C-1, 6, D-13, 14, 18 E-13	5	24
		Nonsupportive: Students were not allowed to practice concepts learned in didactic classes because facility lacked confidence in the students.	B-7, C-13, 18, 17, 22, 23, D-2, 3, E-7, E-12	4	4

APPENDIX D

FORM D.1

LETTER SENT TO COORDINATED UNDERGRADUATE PROGRAM IN DIETETICS DIRECTORS TO OBTAIN LISTS OF GRADUATING SENIORS

As a part of my research for the doctoral degree in the College of Home Economics at The University of Tennessee, Knoxville, a survey has been planned to determine how graduating seniors from coordinated dietetic programs perceive the effect of various organization incidents on the learning climate in major clinical facilities utilized. The checklist developed by interviewing senior and former students from two programs will be utilized as an evaluative instrument by dietetic programs and clinical facilities that have dietetic students. The instrument will be validated by having students from selected coordinated dietetic programs with a generalist emphasis respond to the checklist.

As a director of a Coordinated Undergraduate Program in Dietetics with the generalist emphasis, we are asking your support for this study by sending a list of your graduating seniors for Spring 1978, with their permanent mailing addresses. We will mail the checklist to them directly with a copy to you. Coding will be used on the checklists by program only for analysis and follow-up purposes, but no names of students or programs will be disclosed in any publication in order for the answers to remain confidential. Enclosed is a stamped, self-addressed envelope for you to use in returning your list of graduating seniors. If possible, may we have the list by June 15, 1978.

If you have any questions, please contact me by mail or phone. All comments are welcome and your cooperation is sincerely appreciated. I will be happy to share a copy of the instrument and summary of the study results with you if you indicate this desire at the end of the list that you send to us.

Yours truly,

Elizabeth S. Sowell, R.D., Researcher
Home Economics Department
Jacksonville State University
Jacksonville, AL 36265
Phone (205) 435-9820

THROUGH:

Betty L. Beach, Ph.D., R.D.
Major Professor
Phone (615) 974-5445

FORM D.2

LETTER SENT TO RECENT GRADUATES WITH THE LEARNING CLIMATE CHECKLIST

Dear

As a part of my research for the doctoral degree in the College of Home Economics at The University of Tennessee, Knoxville, a survey is being conducted to determine how students, who have recently completed coordinated programs, perceive the effect of various organizational incidents in the learning climates in the major clinical facilities utilized for training dietetic students. The checklist enclosed will provide an evaluative instrument that can be used by programs and facilities working with dietetic students.

All students, who have recently graduated from selected accredited coordinated undergraduate programs in dietetics with a generalist emphasis, are being asked to cooperate in this study. It is important that we receive your opinions on this subject for the research to provide reliable data. Please provide the profile data and follow the instructions enclosed for completion of the survey. Since the form is a checklist, it should not require more than thirty minutes to complete. The Director of the program from which you graduated gave us your name and address and is interested in using the form that is developed in that program.

The checklists are coded by program only for analysis and follow-up purposes, but the names of individuals and institutions will not be used in any publication in order for your answers to remain confidential. Enclosed is a stamped, self-addressed, return envelope for you to use in returning the checklist without your name and a postcard for you to return with your name on it by July 31, 1978, so that we will know that you have returned both and can contact nonrespondents.

If you have any questions, please contact me or Dr. Beach by mail or phone. All comments are welcome and your cooperation is sincerely appreciated.

Yours truly,

Elizabeth S. Sowell, R.D.
Researcher

THROUGH:

Betty L. Beach, Ph.D., R.D.
Major Professor

TABLE D.1

Summary of Responses to Learning Climate Instrument with Percent of Successful, Unsuccessful, and Not Allowed Experiences and Effect on Professional Development for Eleven Generalist Coordinated Undergraduate Programs in Dietetics

