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PROFESSIONAL EXPERIENCE OF GRADUATES FROM A COORDINATED UNDERGRADUATE PROGRAM IN DIETETICS: A METHOD OF PROGRAM EVALUATION

by

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INTRODUCTION

Preparing students to become competent practitioners is the ultimate goal of professional education. The advent of the coordinated undergraduate program in dietetics brought the concept of competency into sharp focus. The present academic requirements for membership in The American Dietetic Association (ADA), designated as Plan IV, identify competencies in the various areas of the education of a dietitian.

The idea of individual course or area competencies culminating in an entry level competency for graduates is exemplified in the Essentials for Coordinated Undergraduate Programs in Dietetics (1). This pronouncement from ADA mandates an effective system for total program evaluation including follow-up of graduates. Spears (2), in recognition of the goal of professional education, stated that the true test of the effectiveness of this educational experience will be the professional success of the graduates which cannot be measured for some years.

In recognition of the ADA mandate for program evaluation, the Department of Dietetics, Restaurant, and Institutional Management at Kansas State University (KSU) had distributed program evaluation instruments six months after graduation (3). This evaluation has been in progress for the ten successive years of the coordinated undergraduate program (CUP) at Kansas State University. Two evaluation forms are used, one for the graduate and one for the supervisor, for rating the educational preparation of the entry level dietitian. Comments by the respondents indicated the desirability and probable value of surveys made several years after graduation.

The purpose of this study was to evaluate the coordinated undergraduate program in dietetics at Kansas State University by a survey of graduates in practice from four to eight and a half years. The specific objectives were to (a) ascertain the influence on the development of competency by the undergraduate program, graduate study, continuing education, and work experience; and (b) examine the career patterns of the graduates by the employment record from the first to the present position.

The landmark research on competencies for dietitians was done by Loyd and Vaden (4). The Loyd competency statements were used for this research but the response rating system was designed to disclose the effect of education and work experience on the development of the competencies. The Loyd study was devoted to entry level dietitians and the competencies were categorized as essential, desired but not essential, and beyond expectation. The responses by the practitioner graduates of KSU out of college for a minimum of four years were classified into five groups according to the responsibility in the present position. These classifications then were compared with the three categorizations of Loyd.

REVIEW OF LITERATURE

Evolution of Coordinated Undergraduate Programs

Robinson (5) described an interest in coordinating a dietetic internship with the undergraduate curriculum, combining theory and practice. The Ohio State University program, established in 1961, had been stimulated by the question of dietetic educators, Ashe and Lewis (6): "Could a coordinated educational plan for the preparation of dietitians be effectively administered by a college of medicine?" In 1962, academic and experience requirements for membership in the ADA were incorporated in this four-year plan, and the proposed curriculum was approved by the Council on Instruction of the University. The guiding thesis was to provide students the opportunity to learn and apply theory and principles concurrently. The Ohio State University program was granted approval by ADA in 1964.

During the latter part of the 1960s, leadership of the ADA authorized the appointment of a commission to study the profession of dietetics (7). The responsibility of the Commission was to define the present and future role of the dietitian and study the educational needs appropriate for the future. The committee was composed largely of leaders in disciplines related to dietetics. According to Millis (7), chairman of the Commission, previously, there were only a few examples in American history of a professional society which had sought opinion and judgment from non-members. Specific recommendations were made by the Commission to alleviate identified deficiencies. Recommendation I proposed that the basic education of dietitians be designed as a four-year

curriculum resulting in a bachelor's degree and including both didactic learning and introductory clinical experience for beginning practice as a dietitian (8).

The ADA Committee appointed to review the Report agreed that the four year coordinated program should be one approach to educating the dietitian and assigned top priority to the thorough study of this recommendation. The review committee suggested that an ADA Committee be appointed with specific charges. Included in the charges were: to review existing guidelines for coordinated programs, to evaluate graduates of four year coordinated programs as sufficient numbers become available to make a study feasible, and to study problems in developing quality coordinated programs and products of programs (9).

Spears (3) stated in a report on the first year of a coordinated undergraduate program in food systems management that the quality of the integrated experience and its relationship to the didactic are considered the most sensitive and critical elements in a coordinated program. Student reactions were quite favorable due to an appreciation of the concept of coordination. Spears concluded that "the true test of the effectiveness of this educational experience will be the professional success of the graduates which cannot be measured for some years." Reddout (10) outlined the integrated curriculum design of a program in clinical dietetics. Program goals, stated as behaviors, described the competencies of a beginning practitioner with expertise in nutritional care.

In a commentary on coordinated undergraduate programs, Hart (11) described the walls in a dietetic classroom as encompassing the entire community. The concept of coordination permits a meaningful learning

experience because the student can relate cognitive facts to real situations. Later Hart (12) discussed the philosophy and standards for dietetic educational programs which have been developed and revised to meet the changing needs of the profession. A major revision occurred with the development of CUP which incorporated didactic instruction and clinical experience in a four-year college curriculum. A total of seventy-six ADA approved coordinated undergraduate programs are listed in the 1980 Directory of Dietetic Programs (13).

Competencies and Dietetic Education

Progression of ADA Academic Plans

Corbett (14), in 1910, described essentials in the technical training of the dietitian as a thirty-eight course curriculum. Fifteen years later, college courses for prospective dietitians were presented by Marlatt (15). By 1927, the first dietetic educational plan was announced by the ADA Committee on Education (16). Plan II academic requirements for membership were approved by the Executive Board in 1944 to maintain quality in education (17). West (18) outlined a design for progress by stating that the profession will never rise above the standards established and maintained by dietitians, and education and training must be the best that can be provided. Evolving standards of training for the dietitian, as a route to ensure academic quality, were explained by Johnson (19).

New requirements for ADA membership in 1959 were introduced as Plan III (20). Emphasis was on careers in management, clinical nutrition, and education to broaden the opportunities in the field of dietetics. The Academics Requirement Committee was commissioned by the ADA Executive

Board to assure that educational standards were concurrent with the needs of the dietetic profession (21). The Committee, first appointed in 1967-68, prepared a report that was later adopted as Plan IV (22) in which requirements for practice were expressed in basic competencies and knowledge areas.

Competency Defined

Gale and Pol (23) defined competency as the quality of being functionally adequate in performing the tasks and assuming the role of a specified position with the requisite knowledge, ability, skills, judgment, attitudes and values. Competency was identified by Murray (24) as the essential condition which promotes the ability or skill to use knowledge at some acceptable proficiency or criterion level.

Bell (25) described competency as the minimum knowledge, skills, affective behavior, and judgment which a person is certified to possess on a set of criteria and level of expectation. Becker (26) viewed competency as the dynamic interplay of six major elements: knowledge, a cognitive awareness; understanding, the ability or proficiency to perform a task or job; value, a norm or standard which is a psychologically integrated belief; attitude, a feeling or mood; and interest, an underlying motivation or continuing desire.

Butler (27) stressed that competency is necessary to perform properly an activity important to success in both personal and professional life. Competency must meet prevailing standards of adequacy for a particular activity. Ingals (28) explained competency as the demonstrated ability to perform or accomplish a task, activity, or project by oneself or with others.

Evolution of Competency Statements

Competency statements for dietetic practice have been defined for the entry-level dietitian who has completed all preprofessional requirements and has just entered professional practice (29). Plan IV Minimum Academic Requirements for ADA membership, adopted in 1972, introduced the concept of competencies for dietetic practice. For the first time, requirements for practice were expressed in terms of basic competencies and knowledge areas rather than specific courses and credit hours (22). Two premises formed the basis for Plan IV guidelines.

1. Members of the profession of dietetics must be well prepared in biological, social, and communication sciences and the applied sciences basic to the profession.
2. The need for specialization within the profession is urgent because of the rapid expansion of scientific knowledge, technologic, social and economic change, and proliferation of employment opportunities for dietitians. In the immediate future, however, there will continue to be a need for the generalist (30).

Four subject matter areas of science were designed in Plan IV: physical and biological, behavioral and social, professional, and communication. The plan denotes basic requirements and additional requirements in the four science areas for each specialty. Specialization categories include general, management, clinical, and community (22).

Since the inception of ADA in 1917, the profession has acknowledged its responsibility to society by requiring excellence in education as a sound basis for competent practice (31). Consistent with this responsibility, the administrative committee of the Council on Educational

Preparation, supported by the ADA Board of Directors, commissioned a task force to develop uniform competencies. Early in its deliberations, the task force realized that other issues needed consideration before competencies could be developed. As a result, the task force received permission to alter the initial charge and develop a conceptual framework for the profession of dietetics that would serve as essential preliminary work for competency based education.

The Foodservice Systems Management Education Council (FSMEC), an organization composed of college and university faculty who teach foodservice systems management, contributed to the development and evaluation of educational programs in foodservice systems management (32). Two biennial conferences of FSMEC have focused on competency based education. At the eighth conference in 1975, management competencies, terminal behavioral objectives, and enabling objectives for the entry-level dietitian were identified. Techniques to evaluate achievement in competency-based education were also discussed (33). In 1977, the ninth conference focused on evaluation strategies in a competency-based education program. Participants, under the direction of Bell and Spears, evaluated competencies in foodservice systems management and developed instruments to assess these competencies (34).

Research on Competency Statements

In 1972, Cagguilla was commissioned by the ADA Executive Board to develop entry-level competencies for the generalist dietitian as the first step in identifying competencies for the profession (29). Cagguilla's competency statements were used by Loyd (35) to identify entry-level competencies needed in administrative and clinical dietetics. Separate instruments were developed and sent to general and specialized

practitioners. Twenty-three administrative and fourteen clinical competencies, rated as essential for the entry-level dietitian, were further examined in relation to Katz's model (36).

The attempt by Chambers (37) to measure the status of graduates from general dietetic programs based on minimum academic requirements established by ADA was not conclusive because the instrument needed refinement. Bedford (38) developed a set of affective competencies and identified related measurable behaviors for the entry-level dietitian.

One hundred hospital dietitians in the state of Mississippi were surveyed by Slomski (39) to develop a list of specific skills judged essential for competency as an entry-level dietitian. This study was undertaken to provide guidelines for the Coordinated Undergraduate Program at the University of Southern Mississippi.

Baird (40) examined the structures that determine roles of administrative and clinical hospital dietitians using performance statements adapted from Loyd's (4) competencies. A mailed survey to entry-level and three year experience level dietitians yielded data that identified perceptions concerning specialization. Analysis revealed that tenets of the dietetic profession concerning specialization discussed by leaders in dietetics were not in harmony with the perceptions of practitioners.

Holmes (41) conducted a study to identify competencies essential for graduates of coordinated and traditional programs in dietetics. Competency statements from Loyd (4) were used to develop the research instrument that was sent to a national sample of dietetic educators in coordinated undergraduate programs and dietetic internships. Results showed that both groups of educators agreed that approximately eighty-five

per cent of the competency statements were expected of graduates from a CUP and only twenty-nine per cent of graduates from traditional program.

Morales et al. (42) performed research on menu planning competencies utilizing a population of practitioners. Subcompetencies and descriptors, developed from five competency statements taken from the Loyd study (4) were rated on two scales by hospital dietitians. Analysis of data was based on levels of practice of the respondents. No significant differences were found between the experienced and entry-level dietitian on the importance scale; time consideration revealed significant differences because the more experienced practitioners rated the menu planning activities as more time consuming than did the less experienced.

Meeks (43) conducted a study to evaluate dietitians' perceptions of the adequacy of their professional education in preparing them for the entry-level practice. Meeks used the two categories "essential" and "desirable but not essential." Rinke's (44) research pertained to employers' perceptions of the adequacy of educational preparation in administrative competencies of dietetic graduates with respect to the route to ADA membership, i.e. internship, coordinated undergraduate program, traineeship, and advanced degree program. Administrative competencies, drawn from the Loyd study (4), were regarded as important for entry-level performance.

Mariampolski (45) developed competency statements for entry into commercial foodservice management adapted from the administrative statements evaluated by Loyd (4). The research responses were the considered opinions of experienced managers. Data were analyzed and the statements classified into technical, human, and conceptual skills as defined by

Katz (36). Recommendations for further definition and refinement of these statements resulted (45).

Hoadley (46) utilized the competency statements for entry-level dietitians developed by Loyd (4) to identify responsibilities of hospital dietitians that could be delegated to dietetic technicians. Data from this study would assist in defining scope of practice of the technician and differentiation between roles of the dietitian and technician.

Graduate Education

Definition and Purpose

Ryan (47) reviewed the background of early American graduate education and credited three factors contributing to excellence in this area: determination to meet real needs rather than follow a pattern, emphasis on persons rather than things, and insistence on quality. The essence of advanced education lies in the graduate degree program.

The master's degree is a respected academic award given in recognition of the successful completion of a planned program of post-baccalaureate study in a chosen field. The doctoral degree in a professional field is the highest academic award given in recognition of successful completion of a planned program in preparation for creative and scholarly research, teaching, and leadership within that field (48). A joint policy statement by The Council on Postsecondary Accreditation and The Council of Graduate Schools in the United States defined a graduate degree program as a set of academic experiences offered to a student to be satisfactorily completed to make appropriate the award of an advanced degree (49).

Two types of graduate degree programs have been identified. Research-oriented programs prepare students for professional practice directed mainly toward acquisition of new knowledge. Practice-oriented programs prepare students for a profession concerned with the application or transmission of existing knowledge (49).

Three purposes of graduate education have been specified.

1. The advanced education and intellectual development of able and motivated individuals in a variety of forms and disciplines essential to the pursuit of specific careers.
2. The production of new knowledge through research and intellectual inquiry or the application of knowledge toward the solution of technological, social, economic, and political problems and issues.
3. The preservation and transmission of knowledge and the extension of our cultural heritage to successive generations (49).

Graduate Study in Dietetics

In the guidelines for graduate programs in home economics, the statement is made that home economics university faculties are concerned with upgrading the quality of graduate programs to assure the intellectual and professional development of students. Graduate study is intended to increase one's capacity for independent action in scholarly and professional pursuits (48).

At the time of the Report of the Study Commission on Dietetics, 25 per cent of the members in The American Dietetic Association held advanced degrees in many disciplines related to the profession (8). The implication of graduate level education is specialization, to be acquired through the mastery of specific skills required for a special

role and the deepening of knowledge pecularily relevant to those skills. Such programs would prepare dietitians for responsible clinical and managerial positions (50).

To maintain high standards of dietetic employment practices, the Association publishes a position paper on recommended salaries and employment practices for members (50). The entry-level position for an ADA dietitian or registered dietitian (R.D.) requires no additional preparation or experience. Functional titles which imply experience or specialized preparation are Administrative Dietitian, Clinical Dietitian, and Community Dietitian. Additional experience is required for the Consultant Dietitian and additional preparation is necessary for the Research Dietitian and Teaching Dietitian. Administrative positions requiring experience or specialized preparation include Director, R.D.; Associate Director, R.D.; and Assistant Director, R.D. Any position requiring specialized preparation may be available to the graduate with an advanced degree.

Continuing Education

Definition of Needs for Dietitians

Donaldson (51), in an article published in 1965 on the future in food administration, made two statements about continuing education. The statements were that, as a challenge for the future, continuing education is required for all dietitians to avoid obsolescence; and the potential of each young staff dietitian can be realized through continual education.

Robinson (52), in an address on an individual's role in the continuing development of dietetics, quoted Alvin C. Eurich:

> . . . the final goal of any student's education should be the capacity to learn without the teacher, to continue his intellectual life on his own initiative . . . if we have not taught our graduates how to learn without us, then we have taught them nothing of enduring value in a rapidly changing world.

To continue learning is to broaden horizons, keep up to date in knowledge and learn about other disciplines, according to Robinson (52).

The ADA publication, Goals of the Lifetime Education of the Dietitian, serves as a basis for on-going development and continuing education throughout the lifetime of each member (53). In recognition of the importance of continuing education as an essential element for professional competency, the ADA published a position paper (54). In the paper, the objectives of this educational process are defined and the responsibility of the Association for setting and maintaining standards are stipulated.

A further emphasis on continuing education was provided by one of the recommendations of the Task Force on Competencies that the Board of Directors assume leadership for elaboration of the conceptual framework so that it can serve as the theoretical basis for standards of education, practice, and continuing education (31).

Weaver (55) stated that the allied health professions are concerned with changes in academic strength and the route toward greater professionalism, thus supporting the concept of continuing education. Weaver presented a broad and all-inclusive definition for continuing education which includes educational activities that completely fill the gap between conventional on-campus credit activities and total educational activities for any qualified person.

Registration and Continuation Requirements

The American Dietetic Association in 1969 launched a voluntary program of professional registration as a technique to assure the continued competency of practitioners (56). Eligibility requirements for registration were met through membership in ADA and successful completion of a written examination. Registered status was maintained through completion of seventy-five hours of ADA approved continuing education over a five year period. In 1974, ADA became the accrediting agency for CUP programs (57), and subsequently, members voted that Association membership was no longer a prerequisite for registration (58).

Boissoneau (59) contended that although requirements for maintaining registration were established, the importance of continuing education is not a guarantee that dietitians will keep up to date. He proposed devotion to the profession and conviction of the need as requirements to assure continual education for daily practice.

Programs in Continuing Education

Wittrock (60) identified availability, quality, and continuity as factors contributing to beneficial programs in continuing education. These were supplemented by Boissoneau (59) who pointed out the need for reasonable cost, personal fulfillment, diversity, comprehensiveness, and accountability in continuing education programs. When considering constraints to full participation in continuing education in non-urban areas, Watson (61) identified inaccessibility of programs as a deterrent. Bennett (62) identified barriers to producing program development and participating in activities for continuing education in a semi-rural setting.

Upton (63) suggested combining the efforts of practitioner and educator to ensure high quality continuing education programs. This would require dietitians to become effective planners and evaluators as well as receivers of continuing education opportunities.

Hoffman (64) discussed the planning and implementation of programs for continuing education to meet needs in allied health. Procedures to facilitate program planning are given, including factors to reduce resistance to change.

Broski and Upp (65) conducted a study to identify specific content from five allied health areas for continuing education programs. In the area of medical dietetics, ten most frequently mentioned topics were listed. Vanderveen and Hubbard (66) revealed continuing education needs as perceived by dietetic practitioners using a self-assessment questionnaire. Upton (63) stated that continuous improvement of professional competency is required to fulfill the goal of providing high quality nutritional services; methods, therefore, must be developed to measure the impact of continuing education.

According to Hayems (67), attention to educational goals is essential when planning successful continuing education programs. Wise (68) pointed out the necessity for a program to be based on a conceptual or theoretical framework that reflects the provider's philosophy. Curriculums must be developed to provide consistency and value for effective continuing education programs.

Development of Career Patterns

Career Pattern Defined

Form and Miller (69) studied career patterns through the examination of the total number of jobs classified as initial, trial, or stable. An initial job was described as one held during the completion of an individual's formal education; a trial job was identified as one held for three years or less after formal education; and a stable job was defined as one that lasts for three years or more.

Super (70) stated that career patterns present the sequence of occupations and describe the changes in socioeconomic levels of jobs throughout life. Patterns are the result of various psychological, physical, situational, and societal factors in an individual's life (71). Crites (72) described career patterns as the trace of an individual's job movement. Zaccaria (73) defined career pattern as the conceptual framework used to summarize groups of major vocational events in the life of an individual.