Question Number	Experience Category	% Respondents[a] Having Experience n = 126 Yes	No	General Description of Experiences and Climate Indicators	% Multiple Responses[b] Indicating Occurrence or Nonoccurrence Climate Indicators	% Respondents[c] Indicating Influence on Development Yes	No
1	Patient Counseling	99	2	Successful: Diet instructions were performed successfully with patients' cooperation and R.D.'s support and assistance.	72 (486)	96 (121)	1 (1)
				Unsuccessful: Diet instructions were not performed successfully when patients were unreceptive and sufficient time was not allowed.	28 (182)	38 (48)	8 (10)
2	Inservice Education	94	8	Successful: Inservice education was provided successfully when employees were receptive and when R.D. backed efforts.	69 (245)	77 (91)	8 (9)
				Unsuccessful: Inservice education was not considered successful when employees lacked motivation and sufficient time not allowed.	28 (98)	22 (26)	9 (11)

TABLE D.1 (Continued)

Question Number	Experience Category	% Respondents[a] Having Experience n = 126 Yes	No	General Description of Experiences and Climate Indicators	% Multiple Responses[b] Indicating Occurrence or Nonoccurrence of Climate Indicators	% Respondents[c] Indicating Influence on Development Yes	No
				Not Allowed: Inservice education was not allowed when the experience was not included or not enough time to schedule.	3 (11)	30 (3)	70 (7)
3	Projects Implementation	81	27	Successful: Student projects were considered successful when the R.D. and administration backed the projects.	73 (245)	85 (87)	7 (7)
				Unsuccessful: Student projects were not implemented successfully when employees could not see a benefit for themselves.	17 (56)	20 (20)	4 (4)
				Not Allowed: Students were not allowed to implement projects when the time elements did not allow or administration did not want changes.	10 (32)	53 (18)	29 (10)
4	Responsibility for Patients	94	8	Successful: Responsibility for a certain number of patients was given successfully when R.D. had confidence in the student and follow-through was possible.	92 (458)	96 (113)	2 (2)

TABLE D.1 (Continued)

Question Number	Experience Category	% Respondents[a] Having Experience n = 126 Yes	No	General Description of Experiences and Climate Indicators	% Multiple Responses[b] Indicating Occurrence or Nonoccurrence of Climate Indicators	% Respondents[c] Indicating Influence on Development Yes	No
				Unsuccessful: Responsibility for patients was not successful when follow-through was not possible or R.D. lacked confidence in students.	7 (33)	13 (15)	4 (5)
				Not Allowed: Responsibility for patients was not given because R.D. did not have certain floors.	1 (5)	40 (4)	0 (0)
5	Performance of Time and Motion Studies	69	32	Successful: Time and motion studies were performed successfully with backing of administration and the cooperation of employees.	58 (136)	51 (44)	22 (19)
				Unsuccessful: Time and motion studies were not done successfully when students lacked authority and supervisor did not enforce.	39 (90)	13 (11)	18 (16)
				Not Allowed: Time and motion studies were not allowed due to lack of opportunity.	3 (7)	15 (6)	45 (18)

TABLE D.1 (Continued)

Question Number	Experience Category	% Respondents[a] Having Experience n = 126 Yes	% Respondents[a] Having Experience n = 126 No	General Description of Experiences and Climate Indicators	% Multiple Responses[b] Indicating Occurrence or Nonoccurrence of Climate Indicators	% Respondents[c] Indicating Influence on Development Yes	% Respondents[c] Indicating Influence on Development No
6	Dietary Change Suggestions	79	21	Successful: Suggestions from students were utilized successfully by M.D.s when M.D. was receptive to change.	69 (247)	83 (83)	3 (3)
				Unsuccessful: Suggestions were not utilized when M.D. was not receptive to change or lacked respect for dietetic professionals.	24 (88)	22 (22)	9 (9)
				Not Allowed: Suggestions were not made to M.D.s because lacked opportunity.	7 (24)	48 (13)	19 (5)
7	Employee Counseling	33	69	Successful: Students did employee counseling successfully when given authority and the opportunity.	41 (79)	66 (28)	12 (5)
				Unsuccessful: Students did not do employee counseling successfully when employees were unreceptive, administration would not allow, or no opportunity.	5 (9)	7 (3)	10 (4)
				Not Allowed: Students did not perform employee counseling when the necessity for the experience was not recognized by management, or had lack of confidence in the student.	54 (105)	20 (17)	53 (46)

TABLE D.1 (Continued)

Question Number	Experience Category	% Respondents[a] Having Experience n = 126 Yes	No	General Description of Experiences and Climate Indicators	% Multiple Responses[b] Indicating Occurrence or Nonoccurrence of Climate Indicators	% Respondents[c] Indicating Influence on Development Yes	No
8	Employee Evaluations	36	67	Successful: Students did employee evaluations successfully with confidence of administration in the student and employees' cooperation.	44 (86)	60 (27)	27 (12)
				Unsuccessful: Students did not do employee evaluations successfully when contacts with employees were limited and there was no opportunity.	4 (7)	4 (2)	13 (6)
				Not Allowed: Students did not perform employee evaluations when the necessity for the experience was not recognized by management.	52 (102)	29 (24)	44 (37)
9	Interviewing Skills	31	68	Successful: Students participated in interviewing prospective employees successfully when student had self-confidence and backing of administration.	45 (70)	74 (29)	15 (6)
				Unsuccessful: Students did not participate successfully when opportunity was lacking.	2 (3)	5 (2)	3 (1)
				Not Allowed: Students were not allowed to participate in interviewing when management lacked confidence in the students or there was no opportunity.	53 (82)	29 (25)	41 (35)

TABLE D.1 (Continued)

Question Number	Experience Category	% Respondents[a] Having Experience n = 126 Yes	No	General Description of Experiences and Climate Indicators	% Multiple Responses[b] Indicating Occurrence or Nonoccurrence of Climate Indicators	% Respondents[c] Indicating Influence on Development Yes	No
10	Student Authority	94	15	Successful: Students were given authority and used it successfully with backing of management and cooperation of employees.	86 (393)	86 (102)	8 (9)
				Unsuccessful: Students were given authority and did not use it successfully because still considered a "student."	2 (9)	5 (6)	1 (1)
				Not Allowed: Students were not given authority when time was not sufficient and opportunity was lacking.	12 (53)	37 (7)	32 (6)
11	Health Care Team	91	19	Successful: Students acted as members of the health care team when R.D. had respect for the student and good relations with other health professionals existed.	87 (415)	84 (97)	3 (3)
				Unsuccessful: Students were allowed to participate, but were unsuccessful when students lacked self-confidence.	3 (16)	7 (8)	3 (3)
				Not Allowed: Students were not allowed to act as members of the health care team, if there was a lack of confidence among health team members.	10 (45)	58 (14)	17 (4)

TABLE D.1 (Continued)

Question Number	Experience Category	% Respondents[a] Having Experience n = 126 Yes	No	General Description of Experiences and Climate Indicators	% Multiple Responses[b] Indicating Occurrence or Nonoccurrence of Climate Indicators	% Respondents[c] Indicating Influence on Development Yes	No
12	Time and Temperature Studies	75	25	Successful: Time and temperature study information was utilized successfully when R.D. backed student, employees were receptive, and equipment was satisfactory.	81 (233)	60 (56)	21 (20)
				Unsuccessful: Time and temperature study information was not utilized successfully without employee cooperation.	10 (29)	7 (7)	10 (9)
				Not Allowed: Time and temperature study information was not utilized when there was no time or opportunity.	9 (25)	6 (2)	52 (16)
13	Being Away from Campus	70	17	Beneficial: Students felt that being required to be away from main campus was beneficial to individual freedom and learning.	86 (210)	86 (76)	6 (5)
				Not Beneficial: Students felt that being required to be away from the main campus was not beneficial due to less communications with the instructor on campus.	14 (34)	48 (10)	14 (3)

TABLE D.1 (Continued)

Question Number	Experience Category	% Respondents[a] Having Experience n = 126 Yes	No	General Description of Experiences and Climate Indicators	% Multiple Responses[b] Indicating Occurrence or Nonoccurrence Climate Indicators	% Respondents[c] Indicating Influence on Development Yes	No
14	Medical Educational Activities	93	11	Beneficial: Students attended medical educational activities with benefits of making profession more meaningful and M.D. recognizing importance of dietitian's knowledge.	91 (293)	85 (100)	4 (5)
				Not Beneficial: Students attended medical educational activities without benefit when information was not related to dietetics.	4 (14)	2 (2)	3 (3)
				Not Allowed: Students did not attend when no opportunity existed.	5 (15)	57 (8)	21 (3)
15	Student Placement	56	52	Beneficial: Students felt that placement techniques utilized were the best under the circumstances.	36 (62)	61 (43)	13 (9)
				Not Beneficial: Students did not feel that all implications were considered in student placement; there was a lack of effective professional supervision in the facility or too many students were placed in the facility.	64 (111)	61 (40)	18 (12)