Types of Career Patterns

Career patterns first described by Miller and Form (69) were later modified by Super who identified four career patterns (70). The stable pattern is characterized by early achievement or stability; the conventional pattern is a series of trial jobs, culminating in a stable job; the unstable pattern is a series of trial jobs, stability, and a return to trial jobs; and the multiple trial pattern is an unbroken series of trial jobs. Patterns are subject to variations, and Super (70) provided a different system of career patterns for women based on traditional roles of childbearer and homemaker.

Ginzberg (74) studied the work history of 342 male fellowship holders after graduation from Columbia University in an attempt to determine variations in occupational development. The direction, progression, and continuity of work were classified as a straight pattern, a continuous field with the same type of work; a broad pattern, a career with shifts characterized by proliferation and shifts; and a variant pattern, one with more radical changes.

Garfinkle (75) described a woman's work pattern as generally shorter than a man's work pattern in a Manpower Report from the Department of Labor. It also revealed a less continuous work pattern for married women than men. Careers begin around the same age for men and women, yet women leave the work force after they marry to raise a family. A difference between the rate of employment for single and married women in the twenty-five to thirty-four age bracket was noted in the 1975 Handbook on Women Workers (76). Eighty-two per cent of the single women were employed, while only forty-six per cent of the married women were in the work force.

METHODOLOGY

Study Population

The population for this research consisted of 109 graduates of the Coordinated Undergraduate Program in Dietetics at Kansas State University (KSU) from the inception of the program in 1971 through December 1975. The group had been out of college a minimum of four years and a maximum of eight and a half years.

Development of the Instrument

Sixty-seven directors of coordinated undergraduate programs in dietetics were requested to send program evaluation documents that had been used. Information was requested, by a questionnaire, on program emphasis, accreditation status, annual number of graduates, and frequency of evaluation after graduation. The letter to the directors contained a brief explanation of the forthcoming research (Appendix A). Fifty-five of the program directors requested a copy of the final instrument which were sent with a cover letter (Appendix A). Questionnaires were returned from 83.6 per cent of the program directors. Evaluation forms received from half (50 per cent) of the respondents were used as references in developing the instrument for this study. Of the 28 instruments returned, 71.4 per cent used competency statements as an element in program evaluation. Instruments used in previous research at KSU were reviewed for items or components that might be adapted to this research.

Initial Draft

An instrument was designed to ascertain demographic information including attitudes toward educational preparation and professional competency, a profile of employment background, and the influence of undergraduate education, graduate study, continuing education, and work in developing specific competencies. The instrument was developed in three parts: Part A, Demographic Information; Part B, Chart of Employment Background; and Part C, Competency Statements (Appendix B).

Part A. Demographic Information. The purpose of this section was to gather data on educational background, professional involvement, factors affecting acceptance of first and current positions, and attitudes toward educational preparation and competency of graduates of the coordinated undergraduate program. Respondents were asked to rate their own professional competency in comparison with other dietitians of their acquaintance. Many of the items were adapted from the work of McNeil (77), Fargen (78), and Stone (80).

Part B. Chart of Employment Background. This section was adapted from Fargen (78) who examined career patterns of hospital dietitians. Data on all positions held since graduation were requested, including those in areas other than dietetics. Information concerning each position was arranged in a separate block to facilitate complete and consistent responses. Blanks were provided for employment dates, full or part time status, and unemployment information. A code sheet for Part B was provided for numbered responses pertaining to position title, type of facility, reason for leaving, and reason for unemployment between positions.

Part C. Competency Statements. The separate statements were those used by Loyd (35) to identify competencies for the entry-level dietitian. The seventy-two statements, five of which had multiple parts, totaled eighty-two, and were arranged in random order for evaluation on two separate scales. Scale A, developed by Hoadley (46), required a response to indicate the degree of responsibility in the present position. The scale responses were:

(1) major responsibility

(2) some degree of responsibility

(3) not a responsibility

Scale B was designed for rating the contribution of various professional experiences in developing each competency. Experiences included undergraduate education, graduate study, continuing education, and work experience. Responses on Scale B were:

(1) extremely helpful

(2) helpful

(3) somewhat helpful

(4) of little or no help

Validation of the Draft Instrument

Twelve dietetic practitioners were recruited, personally and by telephone requests, to participate in the pilot study. The participants were ADA dietitians who received membership through a coordinated program, worked with students from KSU's coordinated program, or graduated from KSU's coordinated program since December 1975. Each dietitian received a letter confirming agreement to participate in the pilot study, a copy of the proposed cover letter, a copy of the draft instrument, and an evaluation form (Appendix C).

Participants were encouraged to complete the questionnaire. The design, directions, and data gathering techniques were evaluated by the practitioners as a measure of validity. After a one week period, the responses from the participants in the study were collected, and reviewed by the research team.

Final Instrument

The critique of the pilot study was used to develop the final instrument (Appendix D). The demographic information (Part A) included a question on education which was expanded to include expected date of Ph.D. if in progress. The response to another query for the individual's perception of a coordinated program in dietetics was modified to include "not sure" as a possible choice. A separate item was added to identify the number of publications the respondent had authored, co-authored, or contributed to since graduation. A final question was added requesting the present salary of the respondent.

The employment background chart (Part B), printed in blocks, was clarified by the addition of six bold arrows to designate the sequence of responses. The instructions were amplified and included an example on the use of the code sheet for this section. Additional blocks were printed on the back of the code sheet in response to concerns that some graduates might have had more than six positions.

The greatest criticism by participants in the pilot study concerned the clarity of the directions for responding to the competency statements (Part C). In the draft instrument, respondents were to use both Scales A and B. On the final instrument, Scale B was to be used only if the competency was a responsibility in the present job of the respondent. To

secure greater differentiation in responses, Scale B was reduced from four to three as follows:

(1) very helpful

(2) of some help

(3) little or no help

The final instrument consisted of an eight page booklet with a one page insert pertaining to Part B. The first page was printed on departmental letterhead.

Distribution of the Instrument

Initial Mailing

Current names and addresses of the research population were obtained from the files in the Alumni Office and personal communications from faculty members. The instrument was accompanied by a cover letter (Appendix E) and an addressed prepaid envelope for the return of the completed questionnaire. A letter from the program director (Appendix E) with an address form to be returned for updating departmental files on the graduates' home and business addresses was also included. The initial mailing went to 109 graduates. Twelve were returned as undeliverable. New addresses were discovered, and the initial packet was remailed to each of these graduates.

Early incomplete responses were given special attention. Incomplete portions of the questionnaire were photocopied and instructions for corrections were marked in red. Each copy was accompanied by an explanatory letter and an example to illustrate appropriate response and mailed to the respondent (Appendix F). The initial mailing resulted in a return of 43.1 per cent.

Follow-ups

Three weeks later, a follow-up mailing was made to those who had not responded. This mailing consisted of a letter (Appendix F) and another copy of the instrument. The follow-up letter specified a two-week period for returning the questionnaire. At the end of this period, telephone calls were made to determine if questionnaire had been received and if there were problems which could be resolved by telephone. This procedure stimulated responses from twenty-two additional graduates. Four graduates could not be located, thus reducing the possible population from 109 to 105. Seven weeks after the initial mailing ninety-three questionnaires had been returned, a response of 88.6 per cent (N = 105).

Data Analysis

Data from the returned instruments were coded, keypunched on eight 80-column computer cards, and analyzed. Programs and routines of the Statistical Package for the Social Sciences (SPSS) were used for all data analysis (80).

Frequency distributions were compiled for demographic information in Part A of the survey instrument. A t-test was used to compare mean salaries of respondents employed full and part-time.

In Part B, respondents were asked to describe each position held since graduation. As stated in the section on development of the instrument, standard codes (Appendix D) were developed to facilitate respondent's recording of information on position title, type of facility, reason for leaving, and reason for unemployment between positions. For analysis of survey results, a coding form was developed to summarize data on employment background (Appendix G).

Total months in practice and months unemployed were recorded, as well as total number of jobs held since graduation. Job history was examined to determine if the graduate had continuous employment in the field of dietetics or had been employed outside of the profession, previously or at the time of the survey.

Selected characteristics about current or most recent position and first position held since graduation were recorded on the coding form. If a respondent had held only one position since graduation, the position was recorded as current. Data were summarized on the coding form to include four positions. First and current or most recent position were examined in this study, although data included two positions held prior to the current position. Each position was analyzed for degree of leadership responsibility, using the following categorization:

(1) associate, assistant or department director

(2) head clinical or head administrative dietitian

(3) all other positions

In addition, position title, type of facility, reason for leaving, length of employment, and reason for unemployment between positions were also recorded. Frequency distributions were compiled for the variables described. Means and standard deviations were computed where appropriate; for example, for months in practice.

Frequency distributions were compiled for all responses on rating competency statements in Part C of the research instrument. Mean and standard deviation were computed for degree of responsibility in present position (Scale A) and degree of influence of various experiences in the development of competency (Scale B). Scores were assigned as follows:

Scale A	Scale B
(1) major responsibility	(1) very helpful
(2) some degree of responsibility	(2) some help
(3) not a responsibility	(3) little or no help

Frequency distributions from Scale A responses were examined to develop the following five classifications of competencies:

1. typical--responsibilities rated as "major" by at least 50 per cent of the respondents.

2. frequent--responsibilities rated as "some" or "major" by at least two-thirds, but not to include those rated "major" by at least 50 per cent of the respondents.

3. common--responsibilities rated as "some" or "major" by at least 50 per cent, but less than two-thirds, but not to include those rated as "major" by at least 50 per cent of the respondents.

4. occasional--responsibilities rated as "some" or "major" by at least 40 per cent, but less than 50 per cent of the respondents.

5. rare--responsibilities rated as "some" or "major" by less than 40 per cent of the respondents.

For further analysis of responsibility ratings, chi square was used to study responses of three groups defined by present position title. The intent was to gain insight into differences in job responsibilities in relation to present position of graduates. Because of the small number of responsibilities in each of the fourteen dietetic positions studied, several similar categories were combined and others were eliminated from the analysis. The following were the three classifications of jobs used:

1. administrator--associate, assistant, and department director; head clinical and head administrative dietitian.

2. clinician--clinical and community dietitian.

3. generalist--administrative staff dietitian, generalist, and food production manager.

The degree of influence ratings were analyzed for undergraduate education, continuing education, and work. Because of the small number of respondents who held master's degree, data were insufficient for reliable ratings and were not reported. Analysis of degree of influence ratings focused on competencies for which 50 per cent or more of the respondents indicated the experience (i.e., B.S., work) was "very helpful" in the development of a particular competency.

RESULTS AND DISCUSSION

Characteristics of the Respondents

Part A of the questionnaire, designated demographic information, included data on the following: educational background, professional involvement, factors affecting acceptance of first and current positions, and salary of respondents. Ratings of graduates' attitudes toward educational preparation and professional competency were included.

Educational Background

The entire research population was composed of 109 graduates from the first five years of Kansas State University's Coordinated Undergraduate Program in Dietetics. The distribution of graduates per year and the number and percentage responding were:

Year of Graduation	Number of Graduates	Number of Responses	Per Cent of Responses
1971	7	7	100.0
1972	11	8	72.7
1973	19	17	89.5
1974	36	26	72.2
1975	36	35	97.2
Total	109	93	85.3

One questionnaire from a 1975 graduate was not included in the statistical analysis because it was lost in the computer center, thus reducing the total population to 92. Four graduates could not be contacted by mail or telephone and for this reason the total number of graduates available for responses was reduced to 105 bringing the per cent of return to 88.6 per cent.

Twenty-three (24.9 per cent) of the graduates had completed a master's degree, and 8.6 per cent more were working on the degree

(Table 1). In a national sample of dietitians from twenty-four to twenty-nine years of age, Stone (79) found that 13.7 per cent had completed a master's degree. A comparison of the two groups indicates that a high proportion of KSU graduates have completed the master's degree. In addition, one respondent expects to complete requirements for a doctor of philosophy degree by 1982 and two are pursuing law degrees.

Table 1: Educational background of survey respondents

characteristic	N	%
year of graduation (N = 92)		
1971	7	7.6
1972	8	8.6
1973	17	18.5
1974	26	28.3
1975	34	37.0
most advanced degree		
bachelor's	69	75.1
master's	23	24.9
area of interest for graduate study[1] (N = 57)		
foodservice management	14	22.5
education	13	21.0
business administration	11	17.7
clinical dietetics	8	12.9
public health nutrition	6	9.7
nutrition	5	8.1
other	5	8.1

[1]Multiple areas of interest were indicated by several respondents.

Over sixty per cent of the total respondents have completed or expect to pursue graduate study. Major areas of interest were foodservice

management, 22.5 per cent; education, 21 per cent; business administration, 17.7 per cent; and clinical dietetics, 12.9 per cent (Table 1).

Among those responding to the question concerning initiation of graduate study, 31.4 per cent responded they were very well prepared by the undergraduate curriculum and 57.1 per cent were fairly well prepared. The remainder (11.4 per cent) said the undergraduate program did not prepare them well for graduate study.

Professional Involvement

All but one of the respondents were registered dietitians (R.D.) and attained registration within the year following graduation. Two of the respondents were not members of The American Dietetic Association. Membership of the respondents in other professional organizations included the American Diabetes Association (14 per cent) and the Society for Nutrition Education (12 per cent). Other organizational memberships reported by more than one graduate were the American Home Economics Association, American Society for Parenteral and Enteral Nutrition, National Council on Renal Nutrition, American School Food Service Association, American Public Health Association, and the American Kidney Association.

Members have contributed to the dietetic profession through participation on committees and holding offices within the Association (Table 2). Two graduates have contributed to national committees or offices for four to seven years each. At the state level, nearly twenty per cent of the graduates have served on apointed committees or elected offices for one to five years. At the district level, more than fifty per cent have served as committee members or held one or more offices since graduation.

Table 2: Professional involvement of survey respondents (N = 92)

item	dietetic associations					
	district		state		national	
	N	%	N	%	N	%
number of years served on committees or in offices						
none	19	20.7	26	28.3	29	31.5
one to three	33	35.8	15	16.3	--	--
four to five	12	13.1	3	3.3	1	1.1
six to seven	5	5.4	--	--	1	1.1
no response	23	25.0	48	52.2	61	66.3
number of district meetings attended in the last year						
none	18	19.6				
one to three	42	45.6				
four to six	25	27.2				
seven to nine	4	4.4				
no response	3	3.3				
number of state meetings attended in the past three years						
none			7	7.6		
one to three			62	67.4		
four to six			19	20.6		
seven to nine			1	1.1		
no response			3	3.3		
number of national meetings attended in the past three years						
none					34	37.0
one					28	30.4
two					6	6.5
three					2	2.2
no response					22	23.9

In the past year, 77.2 per cent of the graduates attended one or more district meetings. State association meetings were attended by 89 per cent of K-State CUP graduates in the past three years. Thirty-nine per cent of the graduates have attended at least one annual meeting of ADA in the last three years with two graduates attending all three (Table 2).

Participation in dietetic related activities, over and above work responsibilities, were assessed. Specifically, respondents were asked the number of times in the past three years he/she participated in public presentations, as an advisor to one or more community groups, an officer or committee member for one or more community groups, or other related activities. Responses indicated that 56.5 per cent of the graduates participated in public presentations within the last year with 12 per cent involved in ten or more presentations. Community groups attracted 18.5 per cent of the graduates as advisors and 25 per cent as committee members. Other related activities included participating in National Nutrition Week and Dial-a-Dietitian programs, speaking at undergraduate programs in dietetics, teaching classes in prenatal nutrition and for foodservice supervisors, advising Home Economics Related Occupations groups, and coordinating dietetic workshops and newsletters.

Since graduation, several respondents received recognition from their community, peers, or professional organizations. A service award from the Veterans Administration and one from the Kansas City Chapter of Mended Hearts were received by two graduates. "Employee of the Month" was an award received by one respondent. In 1979, a paper of special merit was presented by a graduate at the Society for Nutrition Education Conference.

Two graduates, recognized for graduate study, were recipients of the Estelle B. Sharpe Scholarship and the Allied Health Traineeship for Administrative Dietetics. One graduate had been a speaker at a national ADA meeting, received an award for Outstanding Young Women of America, and was a Recognized Young Dietitian of the Year (RYDY). Seven other graduates have been nominated or chosen as an RYDY by their district and state associations.

Holcomb et al. (80) described scholarly publications by graduates as an indication of professional leadership. Seven graduates from K-State's coordinated undergraduate program have published at least one scholarly paper in a professional journal and three have published in trade journals.

Among the respondents, 33.7 per cent have authored, co-authored, or contributed to the development of one or more diet manuals since graduation. Patient or client teaching materials have been developed by 57.6 per cent of the graduates with two-thirds contributing to the development of more than one project. Contributions to employee training materials were provided by 44.6 per cent of the graduates. It appears that a high proportion of CUP graduates from KSU are participating in a variety of related organizations and are active professionally.

Factors Affecting Acceptance of Positions

Factors which may affect a graduate's choice in accepting first and current positions, selected from Fargen's study (78) on career patterns of hospital dietitians, are shown in Table 3. Experience the job offers was rated as the most important factor in accepting both first and current positions according to 64 per cent of the respondents. The specific city or town and geographic location were also of major

Table 3: Factors affecting choice in accepting first and current positions

factors	important in first position[1]			important in current position[2]		
	major	minor	not imp	major	minor	not imp
	%	%	%	%	%	%
specific city or town	52.2	17.8	30.0	57.1	24.3	18.6
size of the city or town	12.4	30.3	57.3	10.1	27.5	62.3
geographic location	40.4	28.1	31.5	45.6	26.5	27.9
spouse's job	31.8	10.6	57.6	55.2	13.4	31.3
family considerations	19.5	40.2	40.2	50.0	16.2	33.8
experience the job offers	64.4	27.8	7.8	64.3	25.7	10.0
salary	19.1	56.2	24.7	20.0	57.1	22.9
only job available	19.3	20.5	60.2	14.9	19.4	65.7

[1] N varied from 85 to 90.

[2] N varied from 67 to 70.

importance to the respondents for both positions. Size of the city or town or the fact that it was the only job available were not important at either time. Spouse's job and family considerations, while not important in accepting the first position, were of major importance to at least half of the respondents in accepting the current position.

Salary

An open-ended question requesting present annual salary generated seventy-one responses of which sixty-one were for full-time positions.

The mean salary for full-time dietitians was $15,590 with a range from $12,385 to $18,795.

Attitudes Toward Education and Competency

Respondents were asked if they would recommend a coordinated program to a college sophomore interested in the field of dietetics. Analysis revealed that 98 per cent "would" or "probably would" make this recommendation.

When asked to rate their professional competency as compared with other dietitians, over one-third (38.9 per cent) rated their competency as above average and 60 per cent, as average. One graduate indicated that her competency was below average when compared to dietitians with whom she was acquainted.

Employment Background

Employment data were analyzed for eighty-eight of the ninety-two respondents. Four graduates have been unemployed for more than four years and data from these respondents were not used to compare present and current positions.

Selection and Length of Employment

The mean number of years in practice for the research population was four and three-fourths years. Since graduation, the average total length of time for unemployment was nine months, and reasons varied among respondents. Forty-five had been continuously employed in dietetics. Breaks in career patterns were attributed primarily to family responsibilities.

Employment outside the field of dietetics was reported by 14.8 per cent of the respondents. Ten per cent, previously employed in a non-dietetic position, have returned to practice in dietetics. The primary reason for employment in a non-dietetic position was that a job of interest was not available. Graduates presently in non-dietetic positions were either attending graduate school or seeking a higher salary, a different experience, or a greater challenge; transfer of the spouse to another city was also a reason. The remaining seventy-six were employed in dietetic positions.