TABLE D.1 (Continued)

Question Number	Experience Category	% Respondents[a] Having Experience n = 126 Yes	No	General Description of Experiences and Climate Indicators	% Multiple Responses[b] Indicating Occurrence or Nonoccurrence Climate Indicators	% Respondents[c] Indicating Influence on Development Yes	No
16	Utilization of Concepts	100	4	Allowed: Students were allowed to practice concepts learned in didactic classes to experience the practical application of ideas.	99 (1356)	94 (119)	0 (0)
				Not Allowed: Students were not allowed to practice concepts learned in didactic classes because facility lacked confidence in students.	1 (6)	60 (3)	60 (3)

[a]Some respondents marked "yes" and "no" because experiences were allowed in some facilities and not in other facilities; therefore, percent respondents may total more than 100%.

[b]Figures in parentheses following percent of multiple responses are the numbers of responses upon which the percentages of multiple responses is based. Percent multiple responses should total 100% for each question.

[c]Figures in parentheses following percent respondents are the number of respondents upon which the percentages is based.

APPENDIX E

FORM E.1

LEARNING CLIMATE INSTRUMENT

FOR

COORDINATED UNDERGRADUATE PROGRAMS IN DIETETICS

WITH

A GENERALIST EMPHASIS

INSTRUCTIONS FOR CHECKLIST

As a prospective graduate of a generalist coordinated program in dietetics, we are interested in your opinions of the effect of various incidents on the learning climate in the major clinical facilities with which you have worked as a student. A checklist was developed from incidents identified by both former and present students in two generalist programs. It is possible that each incident could have occurred both successfully and unsuccessfully at different times in your training in which case both types of incidents should be checked. We want to know if these types of incidents generally occurred in your program and what reason(s) made this incident successful or unsuccessful.

A general question relating to an incident that might have occurred during your training is given with several possible reasons for its occurrence. We would appreciate your responding to each incident by doing the following:

1. Check "yes" or "no," if this type of incident occurred in your training.

2. If this incident did occur, check the reason(s) that caused the incident to happen. If this incident did not occur, check the reason(s) that caused the incident not to happen. Feel free to add reason(s) or other items that you might have encountered in the space provided for "other."

3. Check whether the experience had an effect on you, and if it did, tell how the experience affected you in a brief statement, if possible.

EXAMPLE:

Did you produce a menu that you planned in the clinical facility?
Yes X No___

If yes, complete section A and/or B.
If no, complete section C.

A. If the menu was produced successfully, check reason(s):

a. manager supported student's efforts X
b. special event menu X
c. other_____

Did this successful experience have an effect on your development?
Yes___ No X

If it had an effect, how did the experience affect you?_____

_____

B. If the menu was not produced successfully, check reason(s):

a. lack of support from management ___
b. poor supervision from student X
c. other_____

Did this unsuccessful experience have an effect on your development?
Yes X No___

If it had an effect, how did the experience affect you?_____

_____

C. If the menu was not produced, give reason(s)_____

Did not having this experience have an effect on your development?
Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

1. Did you give diet instructions to a patient or client? Yes___No___
   If yes, complete section A and/or B.
   If no, complete section C.

   A. If the instructions were considered successful, check reason(s):

   a. confidence of R.D. in student ___
   b. confidence of M.D. in student ___
   c. patients had anticipated benefit ___
   d. support and backing of R.D. ___
   e. socio-cultural ideas were incorporated ___
   f. self-confidence of student ___
   g. other_____

   Did this successful experience have an effect on your development?
   Yes___No___

   If it had an effect, how did the experience affect you?