When comparing first and current positions, the mean number of years in practice was one and a half years for the first position, and two years for the current position. Reasons for unemployment included no job available, family responsibility, or not desiring work for a time. Reasons for leaving both first and current positions were similar to those for unemployment.

Comparison of First and Current Positions

A contrast between first and current positions is evident in position titles described in Table 4. Administrators included directors, associate and assistant directors, head administrative, and head clinical dietitians. The number of head clinical dietitians increased from 7.7 per cent in the first position to 13.6 per cent in the current position, and overall, administrators increased from 18.0 to 26.3 per cent.

The first position as a clinical or community dietitian was characteristic of nearly half of the respondents (44.9 per cent) and this decreased to 26.1 per cent in the current position. Generalist positions decreased from 25.6 per cent in the first position to 17 per cent in the current position.

Table 4: Employment background of survey respondents

position titles	current or most recent position[1] (N = 88)		first position[2] (N = 78)	
	N	%	N	%
administrators				
directors	7	8.0	7	9.0
associate or assistant	3	3.4	--	--
head administrative	1	1.2	1	1.3
head clinical dietitian	12	13.6	6	7.7
total	23	26.3	14	18.0
clinicians				
clinical dietitian	20	22.7	33	42.3
community dietitian	3	3.4	2	2.6
total	23	26.1	35	44.9
generalist				
administrative staff	3	3.4	6	7.7
general dietitian	9	10.2	11	14.1
food production manager	3	3.4	3	3.8
total	15	17.0	20	25.6
educator				
teaching dietitian	2	2.2	1	1.3
college faculty member	7	8.0	1	1.3
clinical instructor--CUP	--	--	2	2.6
total	9	10.2	4	5.2
consultant				
nutrition counselor	2	2.2	--	--
health care consultant	10	11.4	2	2.6
total	12	13.6	2	2.6
other				
non-dietetic positions	6	6.8	3	3.8

[1] Includes description of current position for those employed at time of survey (N = 82) and of most recent position for those whose last employment was within two years (N = 6).

[2] Ten respondents reported only one position since graduation. Those currently employed in first position are included in description of current position.

Numbers of graduates practicing in education and as consultant dietitians increased from first to current positions. First positions as dietetic educators were taken by 5.2 per cent of the graduates, half of which were attending graduate school; current positions were reported by 11.4 per cent of the respondents. The consultant group increased from 2.6 per cent in the first position to 13.6 per cent in the current position. Movement of graduates to positions as administrators, educators, and consultants is supported by the ADA Position Paper on employment practices (81) which identifies these positions as requiring advanced experience or education beyond entry-level practice.

The number of graduates, summarized by position title in Table 5, included the ten graduates who have remained in the first position throughout their employment history for a total of eighty-eight graduates in first and current positions. Of the twenty-three graduates currently employed with administrator position titles, ten initially held clinical positions and seven held positions in administration. Current clinician positions were held by twenty-three graduates, thirteen of which were initially in a clinical position, while three were in administration and three in general dietetics.

Nine graduates were currently employed as educators. Two-thirds held first positions in clinical dietetics, two were generalists and one graduate's first position was in education. Twelve graduates were presently employed as consultants. Eight were initially clinical or general positions, while others were administrative, education, or a non-dietetic position. Six graduates, previously in dietetics, were employed in non-dietetic positions.

Table 5: Summary of position titles for first and current positions (N = 88)[1,2]

totals	first positions: adm	clin	gen	educ	cons	other[3]	position titles	
23	7	10	3	2	-	1	adm	current positions
23	3	13	3	1	2	1	clin	
15	4	3	8	-	-	-	gen	
9	-	6	2	1	-	-	educ	
12	2	4	4	1	-	1	cons	
6	2	3	1	-	-	-	other[3]	
88	18	39	21	5	2	3	totals	

[1]Includes the research population except the four graduates unemployed since 1976.

[2]Ten respondents reported only one position since graduation; these are included in both first and current positions.

[3]Non-dietetic positions.

Competencies for Dietitians

General Information

Graduates were asked to rate, on Scale A, the degree of responsibility in the present position for each of eighty-two competency statements. If the competency was of a major responsibility or of some responsibility, they were to rate on Scale B the educational and work experiences contributing to the competency. The responses on Scale B varied in numbers because some of the statements were not a responsibility of the particular respondent.

Responsibilities of Graduates

To simplify analysis, the responsibility ratings were divided into five classifications: typical, frequent, common, occasional, and rare. The responses were placed in these classifications on a numerical basis related to the frequency of the separate ratings. A comparison of these classifications with the three categories essential, desirable but not essential, and beyond expectation for entry level are shown in Table 15 (Appendix H).

Typical Responsibilities. Fifteen competencies rated as a major responsibility by at least 50 per cent of the graduates were classified as typical (Table 6). The statement rated as a major responsibility by the largest number of responding practitioners (75 per cent) was "maintains current knowledge of new methods and approaches for the provision of nutritional care." This reflects the functional role of the respondents since 39.7 per cent were in clinical positions. The administrative counterpart, "maintains current knowledge of new methods and systems in administrative management," rated by only 27.6 per cent as a major responsibility of the current position, was placed in the common classification.

"Communicates nutrition care to appropriate personnel" was identified by two-thirds of the graduates as a major responsibility again emphasizing the number of graduates in clinical positions. In fact, thirteen of the fifteen typical responsibilities refer to nutrition care.

When compared to the results of Loyd's categorization of essentiality for entry-level practice, eleven or 73.3 per cent of the responsibilities typically performed by responding dietitians after four to eight and a half years of practice were identified as essential

Table 6: Percentage distribution, mean and standard deviation for typical responsibilities[1] (N = 76)

item number	competency	degree of responsibility[2] major	some	none	mean ±s.d.
		%	%	%	
45	Maintains current knowledge of new methods and approaches for the provision of nutritional care.	75.0	13.2	11.8	1.37 ±.69
27	Communicates orally and via written communication (such as chart notes) pertinent aspects of the nutrition care plan to appropriate clinical personnel, foodservice personnel, and other health team members.	67.1	11.8	21.1	1.54 ±.82
67	Distinguishes and relates pertinent aspects of the individual's medical status (medical history, laboratory diagnostic data, drug treatment and present medical symptoms) to nutritional planning.	63.2	7.9	28.9	1.66 ±.90
43	Provides and directs nutritional care through individual counselling, group counselling, and alternate methods such as audio-visual programming.	61.8	11.8	26.3	1.65 ±.88
19	Uses information collected from nutritional assessment to develop a plan for the provision of optimal nutritional care.	60.5	13.2	26.3	1.66 ±.87

[1] Responsibilities rated as "major" by at least 50 per cent of the respondents.

[2] Scale A, degree of responsibility: 1 = major responsibility, 2 = some degree of responsibility, 3 = not a responsibility.

Table 6: (cont.)

item number	competency	degree of responsibility			mean ±s.d.
		major	some	none	
		%	%	%	
57	Identifies and analyzes problems related to area.	60.5	28.9	10.5	1.50 ±.68
26	Serves as a nutritional consultant to other health team members by providing nutritional information, recommendations for nutrition care and appropriate materials.	59.2	19.7	21.1	1.62 ±.82
16	Monitors and records regularly in the nutrition care plan and chart the progress of individuals to whom care is directed.	57.9	15.8	26.3	1.68 ±.87
53	Analyzes previous nutritional intake for nutritional adequacy and similarity to proposed pattern indicated by recommended modification.	57.9	11.8	30.3	1.72 ±.90
9	Communicates changes to appropriate clinical personnel or recommends changes to other health team members such as the physician.	53.9	21.1	25.0	1.71 ±.85
41	Identifies individuals and/or groups who require nutritional care.	53.9	15.8	30.3	1.76 ±.89
54	Evaluates individual's learning ability, previous knowledge of nutritional modification(s), life style, motivational level, flexibility, acceptance of medical conditions, and possible changes in nutrition care that may result from a change in position in life cycle.	53.9	15.8	30.3	1.76 ±.89

Table 6: (cont.)

item number	competency	degree of responsibility			mean ±s.d.
		major	some	none	
		%	%	%	
11	Implements new approaches.	52.6	43.4	3.9	1.51 ±.58
52	Compiles relevant information from appropriate sources (chart, nursing care plan, members of the health team such as the physician, nurse, and social worker, community agencies, and the patient or client) necessary to make a nutritional assessment.	51.3	21.1	27.6	1.76 ±.86
56	Prepares accurate and appropriate reports routinely.	50.0	26.3	23.7	1.74 ±.82

for the entry level dietitian (Table 15, Appendix H). The four remaining statements classified as typical were rated by Loyd as desirable but not essential, for entry-level practice. Respondents of this study are not performing any typical competencies expected beyond entry-level in the Loyd study (4).

Frequent Responsibilities. Seventeen statements, rated as "some" or "major" by at least two-thirds, but not including those rated as "major" by at least fifty per cent of the respondents, were classified in this study as frequent responsibilities (Table 7). Eight of the frequent responsibility statements were rated as essential for entry-level practice and seven were judged as desirable but not essential (Table 15, Appendix H). "Plans nutrition guidelines" and "develops department goals" were identified as beyond entry-level by Loyd, but are frequent responsibilities for dietitians with four to eight and a half years experience.

Common Responsibilities. Graduates rating twenty-two statements as a common responsibility, represented at least fifty per cent but no more than two-thirds of the total number of respondents (Table 8). Categorization of essential, desirable but not essential, and beyond entry-level as defined by Loyd, showed a resemblance to the classification of common responsibilities similar to that for frequent. In both classifications nearly all statements were evenly divided between those identified as essential and those classified as desirable but not essential for the entry-level dietitian. The two responsibilities which were classified as common in the positions of respondents and rated as beyond

Table 7: Percentage distribution, mean and standard deviation for frequent responsibilities[1] (N = 76)

item number	competency	degree of responsibility[2] major	some	none	mean ±s.d.
		%	%	%	
15	Analyzes new approaches and identifies those which relate to his/her area and program.	40.8	47.4	11.8	1.71 ±.67
1	Consistently evaluates effectiveness of systems and procedures which are utilized.	43.4	42.1	14.5	1.71 ±.71
2	Plans for the use of alternative methods and/or systems for nutrition education (group classes, programmed learning materials, audio-visual materials, etc.).	46.1	34.2	19.7	1.74 ±.77
50	Surveys and obtains appropriate training materials (audio-visual and written).	48.7	31.6	19.7	1.71 ±.78
3	Surveys available materials and obtains those materials necessary for the implementation of nutritional care.	39.5	39.5	21.1	1.82 ±.76
58	Identifies the need for changes in the nutritional care objectives and methods for delivery of care.	47.4	31.6	21.1	1.74 ±.79

[1]Responsibilities rated as "some" or "major" by at least two-thirds, but not to include those rated as "major" by at least 50 per cent of respondents.

[2]Scale A, degree of responsibility: 1 = major responsibility, 2 = some degree of responsibility, 3 = not a responsibility.

Table 7: (cont.)

item number	competency	degree of responsibility			mean ±s.d.
		major	some	none	
		%	%	%	
37	Maintains effective communication with personnel through regular conferences and meetings.	46.1	31.6	22.4	1.76 ±.80
39	Encourages and motivates personnel to provide optimal care by example and adequate reinforcement.	46.1	28.9	25.0	1.76 ±.82
55	Develops systems to support goals.	34.2	40.8	25.0	1.91 ±.77
65	Evaluates the effectiveness of nutritional care services continuously.	42.1	32.9	25.0	1.83 ±.81
13	Utilizes management techniques such as management by objectives.	21.1	51.3	27.6	2.07 ±.70
40	Plans nutritional guidelines (i.e., diet manual, nutritional guidelines, and policies and procedures related to nutrition care) consistent with the objectives of the institution, and current nutrition knowledge.	46.1	26.3	27.6	1.82 ±.84
21	Encourages and motivates personnel to provide optimal food-service by example and adequate reinforcement.	44.7	25.3	30.3	1.86 ±.86
6	Develops long and short range departmental goals.	42.1	25.0	32.9	1.91 ±.87

Table 7: (cont.)

item number	competency	degree of responsibility			mean ±s.d.
		major	some	none	
		%	%	%	
17	Maintains adequate records and a system of regularly reporting the services provided by the nutritional care unit.	44.7	22.4	32.9	1.88 ±.88
35	Modifies systems and/or procedures to solve problems with appropriate personnel within area.	34.2	32.9	32.9	1.99 ±.83
71	Implements policies and procedures in appropriate areas.	43.4	23.7	32.9	1.90 ±.87

Table 8: Percentage distribution, mean and standard deviation for common responsibilities[1] (N = 76)

item number	competency	degree of responsibility[2] major	some	none	mean ±s.d.
		%	%	%	
42	Develops policies and procedures that are consistent with the institution, personnel availability, and characteristics of patient and/or client.	39.5	26.3	34.2	1.95 ±.86
49	Analyzes menu as to nutritional content, cost, and client acceptance, and modifies menu where result of analysis indicate it is necessary to do so.	40.8	25.0	34.2	1.93 ±.87
63	Implements new systems.	32.9	32.9	34.2	2.01 ±.83
24b	Plans menus which incorporate special nutritional and/or taste requirements of individuals or groups within the institute or program.	48.7	15.8	35.5	1.87 ±.91
24a	Plans menus which incorporate principles of good menu planning, i.e. adequate nutritional content, color, texture, shape, and variety.	44.7	18.4	36.8	1.92 ±.91

[1]Responsibilities rated as "some" or "major" by at least 50 per cent, but less than two-thirds, but not to include those rated as "major" by at least 50 per cent of the respondents.

[2]Scale A, degree of responsibility: 1 = major responsibility, 2 = some degree of responsibility, 3 = not a responsibility.

Table 8: (cont.)

item number	competency	degree of responsibility			mean ±s.d.
		major	some	none	
		%	%	%	
70	Develops methods for evaluating client acceptance.	25.0	38.2	36.8	2.12 ±.78
7	Develops job descriptions and specifications for personnel.	36.8	25.0	38.2	2.01 ±.87
34	Assigns nutrition care related tasks to appropriate personnel (according to the nutrition care plan) and coordinates the performance of these tasks.	31.6	27.6	40.8	2.10 ±.85
24c	Plans menus which conform to budget and/or cost requirements, equipment, time and personnel availability.	44.7	14.5	40.8	1.96 ±.93
36c	Performs the following personnel functions related to staffing for nutritional care: continuing in-service training of clinical personnel.	36.8	22.4	40.8	2.04 ±.89
4	Utilizes the performance appraisal as an evaluation as well as a motivational tool for personnel.	28.9	28.9	42.1	2.13 ±.84
14	Refers individuals to appropriate outside agencies or programs for continuance of care, and provides these agencies with information related to previous care.	11.8	46.1	42.1	2.30 ±.67
28	Maintains current knowledge of new methods and systems in administrative management.	27.6	28.9	43.4	2.16 ±.84

Table 8: (cont.)

item number	competency	degree of responsibility			mean ±s.d.
		major	some	none	
		%	%	%	
31	Prepares a proposal to explain and justify the need for new approaches.	21.1	35.5	43.4	2.22 ±.78
48	Serves as an institutional or community resource for nutrition oriented consumer information.	22.4	34.2	43.4	2.21 ±.79
62a	Maintains quality and quantity controls through routine monitoring of food items produced and served.	30.3	26.3	43.4	2.13 ±.85
10	Utilizes community related or community based institutions or programs to meet long-range objectives of nutritional care.	19.7	35.5	44.7	2.25 ±.77
20	Participates in health team activities such as case conferences, medical rounds and Grand Rounds.	27.6	27.6	44.7	2.17 ±.84
59	Plans orientation and in-service training programs for all persons involved with foodservice.	32.9	22.4	44.7	2.12 ±.88
25	Redesigns systems and prepares proposals to present, explain, and justify the proposed changes.	21.1	32.9	46.1	2.25 ±.79

Table 8: (cont.)

item number	competency	degree of responsibility			mean ±s.d.
		major	some	none	
		%	%	%	
61b	Coordinates systems within area to appropriate inter-departmental systems (i.e., food delivery systems to nursing service systems and procedures).	28.9	22.4	48.7	2.20 ±.86
46	Identifies pertinent legislation and sources of outside funding that influence the provision of nutritional care in the institution and the community.	24.0	26.7	49.3	2.25 ±.82

entry level in Loyd were "redesigns systems" and "identifies legislation and funds in community nutrition" (Table 15, Appendix H).

Occasional Responsibilities. With ratings of at least forty but less than fifty per cent, fourteen competency statements were performed occasionally by respondents in the current position (Table 9). Practically all statements follow Loyd's categories of essential and desirable, but not essential. Three statements, rated beyond entry-level by Loyd, are occasionally performed by respondents in this study. These competencies are: "interviews and selects clinical personnel," "determines and justifies equipment needs," and "develops staffing patterns for clinical personnel" (Table 15, Appendix H).

Rare Responsibilities. The remaining competency statements were rated by less than forty per cent as a responsibility (Table 10). Of these fourteen statements, three were identified as essential for the entry-level dietitian, seven as desirable, and four as beyond entry-level.

Influences of Professional Experiences

To rate the contribution of various professional experiences in developing each competency, graduates indicated on Scale B the degree of influence for undergraduate education, graduate study, continuing education, and work experience (Table 16, Appendix H). Work and undergraduate education had the greatest influence in the development of professional competency. Continuing education was generally rated as "some help" to graduates.

The master's degree generated limited responses which would reduce validity and for that reason, the results were not analyzed. Discussion

Table 9: Percentage distribution, mean and standard deviation for occasional responsibilities[1] (N = 76)

item number	competency	degree of responsibility[2]			mean ±s.d.
		major	some	none	
		%	%	%	
36b	Performs the following personnel functions related to staffing for nutritional care: orientating of new clinical personnel.	29.3	20.0	50.7	2.21 ±.87
38	Develops staffing patterns, job descriptions and specifications for individuals (dietitians, technicians, and clerks) involved in the provision of nutritional care.	28.9	18.4	52.6	2.24 ±.88
72	Supervises the daily performance of personnel directly involved in the provision of nutritional care.	30.3	17.1	52.6	2.22 ±.89
66	Uses effective merchandising techniques in the presentation of food to patients and/or clients (i.e., menu design).	22.4	25.0	52.6	2.30 ±.82
62c	Maintains quality and quantity control through routine monitoring of receiving, storage, and sanitation procedures.	21.1	25.0	53.9	2.33 ±.81
62b	Maintains quality and quantity control through consistent supervision of personnel and the identification of factors which influence the productivity and performance of personnel.	27.6	18.4	53.9	2.26 ±.87

[1]Responsibilities rated as "some" or "major" by at least 40 per cent, but less than 50 per cent of the respondents.

[2]Scale A, degree of responsibility: 1 = major responsibility, 2 = some degree of responsibility, 3 = not a responsibility.