   *(1) increased self-confidence ___
   *(2) gave practice ___
   *(3) increased knowledge ___
   (4) other_____

   B. If the instructions were not considered successful, check reason(s):

   a. lack of confidence of R.D. in student ___
   b. patient was apathetic ___
   c. patient was unreceptive ___
   d. patient was uneducated ___
   e. socio-cultural ideas weren't incorporated ___
   f. lack of aid and support by R.D. ___
   g. sufficient time was not allowed to consider all aspects of diet counseling desired ___
   h. lack of self-confidence by student ___
   i. other_____

   Did this unsuccessful experience have an effect on your development?
   Yes___No___

   If it had an effect, how did the experience affect you?

   *(1) increased awareness of importance of patients' receptiveness ___
   (2) other_____

*Indicates items added to the modified checklist.

2. Did you provide inservice education for the dietary employees in the facility? Yes___ No___
If yes, complete section A and/or B.
If no, complete section C.

A. If the inservice education was considered a success, check reason(s):

a. support and backing of R.D. ___
b. receptiveness of employees ___
c. support of facility in purchase of materials ___
d. taught classes using slides of employees which impressed them and effected a change ___
e. other_____

Did this successful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?

*(1) increased ability to deal with people ___
*(2) increased self-confidence ___
*(3) increased teaching skill ___
*(4) gave experience ___
(5) other_____

B. If the inservice education was not considered a success, check reason(s):

a. time scheduled for it was break-time ___
b. lack of supervisor interest ___
c. lack of employee interest ___
d. lack of time prevented follow-through ___
e. all employees were not present ___
f. some changes were made but not thorough enough to be totally effective ___
g. other_____

Did this unsuccessful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

C. If you did NOT provide inservice education for the dietary employees in the facility, give reason(s):_____

_____

Did not having this experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

3. Did you implement projects that you developed in the clinical facility? Yes___ No___
If yes, complete section A and/or B.
If no, complete section C.

A. If the projects were considered successful, check reason(s):

a. support of administration ___
b. support and backing of R.D. ___
c. receptiveness of employees ___
d. cooperation of supervisors ___
e. other_____

Did this successful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?

*(1) increased self-esteem ___
*(2) increased creativity ___
*(3) increased experience ___
(4) other_____

B. If the projects were not considered successful, check reason(s):

a. employees considered projects as educational for the student, not beneficial to them ___
b. lack of employee interest ___
c. lack of administration support ___
d. lack of cooperation of supervisors ___
e. lack of cooperation of employees ___
f. other_____

Did this unsuccessful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

C. If you did NOT implement projects that you developed, give reason(s):

_____

Did not having this experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

4. Were you given the responsibility of a certain number of patients or clients in the clinical facility? Yes___ No___
If yes, complete section A and/or B.
If no, complete section C.

A. If your having this responsibility was successful, check reason(s):

a. support and backing of R.D. ___
b. confidence of R.D. in student ___
c. counseled, instructed, and did follow-through ___
d. confidence of M.D. in student ___
e. self-confidence of the student ___
f. other_____

Did this successful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?

*(1) gave experience in actual working atmosphere ___
*(2) increased self-confidence ___
*(3) increased ability to take more responsibility ___
(4) other_____

B. If your having this responsibility was not successful, check reason(s):

a. lack of confidence of R.D. in student ___
b. unable to follow-through with patients ___
c. lack of confidence of M.D. in student ___
d. lack of self-confidence by the student ___
e. other_____

Did this unsuccessful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

C. If you were NOT given this responsibility, give reason(s):

_____

Did not having this experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

5. Did you conduct a time and motion study in the clinical facility?
Yes___ No___

If yes, complete section A and/or B.
If no, complete section C.

A. If the study was conducted successfully, check reason(s):

a. support of administration ___
b. receptiveness of employees ___
c. cooperation of supervisors ___
d. cooperation of employees ___
e. other_____

Did this successful experience have an effect on your development?
Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

B. If a time and motion study was not conducted successfully, check reason(s):

a. lack of cooperation of supervisors ___
b. lack of employee interest ___
c. lack of student authority ___
d. lack of cooperation of employees ___
e. other_____

Did this unsuccessful experience have an effect on your development?
Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

C. If you did NOT conduct a time and motion study, give reason(s):

*(1) lack of opportunity ___
*(2) had simulated experiences ___
*(3) do not know ___
(4) other_____

Did not having this experience have an effect on your development?
Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

6. Did you make dietary change suggestions for patients to the M.D. in the clinical facility? Yes___ No___
If yes, complete section A and/or B.
If no, complete section C.

A. If the suggestion was utilized successfully, check reason(s):

a. good communication with health care team ___
b. respect of M.D. for R.D. ___
c. good health care team relations ___
d. M.D. was receptive to change ___
e. other_____

Did this successful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?

*(1) increased self-confidence ___
*(2) gave better relations with M.D. ___
*(3) felt part of health care team ___
(4) other_____

B. If the suggestion was not utilized successfully, check reason(s):

a. M.D. had a difference of opinion ___
b. M.D. was not receptive to change ___
c. M.D. lacked confidence in student ___
d. M.D. lacked respect for dietetic professionals ___
e. poor communication with health care team ___
f. other_____

Did this unsuccessful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

If you did NOT make dietary change suggestions for patients, give reason(s):

*a. no opportunity
b. other_____

Did not having this experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

7. Did you do dietary employee counseling in the clinical facility?
Yes___ No___

If yes, complete section A and/or B.
If no, complete section C.

A. If you did the counseling successfully, check reason(s):

a. support of administration ___
b. necessity of experience seen by administration ___
c. cooperation of employees ___
d. other_____

Did this successful experience have an effect on your development?
Yes___ No___

If it had an effect, how did the experience affect you?

*(1) developed better relations with employees ___
(2) other_____

B. If you did not do the counseling successfully, give reason(s):

_____

_____

Did this unsuccessful experience have an effect on your development?
Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

C. If you did NOT do the counseling, check reason(s):

a. lack of administration support ___
b. lack of cooperation of employees ___
c. necessity of experience not seen by administration ___
*d. no opportunity ___
e. other_____

Did not having this experience have an effect on your development?
Yes___ No___

If it had an effect, how did the experience affect you?

*(1) limited experience ___
(2) other_____

8. Did you conduct evaluations of the dietary employees in the clinical facility? Yes___ No___
If yes, complete section A and/or B.
If no, complete section C.

A. If you did the evaluations successfully, check reason(s):

a. support of administration ___
b. necessity of experience seen by administration ___
c. cooperation of employees ___
d. other_____

Did this successful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?

*(1) increased recognition of others' values ___
*(2) gave experience ___
*(3) increased rapport with employees ___
(4) other_____

B. If you did not do the evaluations successfully, give reason(s):

_____

_____

Did this unsuccessful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

C. If you did NOT do the evaluations, check reason(s):

a. lack of administration support ___
b. necessity of experience not seen by administration ___
c. lack of cooperation of employees ___
*d. no opportunity
e. other_____

Did not having this experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?

*(1) denied experience ___
(2) other_____

9. Did you participate in interviewing prospective dietary employees for the clinical facility? Yes___ No___
If yes, complete section A and/or B.
If no, complete section C.

A. If you did participate and the interviewing was successful, check reason(s):

a. self-confidence of student ___
b. confidence of administration ___
c. support and backing of R.D. ___
d. other_____

Did this successful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?

*(1) saw qualifications needed ___
*(2) gave experience ___
(3) other_____

B. If you did participate and the interviewing was not successful, give reason(s):_____

_____

Did this unsuccessful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

C. If you did NOT participate in interviewing, check reason(s):

*a. necessity of experience not seen by administration ___
*b. lack of administration confidence ___
*c. no opportunity ___
d. other_____

Did not having this experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?

*(1) limited experience ___
(2) other_____

10. Were you given authority to accomplish assigned responsibilities?
Yes___ No___

If yes, complete section A and/or B.
If no, complete section C.

A. If you were given authority and used it successfully, check reason(s):

a. support of administration ___
b. cooperation of employees ___
c. cooperation of supervisors ___
d. application of class concepts ___
e. other_____

Did this successful experience have an effect on your development?
Yes___ No___

If it had an effect, how did the experience affect you?