Table 9: (cont.)

item number	competency	degree of responsibility			mean ±s.d.
		major	some	none	
		%	%	%	
61c	Coordinates utilization of labor, equipment, and personnel within area.	27.6	18.4	53.9	2.26 ±.87
69	Determines and justifies specifications for new equipment needed.	17.1	26.3	56.6	2.40 ±.77
61a	Coordinates systems within area to systems in other areas of the department (i.e., food production systems to food-service systems).	25.0	18.4	56.6	2.32 ±.85
60	Delegates appropriate functions (i.e., daily food production planning, daily supervision of personnel, daily supervision of tray service) to supervisory personnel such as the foodservice supervisor.	30.3	13.2	56.6	2.26 ±.90
44c	Performs the following personnel functions: continuing in-service training of administrative personnel.	28.9	14.5	56.6	2.28 ±.89
36a	Performs the following personnel functions related to staffing for nutritional care: interviewing and selection of clinical personnel, i.e., technician and clerk.	20.0	22.7	57.3	2.37 ±.80
30	Maintains accurate and appropriate records for personnel management, fiscal control, and reporting purposes.	26.3	15.8	57.9	2.32 ±.87
12	Plans a master schedule for personnel.	23.7	17.1	59.2	2.36 ±.84

Table 10: Percentage distribution, mean and standard deviation for rare responsibilities[1] (N = 76)

item number	competency	degree of responsibility[2] major	some	none	mean ±s.d.
		%	%	%	
22	Develops standardized recipes to provide a consistent basis for quality and quantity control.	14.7	25.3	60.0	2.45 ±.74
23	Cooperates with other specialists (such as the public health nutritionist) in the design of community related programs to provide preventive or interventive nutrition care.	14.5	25.0	60.5	2.46 ±.74
18	Plans sanitation schedules and procedures that conform to state and local regulation.	22.4	17.1	60.5	2.38 ±.84
8	Identifies state, local, and federal labor laws as well as institutional personnel policies which relate to personnel management.	18.4	21.1	60.5	2.42 ±.79
47	Plans a budget that conforms to departmental or program financial requirements.	19.7	18.4	61.8	2.42 ±.80
33	Conducts task analyses and work sampling studies to provide a basis for developing new and evaluating existing job descriptions and specifications.	7.9	27.6	63.2	2.59 ±.70

[1]Responsibilities rated as "some" or "major" by less than 40 per cent of the respondents.

[2]Scale A, degree of responsibility: 1 = major responsibility, 2 = some degree of responsibility, 3 = not a responsibility.

Table 10: (cont.)

item number	competency	degree of responsibility			mean ±s.d.
		major	some	none	
		%	%	%	
32	Determines man-hour requirements that relate to menu and budget specifications.	19.7	17.1	63.2	2.43 ±.81
44b	Performs the following personnel function: orientating of new administrative personnel.	15.8	17.1	67.1	2.51 ±.76
44a	Performs the following personnel function: interviewing and selection of administrative personnel such as food-service supervisors and/or aides.	19.7	13.2	67.1	2.47 ±.81
5	Plans daily food production.	15.8	15.8	68.4	2.53 ±.76
51	Identifies the need for community related or community based programs to provide preventive nutrition programs and long-term interventive nutritional care.	9.2	22.4	68.4	2.59 ±.66
29	Develops purchasing specifications that insure quality and quantity control.	7.9	21.1	71.1	2.63 ±.63
68	Utilizes appropriate management practices during union organization periods.	7.9	11.8	80.3	2.72 ±.60
64	Designs a non-computerized or computerized inventory system.	7.9	9.2	82.9	2.75 ±.59

of competencies is limited to those rated by at least seventy per cent of the respondents.

Work. Responsibilities for which work was rated as "very helpful" by at least half of the respondents included sixty-six or 80.5 per cent of the eighty-two statements (Table 11). "Provides nutrition counselling" was the one typical responsibility rated by at least seventy per cent of the graduates. Three frequent responsibilities developed by work included "evaluates effectiveness of systems," "evaluates effectiveness of nutritional care," and "maintains effective communication." Three common responsibilities performed by respondents and developed by work experiences were "coordinates interdepartmental systems," "participates in health team activities," and "analyzes and modifies menus."

Other competency statements were rated by less than fifty per cent of the respondents. Four occasional responsibilities, "plans master schedule," "coordinates departmental systems," "supervises nutrition care personnel," and "coordinates resources within department," recognized work in the development of these competencies. Fourteen statements were developed primarily through work by at least seventy per cent or more of the respondents. Less than thirty respondents had responsibilities classified as rare and, therefore, are not included in this discussion.

Undergraduate Education. Undergraduate education was identified as being "very helpful" in developing twenty-nine (35.4 per cent) of eighty-two competencies by at least half the graduates (Table 12). Five competencies, all related to nutrition care, were typical responsibilities rated by 70 per cent of the graduates for which undergraduate education was influential. These responsibilities classified as typical were:

Table 11: Responsibilities for which work was rated as "very helpful" by at least half of the respondents

item number	competency	N[1]	degree of influence: very helpful	some help	little/ none	mean ±s.d.
			%	%	%	
	typical[2]					
43†	provides nutrition counselling	57	70.4	24.1	5.6	1.35 ±.59
27†	communicates nutrition care to appropriate personnel	60	68.5	29.6	1.9	1.33 ±.51
56	prepares reports	57	66.0	34.0	--	1.34 ±.48
16†	monitors and charts progress of nutrition care	57	66.0	30.2	3.8	1.38 ±.56
9†	recommends changes in nutrition care	56	64.7	31.4	3.9	1.39 ±.57
11	implements new systems	70	64.6	32.3	3.1	1.39 ±.55
54†	evaluates socio-psychological factors in nutrition care	55	64.0	36.0	--	1.36 ±.49
67†	relates medical status to nutrition care plan	54	62.7	35.3	2.0	1.39 ±.53
41†	identifies those requiring nutrition care	51	60.8	39.2	--	1.39 ±.49
53†	analyzes previous nutritional intake	54	60.0	38.0	2.0	1.42 ±.54

[1] N varies because of nonresponses and experimental design

[2] Responsibilities rated as "major" by at least 50 per cent of the respondents.

† Responsibilities for which B.S. was also rated as "very helpful."

Table 11: (cont.)

item number	competency	N	degree of influence: very helpful	some help	little/ none	mean ±s.d.
			%	%	%	
52†	assesses nutritional status	55	60.0	34.0	6.0	1.46 ±.61
57	identifies need for changes in nutrition care	67	58.7	41.3	--	1.41 ±.50
26†	serves as nutritional consultant to health team	60	58.2	38.2	3.6	1.46 ±.57
	frequent[3]					
1†	evaluates effectiveness of systems	64	75.0	23.3	1.7	1.27 ±.48
65	evaluates effectiveness of nutrition care	58	71.7	28.3	--	1.28 ±.46
37	maintains effective communication	58	70.9	25.5	3.6	1.33 ±.55
35	solves problems	50	66.7	33.3	--	1.33 ±.48
40†	plans nutrition guidelines	55	66.7	33.3	--	1.33 ±.48
39	provides motivational environment for clinical personnel	56	64.7	33.3	2.0	1.37 ±.53
71	implements policies and procedures	50	63.8	29.8	6.4	1.43 ±.67
58	identifies and analyzes problems in nutritional care	59	63.6	30.9	5.5	1.42 ±.60

[3]Responsibilities rated as "some" or "major" by at least two-thirds, but not to include those rated as "major" by at least 50 per cent of the respondents.

†Responsibilities for which B.S. was also rated as "very helpful."

Table 11: (cont.)

item number	competency	N	degree of influence: very helpful	some help	little/ none	mean ±s.d.
			%	%	%	
17	maintains records of nutrition care plan	51	61.4	34.1	4.5	1.43 ±.59
21	provides motivational environment for administrative personnel	53	57.1	36.7	6.1	1.49 ±.62
6	develops department goals	50	53.3	44.4	2.2	1.49 ±.55
55	develops systems	56	51.9	44.2	3.8	1.52 ±.58
3†	obtains nutrition education materials	61	50.9	42.1	7.0	1.56 ±.63
15	analyzes new approaches	67	50.8	41.0	8.2	1.57 ±.64
	common[4]					
61b	coordinates interdepartmental systems	39	75.0	25.0	--	1.25 ±.44
20†	participates in health team activities	42	71.8	20.5	7.7	1.36 ±.63
49†	analyzes and modifies menus	50	70.2	27.7	2.1	1.32 ±.52
42	develops policies and procedures	50	69.6	30.4	--	1.30 ±.47
59†	plans orientation and in-service training for department	42	67.5	27.5	5.0	1.38 ±.59

[4]Responsibilities rated as "some" or "major" by at least 50 per cent, but less than two-thirds, but not to include those related as "major" by at least 50 per cent of the respondents.

†Responsibilities for which B.S. was also rated as "very helpful."

Table 11: (cont.)

item number	competency	N	degree of influence: very helpful	some help	little/ none	mean ±s.d.
			%	%	%	
62a†	monitors production and service	43	67.5	25.0	7.5	1.40 ±.63
7†	develops job descriptions	48	64.4	28.9	6.7	1.42 ±.62
24c	considers resources in menu planning	46	61.9	38.1	--	1.38 ±.49
63	implements new systems	50	60.9	34.8	4.3	1.44 ±.58
24b†	incorporates individual requirements into menus	49	59.1	40.9	--	1.41 ±.50
70	evaluates client acceptance	48	59.1	31.8	9.1	1.50 ±.67
4	uses performance appraisal	44	57.5	42.5	--	1.45 ±.50
36c	conducts in-service training for clinical personnel	45	57.1	40.5	2.4	1.45 ±.55
14	utilizes outside agencies for continuing care	44	56.4	38.5	5.1	1.49 ±.60
34	assigns and coordinates clinical personnel	44	52.5	45.0	2.5	1.50 ±.36
24a†	uses menu planning principles	48	52.2	41.3	6.5	1.54 ±.62
25	redesigns systems	41	51.4	42.9	5.7	1.54 ±.61

†Responsibilities for which B.S. was also rated as "very helpful."

Table 11: (cont.)

item number	competency	N	degree of influence: very helpful	some help	little/ none	mean ±s.d.
			%	%	%	
	occasional[5]					
12	plans master schedule	31	81.5	18.5	--	1.19 ±.40
61a	coordinates departmental systems	34	73.3	23.3	3.3	1.30 ±.54
72	supervises nutrition care personnel	36	72.7	27.3	--	1.27 ±.45
61c	coordinates resources within department	35	71.0	29.0	--	1.29 ±.46
60	delegates	32	69.0	24.1	6.9	1.38 ±.62
30	maintains records in personnel and fiscal control	31	67.9	32.1	--	1.32 ±.48
62b†	supervises personnel effectively	36	64.7	35.3	--	1.35 ±.49
44c	conducts in-service training for administrative personnel	32	62.1	34.5	3.4	1.41 ±.57
36b	orients new clinical personnel	37	61.8	35.3	2.9	1.41 ±.56
62c†	monitors receiving, storage and sanitation	36	60.6	33.3	6.1	1.46 ±.62
66†	uses effective merchandising techniques	36	60.6	30.3	9.1	1.49 ±.67

[5]Responsibilities rated as "some" or "major" by at least 40 per cent, but less than 50 per cent of the respondents.

†Responsibilities for which B.S. was also rated as "very helpful."

Table 11: (cont.)

item number	competency	N	degree of influence: very helpful	some help	little/ none	mean ±s.d.
			%	%	%	
36a	interviews and selects clinical personnel	33	60.0	36.7	3.3	1.43 ±.57
38	develops staffing patterns for clinical personnel	36	53.1	40.6	6.3	1.53 ±.62
	rare[6]					
44b	orients new administrative personnel	28	76.2	23.8	--	1.24 ±.43
44a	interviews and selects administrative personnel	25	71.3	21.7	--	1.22 ±.42
47	plans budget	28	70.8	16.7	12.5	1.42 ±.72
64	designs inventory system	14	63.6	27.3	9.1	1.46 ±.69
51	identifies need for community programs	24	54.5	36.4	9.1	1.55 ±.67
32	determines man-hour requirements	29	52.0	44.0	4.0	1.52 ±.59
18†	plans sanitation schedules	30	50.0	50.0	--	1.50 ±.51
8	identifies labor laws	30	50.0	42.3	7.7	1.58 ±.64
68	acts appropriately during union organization	15	50.0	35.7	14.3	1.64 ±.75

[6]Responsibilities rated as "some" or "major" by less than 40 per cent of the respondents.

†Responsibilities for which B.S. was also rated as "very helpful."

Table 12: Responsibilities for which the B.S. program was rated as "very helpful" by at least half of the respondents

item number	competency	N[1]	degree of influence: very helpful	some help	little/ none	mean ±s.d.
			%	%	%	
	typical[2]					
54*	evaluates socio-psychological factors in nutrition care	55	78.2	20.0	1.8	1.24 ±.47
43*	provides nutrition counselling	57	77.2	22.8	--	1.23 ±.42
16*	monitors and charts progress of nutrition care	57	77.2	21.1	1.8	1.25 ±.47
67*	relates medical status to nutrition	54	75.9	20.4	3.7	1.28 ±.53
53*	analyzes previous nutritional intake	54	70.4	29.6	--	1.30 ±.46
27*	communicates nutrition care to appropriate personnel	60	66.7	28.3	5.0	1.38 ±.59
41*	identifies those requiring nutritional care	53	64.2	26.4	9.4	1.45 ±.67
52*	assesses nutritional status	55	61.8	34.5	3.6	1.42 ±.57
26*	serves as nutritional consultant to health team	60	60.0	33.3	6.7	1.47 ±.62
9*	recommends changes in nutritional care	56	55.4	41.1	3.6	1.48 ±.57

[1] N varies because of nonresponses and experimental design.

[2] Responsibilities rated as "major" by at least 50 per cent of the respondents.

* Responsibilities for which work was also rated as "very helpful."

Table 12: (cont.)

item number	competency	N	degree of influence: very helpful	some help	little/ none	mean ±s.d.
			%	%	%	
19	develops nutrition care plans	56	51.8	39.3	8.9	1.60 ±.60
	frequent[3]					
1*	evaluates effectiveness of systems	64	53.1	43.8	3.1	1.50 ±.56
40*	plans nutrition guidelines	55	52.7	40.0	7.3	1.53 ±.63
2	plans nutrition education	61	50.8	39.3	9.8	1.61 ±.59
3*	obtains nutrition education materials	61	50.8	39.3	9.8	1.61 ±.59
13	uses management techniques	54	50.0	40.7	9.3	1.77 ±.69
	common[4]					
24a*	uses menu planning principles	48	89.6	10.4	--	1.10 ±.31
62a*	monitors production and service	43	74.4	25.6	--	1.26 ±.44
49*	analyzes and modifies menus	50	68.0	28.0	4.0	1.36 ±.56
24b*	incorporates individual requirements into menus	49	61.2	34.7	4.1	1.43 ±.58

[3]Responsibilities rated as "some" or "major" by at least two-thirds, but not to include those rated as "major" by at least 50 per cent of the respondents.

[4]Responsibilities rated as "some" or "major" by at least 50 per cent, but less than two-thirds, but not to include those related as "major" by at least 50 per cent of the respondents.

*Responsibilities for which work was also rated as "very helpful."

Table 12: (cont.)

item number	competency	N	degree of influence: very helpful	some help	little/ none	mean ±s.d.
			%	%	%	
7*	develops job descriptions	48	54.2	39.6	6.3	1.52 ±.62
59*	plans orientation and in-service training for department	42	52.4	40.5	7.1	1.55 ±.63
20*	participates in health team activities	42	52.4	33.3	14.3	1.62 ±.73
	occasional[5]					
62c*	monitors receiving, storage, and sanitation	36	77.8	22.2	--	1.22 ±.42
62b*	supervises personnel effectively	36	50.0	41.7	8.3	1.58 ±.65
66*	uses effective merchandising techniques	36	58.3	36.1	5.6	1.47 ±.61
	rare[6]					
22	develops standardized recipes	29	82.8	17.2	--	1.17 ±.38
5	plans food production	23	73.9	17.4	8.4	1.35 ±.65
18	plans sanitation schedules	30	53.3	36.7	10.0	1.57 ±.68

[5]Responsibilities rated as "some" or "major" by at least 40 per cent, but less than 50 per cent of the respondents.

[6]Responsibilities rated as "some" or "major" by less than 40 per cent of the respondents.

*Responsibilities for which work was also rated as "very helpful."

"evaluates socio-psychological factors in nutrition care," "provides nutrition counselling," "monitors and charts progress of nutrition care," "relates medical status to nutrition," and "analyzes previous nutritional intake." Although undergraduate education influenced four frequent responsibilities, the B.S. was not rated as "very helpful" by 70 per cent or more of the graduates.

The undergraduate program was very helpful in developing five common, occasional, and rare responsibilities according to 70 per cent of the respondents. Hoadley (46) identified responsibilities which could be delegated to dietetic technicians. Each of the five responsibilities performed less often by graduates and developed in the undergraduate program were technical skills that possessed the highest potential for delegation to supportive personnel.

Some overlap was apparent concerning the contribution of work and undergraduate education. Twenty-four (29.2 per cent) of the competencies for dietitians were identified by at least half of the respondents as being developed through both work and undergraduate education as noted in Tables 11 and 12.

A summary of the responsibility classifications for which work, the B.S. degree, and both work and the B.S. degree were rated as most influential is given below. Clearly, graduates believe that work experiences made the greatest contribution to development of competency. The impact of the undergraduate degree may lessen with time in practice. For approximately thirty per cent of the competency statements, both work and the undergraduate program contributed to the development of competency to practice. This was particularly apparent for the typical

classification where ten of the fifteen responsibilities were developed by both work and the B.S. degree.

Most Influential Experiences

Classification	Work	B.S.	Both Work and B.S.
typical	13	11	10
frequent	14	5	3
common	17	7	7
occasional	13	3	3
rare	9	3	1
total	66	29	24

Continuing Education. Several competency statements were developed through continuing education, yet only three were rated as "very helpful" by over 50 per cent of the respondents (Table 16, Appendix H). For those rated as "very helpful," "maintains current knowledge in nutrition care" received 76.3 per cent, "identifies legislation and funds in community nutrition" received 61.8 per cent, and "maintains current knowledge in administrative management," received 51.3 per cent.

Minor Influences. Eight statements remained after using the criteria of having at least fifty per cent responding to each experience as "very helpful" in the development of the competency (Table 13). Each of four statements for frequent and common responsibilities identified work as the most helpful experience, although for "obtains training materials" the B.S. degree made almost the same contribution.

Comparison to Loyd. Of the sixty-six statements influenced by work, 47 per cent were identified as essential and 40.9 per cent as desirable

Table 13: Responsibilities for which no source was rated as "very helpful" on degree of influence by at least half the respondents[1]

item number	competency	N[2] and % rating "very helpful"					
		B.S.		cont. educ.		work	
		N	%	N	%	N	%
	frequent						
50	obtains training materials	61	47.5	52	26.9	55	49.1
	common						
48	serves as a community resource person	42	35.7	34	26.5	38	44.7
10	utilizes community programs	41	24.4	36	13.9	39	41.0
31	prepares proposals	44	18.2	34	2.9	40	47.5
	occasional						
69	determines and justifies new equipment needs	33	39.4	27	7.4	30	30.0
	rare						
33	evaluates job descriptions	29	44.8	22	4.5	25	24.0
29	develops purchasing specifications	23	43.5	18	5.6	20	45.0
23	cooperates in design of community programs	29	37.9	24	--	27	29.6

[1]Scale B: 1 = very helpful, 2 = of some help, 3 = little or no help.

[2]N varies because of nonresponses and experimental design.

but not essential for entry-level. Those rated as beyond expectations for the entry-level dietitian included 12.1 per cent of the competencies in which work was rated as "very helpful" by half the respondents (Table 15, Appendix H).