*(1) developed managerial ability ___
*(2) increased self-confidence ___
*(3) learned to function as R.D. ___
(4) other_____

B. If you were given authority and did not use it successfully, give reason(s):_____

_____

Did this unsuccessful experience have an effect on your development?
Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

C. If you were NOT given authority, check reason(s):

a. impractical to act as manager for a short period of time because lacked background ___
b. lack of student authority ___
c. lack of opportunity ___
d. supervisors felt threatened ___
e. lack of administration support ___
f. other_____

Did not having this experience have an effect on your development?
Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

11. Did you act as a member of the health care team in the clinical facility? Yes___ No___
If yes, complete section A and/or B.
If no, complete section C.

A. If you acted as a member and participated successfully, check reason(s):

a. respect for R.D. by M.D. ___
b. respect for R.D. by R.N. ___
c. confidence of R.D. in student ___
d. respect for student by M.D. ___
e. contribution of R.D. to team ___
f. other_____

Did this successful experience have an effect on your development? Yes___ No___
If it had an effect, how did the experience affect you?

*(1) increased self-confidence ___
*(2) realized importance of team concept ___
(3) other_____

B. If you acted as a member and did not participate successfully, check reason(s):

a. lack of self-confidence by student ___
b. failure of R.D. to recognize importance of participation ___
c. other_____

Did this unsuccessful experience have an effect on your development? Yes___ No___
If it had an effect, how did the experience affect you?_____
_____

C. If you did NOT act as a member, check reason(s):

a. lack of confidence of M.D. in student ___
b. lack of confidence of M.D. in R.D. ___
c. lack of confidence of R.D. in student ___
d. M.D. didn't believe that R.D. contributed to team ___
*e. lack of administration support ___
f. other_____

Did not having this experience have an effect on your development? Yes___ No___
If it had an effect, how did the experience affect you?

*(1) few think of R.D. as team member ___
*(2) think team needs educating on dietitian's role ___
(3) other_____

12. Did you utilize time and temperature study information in the clinical facility? Yes___ No___
If yes, complete section A and/or B.
If no, complete section C.

A. If you did utilize the information successfully, check reason(s):

a. satisfactory equipment ___
b. support and backing of R.D. ___
c. receptiveness of employees ___
d. cooperation of supervisors ___
e. other_____

Did this successful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?

*(1) realized the importance of use ___
(2) other_____

B. If you did utilize the information and were not successful, check reason(s):

a. outdated equipment ___
b. lack of employee interest ___
c. lack of cooperation of supervisors ___
d. other_____

Did this unsuccessful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

C. If you did NOT utilize time and temperature study information in the clinical facility, give reason(s):

*a. no time or opportunity ___
*b. unknown ___
*c. R.D. did not believe of value ___
d. other_____

Did not having this experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

If you, as a dietetic student, were required to be away from the main campus for extended periods of time (more than one month), please answer question 13; otherwise, go to question 14.

13. Do you believe that being required to be away from the main campus was beneficial to your development? Yes___ No___

If yes, complete section A.
If no, complete section B.

A. If you believe that this experience was beneficial, check reason(s):

a. student had more individual freedom to learn ___
b. increased ability to take responsibility ___
c. practical application of concepts possible ___
*d. more facilities used ___
e. other_____

Did this successful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?

*(1) better learning experiences ___
*(2) increased maturity ___
(3) other_____

B. If you believe that this experience was NOT beneficial, check reason(s):

a. shortage of references and materials off campus ___
b. should not be forced to move off campus ___
c. lack of communication with instructor on campus ___
d. other_____

Did this unsuccessful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?

*(1) resentment ___
(2) other_____

14. Did you attend medical educational activities, such as rounds, surgery, conferences, etc.? Yes___ No___
If yes, complete section A and/or B.
If no, complete section C.

A. If you did attend this type of activity, check benefit(s):

a. made dietetics profession more meaningful ___
b. M.D. recognized importance of dietitian's knowledge of medical profession ___
c. made M.D. aware of dietitian's interest in medicine ___
d. other_____

Did this successful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?