Undergraduate education was "very helpful" in developing twenty-nine competency statements, 75.9 per cent of which were described as essential and 20.7 per cent as desirable but not essential for entry-level practice. "Plans nutrition guidelines" was rated as beyond entry level, and yet the undergraduate program is very helpful in developing this competency, according to about half the respondents.

Position Responsibility Differences

Degree of responsibility ratings were compared for three groups of position titles to gain insight into differences in job responsibilities in relation to present position of graduates (Table 17, Appendix H). The administrator group consisted of twenty-one associate, assistant, and department directors, head clinical and head administrative dietitians. Eighteen clinicians were identified as community and clinical dietitians. Fifteen administrative staff dietitians, generalists, and food production managers comprised the generalist group of graduates.

Using a chi square analysis, fifty-three responsibilities were identified as reflecting differences according to position title (Table 14). Relatively few differences were found when comparing administrator and generalist groups. Great differences were revealed between clinicians and generalists, with somewhat less differences between administrators and clinicians. It appears that practitioners who were functioning as generalists had similar responsibilities to administrators, but the

Table 14: Differentiation among three groups by position title based on responsibility ratings[1]

item number	comparison by groups			item number	comparison by groups		
	adm-clin	clin-gen	gen-adm		adm-clin	clin-gen	gen-adm
1	*	*		38	***	*	*
2		*	*	41	*	**	
3		**	*	42	***	*	*
4	**	***		43		**	*
5	**	**		44a	**	**	
6	***	**	*	44b	**	**	
7	*	***	*	47	**	*	
8	**	**		52	*	**	
9		**	*	53	*	***	*
12	***	***		54	*	**	*
13	*	*		55	***	*	*
14	*	**		58		*	
18	**	***		59	**	***	
19		**	*	60	***	***	
20	*	**	*	61a	***	**	
22	*	**		61b	**	**	
24a	*	**		61c	***	***	
24b	**	*		62a	*	*	
24c	**	***		62b	**	***	*
25	***	***		62c	***	***	
27		*		63	***	***	
28	**	***		64	*	*	
30	*	***	*	66	***	***	
31	*	*		67	*	**	
32	*	**		69	***	***	
35	**	**		70	***	**	
36a	**		*				

[1]Data taken from chi square analysis, Table 17, Appendix H.

[2]Difference in responsibility ratings:

***	great	>50%
**	large	39-50%
*	some	20-39%
no symbol	little	<20%

responsibilities of the clinician did not resemble either administrators or generalists.

SUMMARY AND CONCLUSIONS

The ultimate goal of professional education is to prepare students to become competent practitioners. Stimulated by the Study Commission on Dietetics, coordinated undergraduate programs in dietetics were developed to include both classroom learning and clinical experience for beginning practice as a dietitian. The need for evaluation of coordinated programs was expressed by Spears when she stated, "the true test of the effectiveness of the coordinated undergraduate program in dietetics will be the professional success of the graduates which cannot be measured for some years." Essentials for Coordinated Undergraduate Programs in Dietetics mandate an effective system for total program evaluation including follow-up of graduates.

In recognition of this mandate, the Department of Dietetics, Restaurant, and Institutional Management at Kansas State University distributes program evaluation instruments to graduates within a year after graduation. The purpose of this study was to evaluate the coordinated program at Kansas State University by a survey of graduates in practice from four to eight and a half years. Specific objectives were to (a) ascertain the influence on the development of competency by the undergraduate program, graduate study, continuing education, and work experience, and (b) examine the career patterns of graduates by the employment record from the first to the present or most recent position.

The 109 graduates since the program's inception in 1971 through December 1975, were the research population. An instrument consisting of three parts was developed. Part A, demographic information, requested

information on educational background, professional involvement, factors affecting acceptance of positions, salary, and attitudes toward education and professional competency. Part B, chart of employment background, provided employment dates, status, position title, type of facility, primary reason for leaving, and reasons for any unemployment between positions. Part C consisted of seventy-two statements, five of which had multiple parts, for a total of eighty-two competencies for evaluation on two scales. Scale A indicated the degree of responsibility required in the present position and Scale B rated the contribution of professional experiences in developing each competency. Data from ninety-two graduates were analyzed.

Narly half of the graduates functioned as clinicians at entry-level, and one-fourth were in generalist positions. Movement to positions as administrators, educators, and consultants were reflected in fifty per cent of the current positions with twenty-six per cent reported as clinicians and 17 per cent as generalists. An increase occurred in positions requiring advanced preparation and experience as defined in the ADA Position Paper on employment practices.

The degree of responsibility in the present position was completed by 82.6 per cent of the respondents. Responsibility ratings were divided into five classifications: typical, frequent, common, occasional, and rare. The competency rated as a major responsibility by the largest number of responding practitioners (75 per cent) was "maintains current knowledge of new methods and approaches for the provision of nutritional care." Two-thirds of the graduates identified "communicates nutrition care to appropriate personnel" as a major responsibility.

Competency statements were further examined in relation to levels of "essentiality" for the entry-level dietitian as identified in the Loyd study. More than half the responsibilities were the thirty-seven competencies classified as essential for the entry-level dietitian. The forty-five competencies classified as desirable but not essential or beyond entry-level practice represented almost half the responsibilities of the graduates.

To ascertain the effect of professional experiences on the development of each competency, graduates rated the influence of the undergraduate program, graduate study, continuing education, and work experience for the present position. Work and undergraduate education were the greatest influences in the development of professional competency. Continuing education was rated "very helpful" in maintaining current knowledge and contributed in varying degrees to the development of other competencies. The master's degree generated limited responses and therefore was not analyzed. Fifty-three statements, identified as differences according to position title, showed that practitioners functioning as generalists had similar responsibilities to administrators, but the responsibilities of the clinician did not resemble either administrator or generalist.

A conclusion of this study was that the employment background of dietitians in practice from four to eight and a half years reflects the early development of a career pattern. Graduates indicated that while over half of the responsibilities performed were expected at entry-level, a large number were desired, but not essential, and beyond expectation for entry-level practice based on Loyd's categorization. An important finding was the support found among the graduates for the coordinated undergraduate program.

A recommendation of this study is that the findings be reviewed by dietetic educators at Kansas State University and other coordinated undergraduate programs in dietetics, to assist with program revision, curriculum development, and additional evaluation. Research should be broadened to incorporate a larger population of graduates from coordinated programs and expanded to include studies with graduates from dietetic internships.

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APPENDIXES

APPENDIX A

Correspondence to CUP Directors

(Letterhead)

Initial Letter to Program Directors

October 22, 1979

Dear _____:

At Kansas State University we are conducting research on professional dietetic education. Specifically, we are evaluating the effectiveness of the Coordinated Undergraduate Program in Dietetics as determined by the professional growth of our graduates after they have been in the profession for a minimum of four years.

To assist in developing the evaluative instrument for the study, we are seeking information from other program directors. Would you please complete the enclosed questionnaire on follow-up evaluation procedures for your program? Also, would you share a copy of any instruments developed for these evaluations? A stamped, addressed envelope is enclosed for your response.

Your assistance and cooperation are appreciated. If you are interested, we will share with you a copy of the follow-up evaluation instrument developed in this study. Thank you for your time and efforts.

Sincerely,

Sue Linnenkohl, R.D.
Graduate Teaching Assistant

Faith Roach, Ph.D., R.D.
Associate Professor
Dietetics, Restaurant and
Institutional Management

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Enclosures

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

Evaluation Procedures
for
Coordinated Undergraduate Program in Dietetics

1. Check (✓) the area(s) of specialization of your program.

_____ generalist
_____ clinical
_____ management
_____ community

2. Please check (✓) the current accreditation status of your program(s).

_____ developmental
_____ full

3. Indicate the year in which your program accreditation status was attained.

_____ prior to 1972
_____ 1972
_____ 1973
_____ 1974
_____ 1975
_____ 1976
_____ 1977
_____ 1978
_____ 1979

4. Indicate the number of graduates for each academic year. If you have two emphases in your program, combine the number of graduates from each.

_____ prior to 1971-72
_____ 1972-73
_____ 1973-74
_____ 1974-75
_____ 1975-76
_____ 1976-77
_____ 1977-78
_____ 1978-79
_____ 1979-80 (expected)

5. Do you conduct follow-up evaluations of your graduates?

_____ yes _____ no

If yes, check (✓) the appropriate time(s) after graduation.

_____ within 3 months
_____ from 3 to 6 months
_____ from 6 to 9 months
_____ from 9 to 12 months
_____ more than 12 months
_____ other, please specify _____

6. Do you request subsequent evaluations?

_____ yes _____ no

7. Have you developed a program evaluation instrument?

_____ yes _____ no

If yes, would you please include a copy of the instrument?

8. Would you like to have a copy of the instrument developed in this study?

_____ yes _____ no

If yes, please give us your name and address below:

Name _____

Address _____

_____

_____

_____

Any comments you care to make will be appreciated. Thank you.

(Letterhead)

Letter Accompanying Complementary Instrument
to Program Directors

March 24, 1980

Dear Coordinated Undergraduate Program in Dietetics Directors:

At Kansas State University we are conducting research on professional dietetic education. As you may recall, one of our projects evaluates the effectiveness of the Coordinated Undergraduate Program in Dietetics by examining the professional growth of our graduates after they have been in the profession for a minimum of four years.

To assist in developing the evaluation instrument, we asked other program directors to share some information about their programs with us. Your assistance and cooperation were appreciated. As requested, a copy of the follow-up evaluation instrument developed in our study is enclosed. Thank you again for your time and efforts.

Sincerely,

Sue Linnenkohl, R.D.
Graduate Teaching Assistant

Faith Roach, Ph.D., R.D.
Associate Professor
Dietetics, Restaurant and
Institutional Management

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Enclosures

APPENDIX B

Initial Draft of the Research Instrument

Part I. Demographic Information

1. Indicate year each degree was awarded.
   ____ (1) Bachelor's
   ____ (2) Master's
   ____ (3) Master's (if currently enrolled, give expected year)

2. If you have pursued graduate study or expect to, what is your area of interest?
   ____ (1) have not enrolled in graduate study
   ____ (2) Nutrition
   ____ (3) Foodservice Management
   ____ (4) Food Science Technology
   ____ (5) Public Health Nutrition
   ____ (6) Education
   ____ (7) Clinical Dietetics
   ____ (8) Business Administration
   ____ (9) other, please specify
   _____

3. If you have initiated graduate study, did your undergraduate degree prepare you for this experience?
   ____ (1) have not initiated graduate study
   ____ (2) yes, very well
   ____ (3) yes, fairly well
   ____ (4) not very well
   ____ (5) not well at all

4. Are you a registered dietitian (R.D.)?
   ____ (1) yes, _____ year
   ____ (2) no

5. Indicate number of years you have contributed to the ADA profession in the following ways:
   No. Years
   ____ (1) district committees/offices
   ____ (2) state committees/offices
   ____ (3) national committees/offices

6. How many ADA meetings have you attended in the past three years?
   Number
   ____ (1) district meetings
   ____ (2) state meetings
   ____ (3) national meetings

7. Indicate number of times in the past year you participate in dietetic related activities which were over and above regular work responsibilities.
   No. Times
   ____ (1) public presentations
   ____ (2) publications
   ____ (3) advisor to community group(s)
   ____ (4) officer/committee member of community group(s)
   ____ (5) other, please specify
   _____

8. Have you received any honors or awards since graduation?
   ____ (1) yes
   ____ (2) no
   If yes, please list
   _____
   _____
   _____

9. From the following list, check your professional memberships.
   ____ (1) American Dietetic Association
   ____ (2) Society for Nutrition Education
   ____ (3) American School Foodservice Association
   ____ (4) American Home Economics Association
   ____ (5) American Society for Allied Health Professionals
   ____ (6) American Society of Hospital Food Service Administrators
   ____ (7) American Public Health Association
   ____ (8) American Diabetes Association
   ____ (9) American Society for Parenteral and Enteral Nutrition
   ____ (10) other, please specify
   _____
   _____

10. Circle the appropriate degree of importance each of these factors had in your decision to accept your first and current positions (1=major importance, 2=minor importance, or 3=not important).

FIRST	CURRENT	
1 2 3	1 2 3	Specific city or town
1 2 3	1 2 3	Size of the city or town
1 2 3	1 2 3	Geographic location
1 2 3	1 2 3	Spouse's job
1 2 3	1 2 3	Family considerations
1 2 3	1 2 3	Experience the job offers
1 2 3	1 2 3	Salary
1 2 3	1 2 3	Only job available

11. How would you rate your professional competence compared with other dietitians with whom you are acquainted?
   ____ (1) above average
   ____ (2) average
   ____ (3) below average

12. Would you recommend a coordinated program to a college sophomore interested in the field of dietetics?
   ____ (1) definitely yes
   ____ (2) probably yes
   ____ (3) probably not
   ____ (4) definitely not

Part II. Chart of employment background

Please complete the following chart to provide a profile of your employment background. Include all positions held since graduation, including employment in areas other than dietetics.

Start with your present or most recent position and end with the first position taken after graduation. Each box represents one position.

For items III, IV, V, and VI on each job, use the code sheet provided. Fill in each blank with the most appropriate code number. Codes are not needed for items I and II.

START HERE WITH PRESENT
OR MOST RECENT POSITION

I. Employment dates: From_____ to_____ mo./yr. mo./yr.	II. ____ Full time ____ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ____No ____Yes, from_____ to_____ mo./yr. mo./yr. If yes, indicate reason (see code)	

I. Employment dates: From_____ to_____ mo./yr. mo./yr.	II. ____ Full time ____ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ____No ____Yes, from_____ to_____ mo./yr. mo./yr. If yes, indicate reason (see code)	

I. Employment dates: From_____ to_____ mo./yr. mo./yr.	II. ____ Full time ____ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ____No ____Yes, from_____ to_____ mo./yr. mo./yr. If yes, indicate reason (see code)	

I. Employment dates: From_____ to_____ mo./yr. mo./yr.	II. ____ Full time ____ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ____No ____Yes, from_____ to_____ mo./yr. mo./yr. If yes, indicate reason (see code)	

I. Employment dates: From_____ to_____ mo./yr. mo./yr.	II. ____ Full time ____ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ____No ____Yes, from_____ to_____ mo./yr. mo./yr. If yes, indicate reason (see code)	

I. Employment dates: From_____ to_____ mo./yr. mo./yr.	II. ____ Full time ____ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ____No ____Yes, from_____ to_____ mo./yr. mo./yr. If yes, indicate reason (see code)	

This is the code sheet for answering items III, IV, V, and VI, on your employment background.
See page 2 for further directions.

III. Position title
1) Director
2) Associate or Assistant Director
3) Head Administrative Dietitian
4) Administrative Staff Dietitian
5) Head Clinical Dietitian
6) Clinical Staff Dietitian
7) Generalist Dietitian (Administrative, clinical, and teaching responsibilities)
8) Research Dietitian
9) Teaching Dietitian
10) Community Dietitian
11) Private Practice--Nutrition Counselor
12) Health Care Facility Consultant
13) College/University Faculty
14) Clinical Instructor--CUP
15) Other dietetic position, please specify
16) Non-dietetic position, please specify

IV. Type of Facility
1) Hospital (other than Univ. Med. Cen.)
2) University Medical Center
3) Nursing Home
4) Other Health Care Facility
5) Public or Voluntary Agency
6) Government Agency
7) School Foodservice
8) College/University Hall Foodservice
9) College/University Academic Unit
10) Vocational/Technical School
11) Community/Jr. College
12) Commercial and Industry Foodservice
13) Business
14) Not applicable, self-employed
15) Other, please specify

V. Reason for leaving--Indicate one primary reason
1) Accept a better paying job
2) Accept a job with better hours
3) Wanted to get a different experience
4) Wanted a more challenging job
5) Didn't like the work
6) To go back to school
7) Raise a family
8) To care for family members
9) Spouse transferred to another city
10) Wanted to move to a different city
11) Promotion within the facility
12) Other, please specify.

VI. Reason for unemployment between positions
1) Raise a family
2) Attend school
3) Did not want to work for awhile
4) No job available
5) Job of interest to me not available
6) Other, please specify

insert

Part III. Competency Statements

Please read the following list of competencies for dietitians and carefully evaluate each statement on Scale A. Then use Scale B to rate the degree of preparation that your undergraduate program (B.S.), graduate program, if applicable (M.S.), continuing education programs (Cont. Educ.), and your work experience (Work) played in developing each competency.

Scale A. In your present job, what is your responsibility for each competency?
(1) Major responsibility
(2) Some degree of responsibility
(3) Not a responsibility of mine

Scale B. What degree of preparation did these experiences play in developing each competency?
(1) Extremely helpful
(2) Helpful
(3) Somewhat helpful
(4) Of little or no help

Please indicate the appropriate number of your response under Scale A below.

Please indicate the appropriate number of your responses under Scale B below.

Scale A. Responsibility	Competencies for Dietitians	Scale B. B.S.	M.S.	Cont. Educ.	Work
___	1. Consistently evaluates effectiveness of systems and procedures which are utilized.	___	___	___	___
___	2. Plans for the use of alternative methods and/or systems for nutrition education (group classes, programmed learning material, audio-visual materials, etc.).	___	___	___	___
___	3. Surveys available materials and obtains those materials necessary for the implementation of nutritional care.	___	___	___	___
___	4. Utilizes the performance appraisal as an evaluation as well as a motivational tool for personnel.	___	___	___	___
___	5. Plans daily food production.	___	___	___	___
___	6. Develops long and short range departmental goals.	___	___	___	___
___	7. Develops job descriptions and specifications for personnel.	___	___	___	___
___	8. Identifies state, local, and federal labor laws as well as institutional personnel policies which relate to personnel management.	___	___	___	___
___	9. Communicates changes to appropriate clinical personnel or recommends changes to other health team members such as the physician.	___	___	___	___
___	10. Utilizes community related or community based institutions or programs to meet long-range objectives of nutrition care.	___	___	___	___
___	11. Implements new approaches.	___	___	___	___
___	12. Plans a master schedule for personnel.	___	___	___	___
___	13. Utilizes management techniques such as management by objectives.	___	___	___	___
___	14. Refers individuals to appropriate outside agencies or programs for continuance of care, and provides these agencies with information related to previous care.	___	___	___	___
___	15. Analyzes new approaches and identifies those which relate to his/her area and program.	___	___	___	___

Scale A. Responsibility	Competencies for Dietitians	Scale B. B.S.	M.S.	Cont. Educ.	Work
___	16. Monitors and records regularly in the nutrition care and charts the progress of individuals to whom care is directed.	___	___	___	___
___	17. Maintains adequate records and a system of regularly reporting the services provided by the clinical nutrition care unit.	___	___	___	___
___	18. Plans sanitation schedules and procedures that conform to state and local regulation.	___	___	___	___
___	19. Uses information collected from nutritional assessment to develop a plan for the provision of optimal nutrition care.	___	___	___	___
___	20. Participate in health team activities such as case conferences, medical rounds and Grand Rounds.	___	___	___	___
___	21. Encourages and motivates personnel to provide optimal foodservice by example and adequate reinforcement.	___	___	___	___
___	22. Develops standardized recipes to provide a consistent basis for quality and quantity control.	___	___	___	___
___	23. Cooperates with other specialists (such as the public health nutritionist) in the design of community related programs to provide preventive or interventive nutrition care.	___	___	___	___
___	24. Plans menus which: 24a. incorporate principles of good menu planning, i.e. adequate nutritional content, color, texture, shape, and variety.	___	___	___	___
___	24b. incorporate special nutritional and/or taste requirements of individuals or groups within the institute or program.	___	___	___	___
___	24c. conform to budget and/or cost requirements, equipment, time and personnel availability.	___	___	___	___
___	25. Redesigns systems and prepares proposals to present, explain, and justify the proposed changes.	___	___	___	___
___	26. Serves as a nutritional consultant to other health team members by providing nutritional information, recommendations for nutrition care and appropriate materials.	___	___	___	___
___	27. Communicates orally and via written communication (such as chart notes) pertinent aspects of the nutrition care plan to appropriate clinical personnel, foodservice personnel, and other health team members.	___	___	___	___
___	28. Maintains current knowledge of new methods and systems in administrative management.	___	___	___	___
___	29. Develops purchasing specifications that insure quality and quantity control.	___	___	___	___
___	30. Maintains accurate and appropriate records for personnel management, fiscal control, and reporting purposes.	___	___	___	___
___	31. Prepares a proposal to explain and justify the need for new approaches.	___	___	___	___

Scale A. Responsibility		Competencies for Dietitians	Scale B. B.S.	M.S.	Cont. Educ.	Work
___	32.	Determines man-hour requirements that relate to menu and budget specifications.	___	___	___	___
___	33.	Conducts task analyses and work sampling studies to provide a basis for developing new and evaluating existing job descriptions and specifications.	___	___	___	___
___	34.	Assigns nutrition care related tasks to appropriate personnel (according to the nutrition care plan) and coordinates the performance of these tasks.	___	___	___	___
___	35.	Modifies systems and/or procedures to solve problems with appropriate personnel within area.	___	___	___	___
___	36.	Performs the following personnel functions related to staffing for nutritional care: 36a. interviewing and selection of clinical personnel, i.e., technician and clerk.	___	___	___	___
___		36b. orientating of new clinical personnel.	___	___	___	___
___		36c. continuing in-service training of clinical personnel.	___	___	___	___
___	37.	Maintains effective communication with personnel through regular conferences and meetings.	___	___	___	___
___	38.	Develops staffing patterns, job descriptions and specifications for individuals (dietitians, technicians, and clerks) involved in the provision of clinical nutrition care.	___	___	___	___
___	39.	Encourages and motivates personnel to provide optimal care by example and adequate reinforcement.	___	___	___	___
___	40.	Plans nutritional guidelines (i.e., diet manual, nutritional guidelines, and policies and procedures related to nutrition care) consistent with the objectives of the institution, and current nutrition knowledge.	___	___	___	___
___	41.	Identifies individuals and/or groups who require nutrition care.	___	___	___	___
___	42.	Develops policies and procedures that are consistant with the institution, personnel availability, and characteristics of patient.	___	___	___	___
___	43.	Provides and directs nutrition care through individual counselling, group counselling, and alternate methods such as audio-visual programming.	___	___	___	___
___	44.	Performs the following personnel functions: 44a. interviewing and selection of administrative personnel such as foodservice supervisors and/or aides.	___	___	___	___
___		44b. orientating of new administrative personnel.	___	___	___	___
___		44c. continuing in-service training of administrative personnel.	___	___	___	___
___	45.	Maintains current knowledge of new methods and approaches for the provision of nutrition care.	___	___	___	___
___	46.	Identifies pertinent legislation and sources of outside funding that influence the provision of nutrition care in the institution and the community.	___	___	___	___

Scale A. Responsibility		Competencies for Dietitians	Scale B. B.S.	M.S.	Cont. Educ.	Work
___	47.	Plans a budget that conforms to departmental or program financial requirements.	___	___	___	___
___	48.	Serves as an institutional or community resource for nutrition oriented consumer information.	___	___	___	___
___	49.	Analyzes menu as to nutritional content, cost, and client acceptance, and modifies menu where result of analysis indicate it is necessary to do so.	___	___	___	___
___	50.	Surveys and obtains appropriate training materials (audio-visual and written).	___	___	___	___
___	51.	Identifies the need for community related or community based programs to provide preventive nutrition programs and long-term interventive nutrition care.	___	___	___	___
___	52.	Compiles relevant information from appropriate sources (chart, nursing care plan, members of the health team such as the physician, nurse, and social worker, community agencies, and the patient or client) necessary to make a nutritional assessment.	___	___	___	___
___	53.	Analyzes previous nutritional intake for nutritional adequacy and similarity to proposed pattern indicated by recommended modification.	___	___	___	___
___	54.	Evaluates individual's learning ability, previous knowledge of nutritional modification(s), life style, motivational level, flexibility, acceptance of medical condition, and possible changes in nutrition care that may result from a change in position in life cycle.	___	___	___	___
___	55.	Develops systems to support goals.	___	___	___	___
___	56.	Prepares accurate and appropriate reports routinely.	___	___	___	___
___	57.	Identifies and analyzes problems related to area.	___	___	___	___
___	58.	Identifies the need for changes in the nutrition care objectives and methods for delivery of care.	___	___	___	___
___	59.	Plans orientation and in-service training programs for all persons involved with foodservice.	___	___	___	___
___	60.	Delegates appropriate functions (i.e., daily food production planning, daily supervision of personnel, daily supervision of tray service) to supervisory personnel such as the foodservice supervisor.	___	___	___	___
___	61.	Coordinates: 61a. systems within area to systems in other areas of the department (i.e., food production systems to foodservice systems).	___	___	___	___
___		61b. systems within area to appropriate interdepartmental systems (i.e., food delivery systems to nursing service systems and procedures.	___	___	___	___
___		61c. utilization of labor, equipment, and personnel within area.	___	___	___	___

Scale A. Responsibility	Competencies for Dietitians	Scale B. B.S.	M.S.	Cont. Educ.	Work
	62. Maintains quality and quantity controls through:				
___	62a. routine monitoring of food items produced and served.	___	___	___	___
___	62b. consistent supervision of personnel and the identification of factors which influence the productivity and performance of personnel.	___	___	___	___
___	62c. routine monitoring of receiving, storage, and sanitation procedures.	___	___	___	___
___	63. Implements new systems.	___	___	___	___
___	64. Designs a non-computerized or computerized inventory system.	___	___	___	___
___	65. Evaluates the effectiveness of clinical nutrition care services continuously.	___	___	___	___
___	66. Uses effective merchandising techniques in the presentation of food to patients and/or clients (i.e., menu design).	___	___	___	___
___	67. Distinguishes and relates pertinent aspects of the individual's medical status (medical history, laboratory diagnostic data, drug treatment and present medical symptoms) to nutritional planning.	___	___	___	___
___	68. Utilizes appropriate management practices during union organization periods.	___	___	___	___
___	69. Determines and justifies specifications for new equipment needed.	___	___	___	___
___	70. Develops methods for evaluating client acceptance.	___	___	___	___
___	71. Implements policies and procedures in appropriate areas.	___	___	___	___
___	72. Supervises the daily performance of personnel directly involved in the provision of clinical nutrition care.	___	___	___	___

APPENDIX C

Correspondence Accompanying Draft Instrument

(Letterhead)

Letter Accompanying Pilot Study Instrument

January 29, 1980

Dear _____:

We appreciate your willingness to help in the pilot study which is part of a research project here at Kansas State University on the evaluation of the Coordinated Undergraduate Program in dietetics as determined by the professional experiences of its graduates. We want your honest reactions and criticisms to help us finalize the questionnaire.

The questionnaire consists of three parts to be evaluated. The first part consists of twelve questions dealing with demographic information. Part II will elicit information on each respondent's employment background. Answers are to be selected from the coding sheet provided. The final part contains a list of competencies for dietitians used in previous research at KSU. Each competency is to be evaluated on two scales. Scale A deals with the responsibility for each competency as found in the present job of the respondent. Scale B is used to rate the degree of preparation that various professional experiences played in developing each competency. These experiences include the undergraduate and graduate programs, continuing education programs, and the work experience of each respondent.

Enclosed is a copy of the proposed questionnaire, a form to evaluate the questionnaire, and the cover letter that will be sent to participants in the actual study. You may complete the questionnaire if you find it helpful in your evaluation. Please review and evaluate each question. We encourage you to make any suggestions you believe will improve the study. Please return the questionnaire and the evaluation form by February 6. Thank you for your cooperation and time; we appreciate your help!

Sincerely,

Sue Linnenkohl, R.D.
Graduate Teaching Assistant

Faith Roach, Ph.D., R.D.
Associate Professor
Dietetics, Restaurant and
Institutional Management

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Enclosures

KANSAS STATE UNIVERSITY

Department of Dietetics, Restaurant and
Institutional Management

EVALUATION OF THE QUESTIONNAIRE

1. Indicate the number of the questions you feel are difficult to answer.

NUMBER	COMMENTS

2. What suggestions do you have for revising the questionnaire?
   _____ None, leave the questionnaire as it is
   _____ Suggestions, please specify:

3. What additions would you suggest?
   _____ None
   _____ Additions, please list below:

4. What would you omit on the questionnaire?
   _____ Nothing
   _____ Omit, please list below:

5. Approximately how long did it take you to complete the questionnaire?

6. Other comments:

APPENDIX D

Final Instrument

PROFESSIONAL EXPERIENCES OF GRADUATES
COORDINATED UNDERGRADUATE PROGRAM IN DIETETICS

Part A. DEMOGRAPHIC INFORMATION

1. Indicate year each degree was awarded or is expected.
   ____ (1) Bachelor's
   ____ (2) Master's
   ____ (3) Expected date of Master's (M.S. in progress)
   ____ (4) Expected date of Ph.D. (Ph.D. in progress)

2. Would you recommend a coordinated program to a college sophomore interested in the field of dietetics?
   ____ (1) definitely yes
   ____ (2) probably yes
   ____ (3) not sure
   ____ (4) probably not
   ____ (5) definitely not

3. If you have pursued graduate study or expect to, what is your area of interest?
   ____ (1) have not pursued graduate study
   ____ (2) Nutrition
   ____ (3) Foodservice Management
   ____ (4) Food Science/Technology
   ____ (5) Public Health Nutrition
   ____ (6) Education
   ____ (7) Clinical Dietetics
   ____ (8) Business Administration
   ____ (9) other, please specify
   _____

4. If you have initiated graduate study, did your undergraduate degree prepare you for this experience?
   ____ (1) have not initiated graduate study
   ____ (2) yes, very well
   ____ (3) yes, fairly well
   ____ (4) not very well
   ____ (5) not well at all

5. Are you a registered dietitian (R.D.)?
   ____ (1) yes, _____ year
   ____ (2) no

6. Indicate number of years you have contributed to the ADA profession in the following ways:

No. Years	
____	(1) district committees/offices
____	(2) state committees/offices
____	(3) national committees/offices

7. How many ADA district meetings have you attended in the past year?
   No.
   _____

8. How many ADA meetings have you attended in the past three years?
   No.
   ____ (1) state meetings
   ____ (2) national meetings

9. Indicate number of times in the past year you participated in dietetic related activities which were over and above regular work responsibilities.

No. Times	
____	(1) public presentations
____	(2) advisor to community group(s)
____	(3) officer/committee member of community group(s)
____	(4) other, please specify

   _____

10. Have you received any honors since graduation?
    ____ (1) yes
    ____ (2) no
    If yes, please list
    _____
    _____
    _____

11. From the following list, check your professional memberships.
    ____ (1) American Dietetic Association
    ____ (2) Society for Nutrition Education
    ____ (3) American School Food Service Association
    ____ (4) American Home Economics Association
    ____ (5) American Society for Allied Health Professionals
    ____ (6) American Society of Hospital Food Service Administrators
    ____ (7) American Public Health Association
    ____ (8) American Diabetes Association
    ____ (9) American Society for Parenteral and Enteral Nutrition
    ____ (10) other, please specify
    _____
    _____

12. Indicate the number of each type of publication or educational materials you have authored, co-authored, or contributed to since graduation from KSU.

No.	
____	(1) professional journal articles (e.g. ADA journal, medical journal)
____	(2) trade magazine articles (e.g. Food Management)
____	(3) magazine articles for the public (e.g. Family Health)
____	(4) diet manuals
____	(5) patient/client teaching materials (e.g. brochures, audio-visuals)
____	(6) employee training materials

13. Circle the appropriate degree of importance each of these factors had in your decision to accept your first and current positions (1= major importance, 2=minor importance, or 3=not important).

FIRST	CURRENT	
1 2 3	1 2 3	Specific city or town
1 2 3	1 2 3	Size of the city or town
1 2 3	1 2 3	Geographic location
1 2 3	1 2 3	Spouse's job
1 2 3	1 2 3	Family considerations
1 2 3	1 2 3	Experience the job offers
1 2 3	1 2 3	Salary
1 2 3	1 2 3	Only job available

14. How would you rate your professional competence compared with other dietitians with whom you are acquainted?
    ____ (1) above average
    ____ (2) average
    ____ (3) below average

15. What is your present salary?
    $_____/year

Part B. CHART OF EMPLOYMENT BACKGROUND

Please complete the following chart to provide a profile of your employment background. Include all positions held since graduation, including employment in areas other than dietetics.

Start with your present or most recent position, go down the columns, and end with the first position after graduation. Each box represents one position.

For items III, IV, V, and VII on each job, use the code sheet provided. Fill in each blank with the most appropriate code number. Please provide data requested in items I, II, and VI; codes are not provided.

START HERE WITH PRESENT OR MOST RECENT POSITION

CONTINUE HERE FROM BOTTOM OF LEFT COLUMN

I. Employment dates: From____ to ____ (mo./yr. mo./yr.)	II. ___ Full time ___ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ___No ___Yes, from____ to____ (mo./yr. mo./yr.)	
VII. If yes, indicate reason (see code)	

I. Employment dates: From____ to ____ (mo./yr. mo./yr.)	II. ___ Full time ___ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ___No ___Yes, from____ to____ (mo./yr. mo./yr.)	
VII. If yes, indicate reason (see code)	

I. Employment dates: From____ to ____ (mo./yr. mo./yr.)	II. ___ Full time ___ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ___No ___Yes, from____ to____ (mo./yr. mo./yr.)	
VII. If yes, indicate reason (see code)	

I. Employment dates: From____ to ____ (mo./yr. mo./yr.)	II. ___ Full time ___ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ___No ___Yes, from____ to____ (mo./yr. mo./yr.)	
VII. If yes, indicate reason (see code)	

I. Employment dates: From____ to ____ (mo./yr. mo./yr.)	II. ___ Full time ___ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ___No ___Yes, from____ to____ (mo./yr. mo./yr.)	
VII. If yes, indicate reason (see code)	

I. Employment dates: From____ to ____ (mo./yr. mo./yr.)	II. ___ Full time ___ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ___No ___Yes, from____ to____ (mo./yr. mo./yr.)	
VII. If yes, indicate reason (see code)	

CONTINUE ON TOP OF NEXT COLUMN

NEED MORE SPACE? GO TO BACK OF CODE SHEET

CODE SHEET FOR PART B

This is the code sheet for answering items III, IV, V, and VII, on your employment background. Fill in each blank with the appropriate code number.

III. Position title
1) Director
2) Associate or Assistant Director
3) Head Administrative Dietitian
4) Administrative Staff Dietitian
5) Head Clinical Dietitian
6) Clinical Staff Dietitian
7) Generalist Dietitian (Administrative, clinical, and/or teaching responsibilities)
8) Research Dietitian
9) Teaching Dietitian
10) Community Dietitian
11) Private Practice--Nutrition Counselor
12) Health Care Facility Consultant
13) College/University Faculty
14) Clinical Instructor--CUP
15) Other dietetic position, please specify
16) Non-dietetic position, please specify

IV. Type of facility
1) Hospital (other than Univ. Med. Cen.)
2) University Medical Center
3) Nursing Home
4) Other Health Care Facility
5) Public or Voluntary Agency
6) Government Agency
7) School Foodservice
8) College/University Foodservice
9) College/University Academic Unit
10) Vocational/Technical School
11) Community/Jr. College
12) Commercial and Industry Foodservice
13) Business
14) Not applicable, self-employed
15) Other, please specify

V. Reason for leaving--Indicate one primary reason
1) To accept a better paying job
2) To accept a job with better hours
3) Wanted to get a different experience
4) Wanted a more challenging job
5) Didn't like the work
6) To go back to school
7) To raise a family
8) To care for family members
9) Spouse transferred to another city
10) Wanted to move to a different city
11) Position was temporary
12) Promotion within the facility
13) Other, please specify

VII. Reason for unemployment between positions--Indicate one primary reason
1) To raise a family
2) To attend school
3) Did not want to work for awhile
4) No job available
5) Job of interest to me not available
6) Other, please specify

EXAMPLE

I. Employment dates: From 8/77 (mo./yr.) to 5/79 (mo./yr.)	II. X Full time ___ Part time
III. Position title (see code) 4	
IV. Type of facility (see code) 8	
V. Primary reason for leaving (see code) 1	
VI. Unemployment between positions? ___No X Yes, from 6/77 (mo./yr.) to 8/77 (mo./yr.)	
VII. If yes, indicate reason (see code) 5	

Interpretation of Example:

The box at the left represents a full-time position as an Administrative Dietitian (III.4) in a College/University Foodservice (IV.8). The primary reason for leaving this position was to accept a better paying job (V.1). There was a period of unemployment between positions for two months as the job of interest was not available (VII.5).

SUPPLEMENTAL CHART OF EMPLOYMENT BACKGROUND

Continue the sequence from Part B. Chart of employment background. Start in the upper left hand box, go down each column, and end with the first position taken after graduation. Each box represents one position.

For items III, IV, V, and VII on each job, use the code sheet provided. Fill in each blank with the most appropriate code number. Please provide data requested in items I, II, and VI; codes are not provided.

START HERE WITH PRESENT OR MOST RECENT POSITION

CONTINUE HERE FROM BOTTOM OF LEFT COLUMN

I. Employment dates: From_____ to_____ (mo./yr. mo./yr.)	II. ____ Full time ____ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ____No ____Yes, from_____ to_____ (mo./yr. mo./yr.)	
VII. If yes, indicate reason (see code)	

I. Employment dates: From_____ to_____ (mo./yr. mo./yr.)	II. ____ Full time ____ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ____No ____Yes, from_____ to_____ (mo./yr. mo./yr.)	
VII. If yes, indicate reason (see code)	

I. Employment dates: From_____ to_____ (mo./yr. mo./yr.)	II. ____ Full time ____ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ____No ____Yes, from_____ to_____ (mo./yr. mo./yr.)	
VII. If yes, indicate reason (see code)	

I. Employment dates: From_____ to_____ (mo./yr. mo./yr.)	II. ____ Full time ____ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ____No ____Yes, from_____ to_____ (mo./yr. mo./yr.)	
VII. If yes, indicate reason (see code)	

I. Employment dates: From_____ to_____ (mo./yr. mo./yr.)	II. ____ Full time ____ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ____No ____Yes, from_____ to_____ (mo./yr. mo./yr.)	
VII. If yes, indicate reason (see code)	

I. Employment dates: From_____ to_____ (mo./yr. mo./yr.)	II. ____ Full time ____ Part time
III. Position title (see code)	
IV. Type of facility (see code)	
V. Primary reason for leaving (see code)	
VI. Unemployment between positions? ____No ____Yes, from_____ to_____ (mo./yr. mo./yr.)	
VII. If yes, indicate reason (see code)	

CONTINUE ON TOP OF NEXT COLUMN

Part C. COMPETENCY STATEMENTS

Please read the following list of competencies for dietitians and carefully evaluate each statement on Scale A. If the competency is of a (1) major responsibility or of (2) some degree of responsibility, proceed to Scale B to rate the influence of each of the following experiences in developing your competence: undergraduate program (B.S.), graduate program, if applicable (M.S.), continuing education programs (Cont. Educ.), and your work experience (Work). If the competency is (3) not a responsibility on Scale A, then proceed to the next competency statement--you need not respond to Scale B.