*(1) felt part of health care team ___
*(2) increased knowledge ___
(3) other_____

B. If you did attend this type of activity and no benefits occurred, give reason(s):_____

_____

Did this unsuccessful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?_____

_____

C. If you did NOT attend this type of activity, give reason(s):

*a. no opportunity ___
b. other_____

Did not having this experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?

*(1) limited knowledge ___
(2) other_____

15. Do you believe that the faculty who determined student placement in a clinical facility considered all the implications?

Yes___ No___

If yes, complete section A.
If no, complete section B.

A. If you believe that all implications were considered, give reason(s):

*(a) variety of experience given ___
*(b) best under circumstances ___
*(c) harmony was achieved ___
(d) other_____

Did this successful experience have an effect on your development?

Yes___ No___

If it had an effect, how did the experience affect you?

*(1) learned from good and bad situations ___
(2) other_____

B. If you believe that all implications were not considered, check problem(s):

a. placement of too many students in a facility so that their expertise could not be applied well ___
b. lack of effective professional supervision in the facility ___
c. when supervising student employees, suggestions were not well accepted because working with peers ___
d. facilities were not educationally oriented to working students ___
e. other_____

Did this unsuccessful experience have an effect on your development?

Yes___ No___

If it had an effect, how did the experience affect you?

*(1) negatively ___
*(2) limited experience ___
(3) other_____

16. Did you practice utilization of concepts learned in classes to gain expertise in the clinical facility? Yes___ No___
If yes, complete section A.
If no, complete section B.

A. If you did gain expertise, check concepts that you practiced:

a. specific disease characteristics identification ___
b. life cycle nutrition information ___
c. charting techniques or skills ___
d. nutritional assessment ___
e. portion control ___
f. layout design ___
g. nutrition education ___
h. planning menus ___
i. forecasting techniques ___
j. setting up scheduling patterns ___
k. standardized recipes ___
l. specifications for purchasing ___
m. development of forms ___
n. other_____

Did this successful experience have an effect on your development? Yes___ No___

If it had an effect, how did the experience affect you?

*(1) practical application possible ___
*(2) increased ability to take responsibility ___
*(3) better understanding of field ___
(4) other_____

B. If you did NOT practice concepts learned in classes, give reason(s):

_____

_____

Did this unsuccessful experience have an effect on your development?

If it had an effect, how did the experience affect you?_____

_____

PROFILE DATA FOR CHECKLIST

1. Sex: Male_____ Female_____

2. Age: 20-21____ 26-27_____
22-23____ 28-29_____
24-25____ Over 30____

3. Marital status during training: Single_____
Divorced____
Married_____
Widowed_____

4. Previous work experience (before training):

Type_____

Amount_____

5. Work experience (during training):

Type_____

Amount_____

VITA

Elizabeth Lee Sledge Sowell was born in Norfolk, Virginia on February 8, 1938. She lived with her family in North Carolina until the age of 6, at which time they moved to Gadsden, Alabama. She was educated in the Gadsden schools, graduating from Gadsden High School as the valedictorian of her class in 1955. She received her Bachelor of Science degree in Home Economics with a major in Foods and Nutrition in 1959 from Auburn University.

Upon completion of her dietetic internship in 1960 at the State University of Iowa, she took a part-time position as an administrative dietitian in the Iowa hospitals while she completed the Master of Science degree in Nutrition in 1961.

Professional societies in which she holds membership are the American Dietetic Association (Registered Dietitian), American Home Economics Association, Society of Nutrition Education, and Foodservice Systems Management Education Council. Her honor societies are Omicron Nu, Mortar Board, and Alpha Eta Epsilon.

Following her marriage in 1961, she served as the dietitian in a hospital and a children's home in Bakersfield, California, and the dietitian at Baptist Memorial Hospital in Gadsden, Alabama, until 1965 when she began teaching dietetics at Jacksonville State University in Jacksonville, Alabama—a position that she still holds.

She is the wife of Donald L. Sowell of Jacksonville, Alabama, and the mother of George and Katy Sowell. She is also the daughter of

Mr. L. Lee Sledge of Gadsden, Alabama and the late Kathryn P. Sledge.