Scale A. In your present job, what is your responsibility for each competency?
(1) Major responsibility
(2) Some degree of responsibility
(3) Not a responsibility

If your response is (3) not a responsibility, proceed to the next statement.

Please indicate the appropriate number of your response under Scale A below.

Scale B. In developing each competency, these experiences were:
(1) Very helpful
(2) Of some help
(3) Of little or no help

Use Scale B only when the statement refers to a responsibility of yours.

Please indicate the appropriate number of your responses below.

Scale A. Responsibility	Competencies for Dietitians	Scale B. B.S.	M.S.	Cont. Educ.	Work
____	1. Consistently evaluates effectiveness of systems and procedures which are utilized.	____	____	____	____
____	2. Plans for the use of alternative methods and/or systems for nutrition education (group classes, programmed learning material, audio-visual materials, etc.).	____	____	____	____
____	3. Surveys available materials and obtains those materials necessary for the implementation of nutritional care.	____	____	____	____
____	4. Utilizes the performance appraisal as an evaluation as well as a motivational tool for personnel.	____	____	____	____
____	5. Plans daily food production.	____	____	____	____
____	6. Develops long and short range departmental goals.	____	____	____	____
____	7. Develops job descriptions and specifications for personnel.	____	____	____	____
____	8. Identifies state, local, and federal labor laws as well as institutional personnel policies which relate to personnel management.	____	____	____	____
____	9. Communicates changes to appropriate clinical personnel or recommends changes to other health team members such as the physician.	____	____	____	____
____	10. Utilizes community related or community based institutions or programs to meet long-range objectives of nutritional care.	____	____	____	____
____	11. Implements new approaches.	____	____	____	____
____	12. Plans a master schedule for personnel.	____	____	____	____
____	13. Utilizes management techniques such as management by objectives.	____	____	____	____

Scale A. In your present job, what is your responsibility for each competency?
(1) Major responsibility
(2) Some degree of responsibility
(3) Not a responsibility

If your response is (3) not a responsibility, proceed to the next statement.

Please indicate the appropriate number of your response under Scale A below.

Scale B. In developing each competency, these experiences were:
(1) Very helpful
(2) Of some help
(3) Of little or no help

Use Scale B only when the statement refers to a responsibility of yours.

Please indicate the appropriate number of your responses below.

Scale A. Responsibility	Competencies for Dietitians	Scale B. B.S.	M.S.	Cont. Educ.	Work
____	14. Refers individuals to appropriate outside agencies or programs for continuance of care, and provides these agencies with information related to previous care.	____	____	____	____
____	15. Analyzes new approaches and identifies those which relate to his/her area and program.	____	____	____	____
____	16. Monitors and records regularly in the nutrition care plan and chart the progress of individuals to whom care is directed.	____	____	____	____
____	17. Maintains adequate records and a system of regularly reporting the services provided by the nutritional care unit.	____	____	____	____
____	18. Plans sanitation schedules and procedures that conform to state and local regulation.	____	____	____	____
____	19. Uses information collected from nutritional assessment to develop a plan for the provision of optimal nutritional care.	____	____	____	____
____	20. Participates in health team activities such as case conferences, medical rounds and Grand Rounds.	____	____	____	____
____	21. Encourages and motivates personnel to provide optimal foodservice by example and adequate reinforcement.	____	____	____	____
____	22. Develops standardized recipes to provide a consistent basis for quality and quantity control.	____	____	____	____
____	23. Cooperates with other specialists (such as the public health nutritionist) in the design of community related programs to provide preventive or interventive nutrition care.	____	____	____	____
____	24. Plans menus which: 24a. incorporate principles of good menu planning, i.e. adequate nutritional content, color, texture, shape, and variety.	____	____	____	____
____	24b. incorporate special nutritional and/or taste requirements of individuals or groups within the institute or program.	____	____	____	____
____	24c. conform to budget and/or cost requirements, equipment, time and personnel availability.	____	____	____	____

Scale A. Responsibility	Competencies for Dietitians	Scale B. B.S.	M.S.	Cont. Educ.	Work
____	25. Redesign systems and prepares proposals to present, explain, and justify the proposed changes.	____	____	____	____
____	26. Serves as a nutritional consultant to other health team members by providing nutritional information, recommendations for nutrition care and appropriate materials.	____	____	____	____
____	27. Communicates orally and via written communication (such as chart notes) pertinent aspects of the nutrition care plan to appropriate clinical personnel, foodservice personnel, and other health team members.	____	____	____	____
____	28. Maintains current knowledge of new methods and systems in administrative management.	____	____	____	____
____	29. Develops purchasing specifications that insure quality and quantity control.	____	____	____	____
____	30. Maintains accurate and appropriate records for personnel management, fiscal control, and reporting purposes.	____	____	____	____
____	31. Prepares a proposal to explain and justify the need for new approaches.	____	____	____	____
____	32. Determines man-hour requirements that relate to menu and budget specifications.	____	____	____	____
____	33. Conducts task analyses and work sampling studies to provide a basis for developing new and evaluating existing job descriptions and specifications.	____	____	____	____
____	34. Assigns nutrition care related tasks to appropriate personnel (according to the nutrition care plan) and coordinates the performance of these tasks.	____	____	____	____
____	35. Modifies systems and/or procedures to solve problems with appropriate personnel within area.	____	____	____	____
	36. Performs the following personnel functions related to staffing for nutritional care:				
____	36a. interviewing and selection of clinical personnel, i.e., technician and clerk.	____	____	____	____
____	36b. orientating of new clinical personnel.	____	____	____	____
____	36c. continuing in-service training of clinical personnel.	____	____	____	____
____	37. Maintains effective communication with personnel through regular conferences and meetings.	____	____	____	____
____	38. Develops staffing patterns, job descriptions and specifications for individuals (dietitians, technicians, and clerks) involved in the provision of nutritional care.	____	____	____	____
____	39. Encourages and motivates personnel to provide optimal care by example and adequate reinforcement.	____	____	____	____

Scale A. In your present job, what is your responsibility for each competency?
(1) Major responsibility
(2) Some degree of responsibility
(3) Not a responsibility

If your response is (3) not a responsibility, proceed to the next statement.

Please indicate the appropriate number of your response under Scale A below.

Scale B. In developing each competency, these experiences were:
(1) Very helpful
(2) Of some help
(3) Of little or no help

Use Scale B only when the statement refers to a responsibility of yours.

Please indicate the appropriate number of your responses below.

Scale A. Responsibility	Competencies for Dietitians	Scale B. B.S.	M.S.	Cont. Educ.	Work
____	40. Plans nutritional guidelines (i.e., diet manual, nutritional guidelines, and policies and procedures related to nutrition care) consistent with the objectives of the institution, and current nutrition knowledge.	____	____	____	____
____	41. Identifies individuals and/or groups who require nutritional care.	____	____	____	____
____	42. Develops policies and procedures that are consistent with the institution, personnel availability, and characteristics of patient and/or client.	____	____	____	____
____	43. Provides and directs nutritional care through individual counselling, group counselling, and alternate methods such as audio-visual programming.	____	____	____	____
____	44. Performs the following personnel functions: 44a. interviewing and selection of administrative personnel such as foodservice supervisors and/or aides.	____	____	____	____
____	44b. orientating of new administrative personnel.	____	____	____	____
____	44c. continuing in-service training of administrative personnel.	____	____	____	____
____	45. Maintains current knowledge of new methods and approaches for the provision of nutritional care.	____	____	____	____
____	46. Identifies pertinent legislation and sources of outside funding that influence the provision of nutritional care in the institution and the community.	____	____	____	____
____	47. Plans a budget that conforms to departmental or program financial requirements.	____	____	____	____
____	48. Serves as an institutional or community resource for nutrition oriented consumer information.	____	____	____	____
____	49. Analyzes menu as to nutritional content, cost, and client acceptance, and modifies menu where result of analysis indicate it is necessary to do so.	____	____	____	____

Scale A. Responsibility	Competencies for Dietitians	Scale B. B.S.	M.S.	Cont. Educ.	Work
____	50. Surveys and obtains appropriate training materials (audio-visual and written).	____	____	____	____
____	51. Identifies the need for community related or community based programs to provide preventive nutrition programs and long-term interventive nutritional care.	____	____	____	____
____	52. Compiles relevant information from appropriate sources (chart, nursing care plan, members of the health team such as the physician, nurse, and social worker, community agencies, and the patient or client) necessary to make a nutritional assessment.	____	____	____	____
____	53. Analyzes previous nutritional intake for nutritional adequacy and similarity to proposed pattern indicated by recommended modification.	____	____	____	____
____	54. Evaluates individual's learning ability, previous knowledge of nutritional modification(s), life style, motivational level, flexibility, acceptance of medical condition, and possible changes in nutrition care that may result from a change in position in life cycle.	____	____	____	____
____	55. Develops systems to support goals.	____	____	____	____
____	56. Prepares accurate and appropriate reports routinely.	____	____	____	____
____	57. Identifies and analyzes problems related to area.	____	____	____	____
____	58. Identifies the need for changes in the nutritional care objectives and methods for delivery of care.	____	____	____	____
____	59. Plans orientation and in-service training programs for all persons involved with foodservice.	____	____	____	____
____	60. Delegates appropriate functions (i.e., daily food production planning, daily supervision of personnel daily supervision of tray service) to supervisory personnel such as the foodservice supervisor.	____	____	____	____
	61. Coordinates:				
____	61a. systems within area to systems in other areas of the department (i.e., food production systems to foodservice systems).	____	____	____	____
____	61b. systems within area to appropriate inter-departmental systems (i.e., food delivery systems to nursing service systems and procedures.	____	____	____	____
____	61c. utilization of labor, equipment, and personnel within area.	____	____	____	____

Scale A. In your present job, what is your responsibility for each competency?
(1) Major responsibility
(2) Some degree of responsibility
(3) Not a responsibility

If your response is (3) not a responsibility, proceed to the next statement.

Please indicate the appropriate number of your response under Scale A below.

Scale B. In developing each competency, these experiences were:
(1) Very helpful
(2) Of some help
(3) Of little or no help

Use Scale B only when the statement refers to a responsibility of yours.

Please indicate the appropriate number of your responses below.

Scale A. Responsibility	Competencies for Dietitians	Scale B. B.S.	M.S.	Cont. Educ.	Work
____	62. Maintains quality and quantity controls through: 62a. routine monitoring of food items produced and served.	____	____	____	____
____	62b. consistent supervision of personnel and the identification of factors which influence the productivity and performance of personnel.	____	____	____	____
____	62c. routine monitoring of receiving, storage, and sanitation procedures.	____	____	____	____
____	63. Implements new systems.	____	____	____	____
____	64. Designs a non-computerized or computerized inventory system.	____	____	____	____
____	65. Evaluates the effectiveness of nutritional care services continuously.	____	____	____	____
____	66. Uses effective merchandising techniques in the presentation of food to patients and/or clients (i.e., menu design).	____	____	____	____
____	67. Distinguishes and relates pertinent aspects of the individual's medical status (medical history, laboratory diagnostic data, drug treatment and present medical symptoms) to nutritional planning.	____	____	____	____
____	68. Utilizes appropriate management practices during union organization periods.	____	____	____	____
____	69. Determines and justifies specifications for new equipment needed.	____	____	____	____
____	70. Develops methods for evaluating client acceptance.	____	____	____	____
____	71. Implements policies and procedures in appropriate areas.	____	____	____	____
____	72. Supervises the daily performance of personnel directly involved in the provision of nutritional care.	____	____	____	____

APPENDIX E

Correspondence Accompanying Final Instrument

(Letterhead)

Letter Accompanying Final Instrument

March 18, 1980

Dear _____:

At Kansas State University your Coordinated Undergraduate Program in Dietetics is under constant evaluation. We have appreciated your responses to the questionnaire sent directly after graduation; now we would like to know what you have experienced since then. This evaluation will examine the professional experiences of graduates who have been in the profession of dietetics for a minimum of four years. The questionnaire is being sent to graduates of the program from August 1971 to December 1975. All information will be strictly confidential; the questionnaire is identified by code number for follow-up purposes only. Your name will not be linked with your responses.

This survey is being conducted under the guidelines established by Kansas State University. By cooperating, you will help provide answers to important questions related to KSU's Coordinated Undergraduate Program in Dietetics. Although your participation is voluntary, we would appreciate your response to each item. If there are individual items you would prefer not to answer, you may leave those blank. Your return of the questionnaire will indicate your willingness to participate in the study.

If you have any comments please express them. When you have completed the questionnaire, place it in the enclosed prepaid envelope and drop it in the mail. This should take about 45 minutes of your time--will you please return it to us by the end of the week? If you have any questions concerning this research, please telephone or write us. Thank you for your cooperation and time in answering the questionnaire.

Sincerely,

Sue Linnenkohl, R.D.
Graduate Teaching Assistant

Faith Roach, Ph.D., R.D.
Associate Professor
Dietetics, Restaurant and
Institutional Management

jj

Enclosures

(Letterhead)

Letter Accompanying Final Instrument

March 18, 1980

TO: Graduates of the coordinated undergraduate program in dietetics

FROM: Faith Roach

This information will be helpful in updating our files. Please complete and return with your questionnaire.

- -

Date _____

Name _____

Graduate Date _____

Position Title _____

Business Address _____

_____

_____
zip

Phone _____
AC

Home Address _____

_____

_____
zip

Phone _____
AC

APPENDIX F

Follow-up Correspondence

(Letterhead)

Follow-up Letter for Final Instrument

April 8, 1980

Dear _____:

We need your help! A few weeks ago you were sent a questionnaire for the follow-up of Kansas State University Coordinated Undergraduate Program graduates. This evaluation will examine the professional experiences of graduates who have been in the profession of dietetics for a minimum of four years. We are eager to review our findings, but they will not be complete without your responses. Completed questionnaires indicate that it is necessary to read and follow directions carefully. All information is confidential; the code numbers are for follow-up purposes only. Your name will not be linked with your responses.

If you have any comments, please express them. When you have completed the questionnaire, place it in the enclosed prepaid envelope and drop it in the mail. This should take about 45 minutes of your time. Please return it to us by Tuesday, April 22. If you have any questions concerning this research, please telephone or write us. Thank you for your cooperation and time in answering the questionnaire. Your responses are critical to assure unbiased representation within the research sample of graduates.

Sincerely,

Sue Linnenkohl, R.D.
Graduate Teaching Assistant

Faith Roach, Ph.D., R.D.
Associate Professor
Dietetics, Restaurant and
Institutional Management

jj

Enclosures

(Letterhead)

Follow-up Letter for Incomplete Responses

April 16, 1980

Dear _____:

Thank you for responding so quickly to our request for information on graduates of our Coordinated Undergraduate Program in Dietetics. We apologize that our instructions were difficult to interpret. To use the data from your questionnaire, it will be necessary for you to rate each experience in Part C Competency Statements according to Scale B. This information is needed for analyzing relationships in the data.

You will find these enclosures:

(1) An example of part of the questionnaire to clarify our directions.

(2) A xerox copy of Part C from the questionnaire you returned. Specific comments are included in red ink to help you complete Part C.

(3) A prepaid self-addressed envelope for you to return the questionnaire.

Please read directions carefully, complete and return the questionnaire by April 28. Your name will not be linked with your responses. The number on the questionnaire is for follow-up purposes only. Data will be grouped and analyzed for the entire group of graduates.

If you have any questions concerning this research, please telephone or write us. Thank you for your helpfulness and cooperation.

Sincerely,

Sue Linnenkohl, R.D.
Graduate Teaching Assistant

Faith Roach, Ph.D., R.D.
Associate Professor
Dietetics, Restaurant and
Institutional Management

jj

Enclosures

APPENDIX G

Coding Information

CARD 8

Col.

(1-2) ____ ID number (#)

(3) 8 Card number (#)

(4-5) ____ Months in practice (#)

(6-7) ____ Months unemployed (#)

(8) ____ Continuous employment?
YES = 1
NO = 2

(9) ____ Employment out of field
YES, at present = 1
YES, previous = 2
NEVER = 3

(10) ____ Total number of jobs (#)

(13) ____ Leadership
Director, Assoc. or Ass't Director = 1
Head Admin. or Clin. Dietitian = 2
All other position titles = 3

(14-15) ____ Function
(III position title 1-16*)

(16-17) ____ Facility
(IV type of facility 1-15*)

(18-19) ____ Reason for leaving
(V reason for leaving 1-13*)

(20) ____ Reason for unemployment
(VII reason for unemployment 1-6*)

(21-22) ____ Months in practice
(number of months)

---

*Refer to Code Sheet Insert in Final Instrument.

APPENDIX H

Supplemental Tables

Table 15: Classification of competencies from Loyd and Vaden (4)

item number	competency[3]	item number[1] adm.	item number[1] clin.	categories[2] essential	categories[2] desirable	categories[2] beyond
	typical					
45	maintains current knowledge in clinical dietetics		C125	X		
27	communicates nutrition care to appropriate personnel		C115	X		
67	relates medical status to nutrition care plan		C14		X	
43	provides nutrition counselling		C117	X		
19	develops nutrition care plan		C16	X		
57	identifies and analyzes problems	A38		X		
26	serves as nutrition consultant		C119	X		
16	monitors and charts progress of nutrition care		C17	X		
53	analyzes previous nutrition intake		C13	X		
9	recommends changes in nutrition care		C122		X	
41	identifies those requiring nutrition care		C11	X		
54	evaluates socio-psychological factors in nutrition care		C15		X	

[1] Refers to competency statement number in reference (4).

[2] Categories are those defined in Loyd's research.

[3] Responsibility classifications defined in this study.

Table 15: (cont.)

item number	competency	item number		categories		
		adm.	clin.	essen-tial	desir-able	beyond
11	implements new approaches		C128		X	
52	assesses nutrition status		C12	X		
56	prepares reports	A22		X		
	frequent					
15	analyzes new approaches		C126	X		
1	evaluates effectiveness of systems	A4			X	
2	plans nutrition education		C18		X	
50	obtains training materials	A12		X		
3	obtains nutrition education materials		C19	X		
58	identifies and analyzes problems in nutrition care		C121		X	
37	maintains effective communication	A29		X		
39	provides motivational environment for clinical personnel		C116	X		
55	develops systems	A3			X	
65	evaluates effectiveness of nutrition care		C124		X	
13	utilizes management techniques	A31			X	
40	plans nutrition guidelines		C110			X
21	provides motivational environment for adminis-trative personnel	A30		X		

Table 15: (cont.)

item number	competency	item number adm.	item number clin.	categories essential	categories desirable	categories beyond
6	develops department goals	A1				X
17	maintains nutrition care records		C118	X		
35	solves problems	A39			X	
71	implements policies and procedures	A8		X		
	common					
42	develops policies and procedures	A7			X	
49	analyzes and modifies menus	A14		X		
63	implements new systems	A6			X	
24b	incorporates individual requirements in menus	A13b		X		
24a	uses menu planning principles	A13a		X		
70	evaluates client acceptance	A15		X		
7	develops job descriptions	A9			X	
34	assigns and coordinates clinical personnel		C113		X	
24c	considers resources in menu planning	A13c		X		
36c	conducts in-service training for clinical personnel		C112c		X	
4	uses performance appraisal	A37		X		
14	utilizes outside agencies for continuing care		C123		X	

Table 15: (cont.)

item number	competency	item number adm.	item number clin.	categories essential	categories desirable	categories beyond
28	maintains current knowledge in administrative dietetics	A2		X		
31	prepares proposals		C127		X	
48	serves as a community resource person		C133		X	
62a	monitors production and service	A35a		X		
10	utilizes community		C132		X	
20	participates in health team activities		C120	X		
59	plans and orients in-service for department	A10		X		
25	redesigns systems	A5				X
46	identifies legislation and funds in community nutrition		C130			X
61b	coordinates interdepartmental systems	A27b			X	
	occasional					
12	plans master schedule	A19			X	
30	maintains personnel and fiscal records	A21			X	
36a	interviews and selects clinical personnel		C112a			X
44c	conducts in-service training for administrative personnel	A11c			X	
60	delegates	A28		X		

Table 15: (cont.)

item number	competency	item number adm.	item number clin.	categories essential	categories desirable	categories beyond
61a	coordinates department systems	A27a			X	
69	determines and justifies equipment needs	A23				X
61c	coordinates resources within department	A27c		X		
62b	effective personnel supervision	A35b		X		
62c	monitors receiving, storage, and sanitation	A35c		X		
66	effective merchandising techniques	A34		X		
72	supervises nutrition care personnel		C114		X	
38	develops staffing patterns for clinical personnel		C111			X
36b	orients new clinical personnel		C112b		X	
	rare					
64	designs inventory systems	A25				X
68	acts appropriately during union organizations	A33			X	
29	develops purchasing specifications	A24			X	
51	identifies need for community programs		C129			X
5	plans food production	A17		X		
44a	interviews and selects administrative personnel	A11a				X

Table 15: (cont.)

item number	competency	item number		categories		
		adm.	clin.	essen-tial	desir-able	beyond
44b	orients new administrative personnel	A11b			X	
32	determines man-hour requirements	A18			X	
33	evaluates job descriptions	A36			X	
47	plans budget	A20				X
8	identifies labor laws	A32			X	
18	plans sanitation schedules	A26		X		
23	cooperates in design of community programs		C131		X	
22	develops standardized recipes	A16		X		

Table 16: Percentage distribution, mean and standard deviation for competencies rated by degree of influence for B.S., continuing education, and work.

item number	competency	experience	N	degree of influence[1] very helpful	of some help	little or no help	mean and s.d.
				%	%	%	
1	evaluates effectiveness of systems	B.S.	64	53.1	43.8	3.1	1.50 ± .56
		con. ed.	55	7.3	58.2	34.5	2.27 ± .59
		work	60	75.0	23.3	1.7	1.27 ± .48
2	plans nutrition education	B.S.	61	50.8	39.3	9.8	1.59 ± .67
		con. ed.	57	28.1	43.9	28.1	2.00 ± .76
		work	57	43.9	50.9	5.3	1.61 ± .59
3	obtains nutrition education materials	B.S.	61	50.8	39.3	9.8	1.59 ± .67
		con. ed.	54	33.3	50.0	16.7	1.83 ± .69
		work	57	50.9	42.1	7.0	1.56 ± .63
4	uses performance appraisal	B.S.	44	34.1	40.9	25.0	1.91 ± .77
		con. ed.	36	5.6	27.8	66.7	2.61 ± .60
		work	40	57.5	42.5	--	1.45 ± .50
5	plans food production	B.S.	23	73.9	17.4	8.7	1.35 ± .65
		con. ed.	19	--	26.3	73.7	2.74 ± .45
		work	21	90.5	9.5	--	1.10 ± .30
6	develops department goals	B.S.	50	44.0	40.0	16.0	1.72 ± .73
		con. ed.	42	4.8	33.3	61.9	2.57 ± .59
		work	45	53.3	44.4	2.2	1.49 ± .55

[1]Scale: 1 = very helpful, 2 = of some help, 3 = little or no help.
Scale B, degree of responsibility: 1 = very helpful, 2 = of some help, 3 = little or no help.

Table 16: (cont.)

item number	competency	experience	N	degree of influence: very helpful	degree of influence: of some help	degree of influence: little or no help	mean and s.d.
				%	%	%	
7	develops job descriptions	B.S.	48	54.2	39.6	6.3	1.52 ± .62
		con. ed.	43	2.3	32.6	65.1	2.63 ± .54
		work	45	64.4	28.9	6.7	1.42 ± .62
8	identifies labor laws	B.S.	30	13.3	50.0	36.7	2.23 ± .68
		con. ed.	25	20.0	56.0	24.0	2.04 ± .68
		work	26	50.0	42.3	7.7	1.58 ± .64
9	recommends changes in nutrition care	B.S.	56	55.4	41.1	3.6	1.48 ± .57
		con. ed.	50	18.0	34.0	48.0	2.30 ± .76
		work	51	64.7	31.4	3.9	1.39 ± .57
10	utilizes community programs	B.S.	41	24.4	53.7	22.0	1.98 ± .69
		con. ed.	36	13.9	44.4	41.7	2.28 ± .70
		work	39	41.0	48.7	10.3	1.69 ± .66
11	implements new systems	B.S.	70	25.7	61.4	12.9	1.87 ± .61
		con. ed.	62	24.2	46.8	29.0	2.05 ± .73
		work	65	64.6	32.3	3.1	1.39 ± .55
12	plans master schedule	B.S.	31	25.8	45.2	29.0	2.03 ± .75
		con. ed.	24	--	12.5	87.5	2.88 ± .34
		work	27	81.5	18.5	--	1.19 ± .40
13	uses management techniques	B.S.	54	50.0	40.7	9.3	1.59 ± .66
		con. ed.	47	10.6	46.8	42.6	2.32 ± .66
		work	48	37.5	47.9	14.6	1.77 ± .69

Table 16: (cont.)

item number	competency	experience	N	degree of influence: very helpful	of some help	little or no help	mean and s.d.
				%	%	%	
14	utilizes outside agencies for continuing care	B.S.	44	22.7	50.0	27.3	2.05 ± .71
		con. ed.	38	10.5	34.2	55.3	2.45 ± .69
		work	39	56.4	38.5	5.1	1.49 ± .60
15	analyzes new approaches	B.S.	67	26.9	61.2	11.9	1.85 ± .61
		con. ed.	60	21.7	51.7	26.7	2.05 ± .70
		work	61	50.8	41.0	8.2	1.57 ± .64
16	monitors and charts progress of nutrition care	B.S.	57	77.2	21.1	1.8	1.25 ± .47
		con. ed.	54	38.9	40.7	20.4	1.82 ± .75
		work	53	66.0	30.2	3.8	1.38 ± .56
17	maintains records of nutrition care unit	B.S.	51	41.2	37.3	21.6	1.80 ± .78
		con. ed.	44	9.1	40.9	50.0	2.41 ± .66
		work	44	61.4	34.1	4.5	1.43 ± .59
18	plans sanitation schedules	B.S.	30	53.3	36.7	10.0	1.57 ± .68
		con. ed.	26	19.2	38.5	42.3	2.23 ± .77
		work	28	50.0	50.0	--	1.50 ± .51
19	develops nutrition care plans	B.S.	56	51.8	39.3	8.9	1.57 ± .66
		con. ed.	52	44.2	44.2	11.5	1.67 ± .68
		work	51	45.1	49.0	5.9	1.60 ± .60
20	participates in health team activities	B.S.	42	52.4	33.3	14.3	1.62 ± .73
		con. ed.	37	18.9	27.0	54.1	2.35 ± .79
		work	39	71.8	20.5	7.7	1.35 ± .63

Table 16: (cont.)

item number	competency	experience	N	degree of influence: very helpful	degree of influence: of some help	degree of influence: little or no help	mean and s.d.
				%	%	%	
21	provides motivational environment for administrative personnel	B.S.	53	41.5	50.9	7.5	1.66 ± .62
		con. ed.	45	13.3	42.2	44.4	2.31 ± .70
		work	49	57.1	36.7	6.1	1.49 ± .62
22	develops standardized recipes	B.S.	29	82.8	17.2	--	1.17 ± .38
		con. ed.	23	--	17.4	82.6	2.82 ± .39
		work	27	33.3	51.9	14.8	1.82 ± .68
23	cooperates in design of community programs	B.S.	29	37.9	51.7	10.3	1.72 ± .65
		con. ed.	24	--	41.7	58.3	2.58 ± .50
		work	27	29.6	63.0	7.4	1.78 ± .58
24a	uses menu planning principles	B.S.	48	89.6	10.4	--	1.10 ± .31
		con. ed.	40	5.0	30.0	65.0	2.60 ± .60
		work	46	52.2	41.3	6.5	1.54 ± .62
24b	incorporates individual requirements into menus	B.S.	49	61.2	34.7	4.1	1.43 ± .58
		con. ed.	41	2.4	29.3	68.3	2.66 ± .53
		work	44	59.1	40.9	--	1.41 ± .50
24c	considers resources in menu planning	B.S.	46	45.7	32.6	21.7	1.76 ± .79
		con. ed.	38	5.3	26.3	68.4	2.63 ± .59
		work	42	61.9	38.1	--	1.38 ± .49
25	redesigns systems	B.S.	41	34.1	48.8	17.1	1.83 ± .70
		con. ed.	32	3.1	18.8	78.1	2.75 ± .51
		work	35	51.4	42.9	5.7	1.54 ± .61

Table 16: (cont.)

item number	competency	experience	N	degree of influence: very helpful	degree of influence: of some help	degree of influence: little or no help	mean and s.d.
				%	%	%	
26	serves as nutritional consultant to health team	B.S.	60	60.0	33.3	6.7	1.47 ± .62
		con. ed.	54	29.6	51.9	18.5	1.89 ± .69
		work	55	58.2	38.2	3.6	1.46 ± .57
27	communicates to appropriate personnel	B.S.	60	66.7	28.3	5.0	1.38 ± .59
		con. ed.	53	15.1	43.4	41.5	2.26 ± .71
		work	54	68.5	29.6	1.9	1.33 ± .51
28	maintains current knowledge in management	B.S.	43	25.6	53.5	20.9	1.93 ± .74
		con. ed.	39	51.3	28.2	20.5	1.69 ± .80
		work	40	32.5	52.5	15.0	1.83 ± .68
29	develops purchasing specifications	B.S.	23	43.5	43.5	13.0	1.70 ± .70
		con. ed.	18	5.6	33.3	61.1	2.56 ± .62
		work	20	45.0	50.0	5.0	1.60 ± .60
30	maintains records in personnel and fiscal control	B.S.	31	25.8	35.5	38.7	2.13 ± .81
		con. ed.	26	3.8	23.1	73.1	2.69 ± .55
		work	28	67.9	32.1	--	1.32 ± .48
31	prepares proposals	B.S.	44	18.2	54.5	27.3	2.09 ± .68
		con. ed.	34	2.9	23.5	73.5	2.71 ± .52
		work	40	47.5	45.0	7.5	1.60 ± .63
32	determines man-hour requirements	B.S.	29	20.7	37.9	41.4	2.21 ± .77
		con. ed.	23	4.3	17.4	78.3	2.74 ± .54
		work	25	52.0	44.0	4.0	1.52 ± .59

Table 16: (cont.)

item number	competency	experience	N	degree of influence: very helpful	degree of influence: of some help	degree of influence: little or no help	mean and s.d.
				%	%	%	
33	evaluates job descriptions	B.S.	29	44.8	44.8	10.3	1.66 ± .67
		con. ed.	22	4.5	13.6	81.8	2.77 ± .53
		work	25	24.0	56.0	20.0	1.96 ± .68
34	assigns and coordinates clinical personnel	B.S.	44	27.3	45.5	27.3	2.00 ± .75
		con. ed.	38	5.3	28.9	65.8	2.61 ± .60
		work	40	52.5	45.0	2.5	1.50 ± .56
35	solves problems	B.S.	50	20.0	68.0	12.0	1.92 ± .57
		con. ed.	43	9.3	27.9	62.8	2.54 ± .67
		work	45	66.7	33.3	--	1.33 ± .48
36a	interviews and selects clinical personnel	B.S.	33	15.2	57.6	27.3	2.12 ± .65
		con. ed.	26	3.8	30.8	65.4	2.62 ± .57
		work	30	60.0	36.7	3.3	1.43 ± .57
36b	orients new clinical personnel	B.S.	37	18.9	51.4	29.7	2.11 ± .70
		con. ed.	29	6.9	27.6	65.5	2.59 ± .63
		work	34	61.8	35.3	2.9	1.41 ± .56
36c	conducts in-service training for clinical personnel	B.S.	45	42.2	44.4	13.3	1.71 ± .70
		con. ed.	39	15.4	28.2	56.4	2.41 ± .75
		work	42	57.1	40.5	2.4	1.45 ± .55
37	maintains effective communication	B.S.	58	24.1	67.2	8.6	1.85 ± .56
		con. ed.	48	2.1	37.5	60.4	2.58 ± .54
		work	55	70.9	25.5	3.6	1.33 ± .55

Table 16: (cont.)

item number	competency	experience	N	degree of influence: very helpful	degree of influence: of some help	degree of influence: little or no help	mean and s.d.
				%	%	%	
38	develops staffing patterns	B.S.	36	44.4	38.9	16.7	1.72 ± .74
		con. ed.	29	--	34.5	65.5	2.65 ± .48
		work	32	53.1	40.6	6.3	1.53 ± .62
39	provides motivational environment for clinical personnel	B.S.	56	30.4	57.1	12.5	1.82 ± .64
		con. ed.	47	4.3	31.9	63.8	2.60 ± .58
		work	51	64.7	33.3	2.0	1.37 ± .53
40	plans nutritional guidelines	B.S.	55	52.7	40.0	7.3	1.55 ± .63
		con. ed.	48	22.9	47.9	29.2	2.06 ± .73
		work	51	66.7	33.3	--	1.33 ± .48
41	identifies those requiring nutritional care	B.S.	53	64.2	26.4	9.4	1.45 ± .67
		con. ed.	49	36.7	42.9	20.4	1.84 ± .75
		work	51	60.8	39.2	--	1.39 ± .49
42	develops policies and procedures	B.S.	50	34.0	50.0	16.0	1.82 ± .69
		con. ed.	42	7.1	33.3	59.5	2.52 ± .63
		work	46	69.6	30.4	--	1.30 ± .47
43	provides nutrition counselling	B.S.	57	77.2	22.8	--	1.23 ± .42
		con. ed.	53	38.9	42.6	18.5	1.80 ± .74
		work	54	70.4	24.1	5.6	1.35 ± .59
44a	interviews and selects administrative personnel	B.S.	25	28.0	56.0	16.0	1.80 ± .67
		con. ed.	21	--	47.6	52.4	2.52 ± .51
		work	23	78.3	21.7	--	1.22 ± .42

Table 16: (cont.)

item number	competency	experience	N	degree of influence: very helpful	degree of influence: of some help	degree of influence: little or no help	mean and s.d.
				%	%	%	
44b	orients new administrative personnel	B.S.	24	20.8	54.2	25.0	2.04 ± .69
		con. ed.	20	5.0	25.0	70.0	2.65 ± .58
		work	21	76.2	23.8	--	1.23 ± .44
44c	conducts in-service training for administrative personnel	B.S.	32	43.8	37.5	18.8	1.75 ± .76
		con. ed.	28	17.9	32.1	50.0	2.32 ± .77
		work	29	62.1	34.5	3.4	1.41 ± .57
45	maintains current knowledge in nutrition care	B.S.	64	29.7	53.1	17.2	1.88 ± .68
		con. ed.	59	76.3	20.3	3.4	1.27 ± .52
		work	59	47.5	42.4	10.2	1.62 ± .67
46	identifies legislation and funds in community nutrition	B.S.	38	7.9	31.6	60.5	2.53 ± .65
		con. ed.	34	61.8	23.5	14.7	1.53 ± .75
		work	35	42.9	34.3	22.9	1.80 ± .80
47	plans budget	B.S.	28	3.6	46.4	50.0	2.46 ± .58
		con. ed.	21	4.8	14.3	81.0	2.76 ± .54
		work	24	70.8	16.7	12.5	1.42 ± .72
48	serves as community resource person	B.S.	42	35.7	59.5	4.8	1.69 ± .56
		con. ed.	34	26.5	55.9	17.6	1.91 ± .67
		work	38	44.7	47.4	7.9	1.63 ± .63
49	analyzes and modifies menus	B.S.	50	68.0	28.0	4.0	1.36 ± .56
		con. ed.	43	4.7	39.5	55.8	2.51 ± .59
		work	47	70.2	27.7	2.1	1.32 ± .52

Table 16: (cont.)

item number	competency	experience	N	degree of influence: very helpful	degree of influence: of some help	degree of influence: little or no help	mean and s.d.
				%	%	%	
50	obtains training materials	B.S.	61	47.5	42.6	9.8	1.62 ± .66
		con. ed.	52	26.9	61.5	11.5	1.84 ± .61
		work	55	49.1	41.8	9.1	1.60 ± .66
51	identifies need for community programs	B.S.	24	29.2	50.0	20.8	1.92 ± .72
		con. ed.	20	25.0	35.0	40.0	2.15 ± .81
		work	22	54.5	36.4	9.1	1.55 ± .67
52	assesses nutritional status	B.S.	55	61.8	34.5	3.6	1.42 ± .57
		con. ed.	50	42.0	44.0	14.0	1.72 ± .70
		work	50	60.0	34.0	6.0	1.46 ± .61
53	analyzes previous nutritional intake	B.S.	54	70.4	29.6	--	1.30 ± .46
		con. ed.	50	26.0	44.0	30.0	2.04 ± .76
		work	50	60.0	38.0	2.0	1.42 ± .54
54	evaluates socio-psychological factors in nutrition care	B.S.	55	78.2	20.0	1.8	1.24 ± .47
		con. ed.	49	20.4	49.0	30.6	2.10 ± .71
		work	50	64.0	36.0	--	1.36 ± .49
55	develops systems	B.S.	56	35.7	55.4	8.9	1.73 ± .62
		con. ed.	46	2.2	43.5	54.3	2.52 ± .55
		work	52	51.9	44.2	3.8	1.52 ± .58
56	prepares reports	B.S.	57	42.1	35.1	22.8	1.81 ± .79
		con. ed.	48	6.3	20.8	72.9	2.67 ± .60
		work	53	66.0	34.0	--	1.34 ± .48

Table 16: (cont.)

item number	competency	experience	N	degree of influence: very helpful	degree of influence: of some help	degree of influence: little or no help	mean and s.d.
				%	%	%	
57	identifies need for changes in nutrition care	B.S.	67	40.3	47.8	11.9	1.72 ± .67
		con. ed.	57	8.8	36.8	54.4	2.46 ± .66
		work	63	58.7	41.3	--	1.41 ± .50
58	identifies and analyzes problems in nutrition care	B.S.	59	30.5	66.1	3.4	1.73 ± .52
		con. ed.	52	11.5	59.6	28.8	2.17 ± .62
		work	55	63.6	30.9	5.5	1.42 ± .60
59	plans orientation and in-service training	B.S.	42	52.4	40.5	7.1	1.55 ± .63
		con. ed.	35	20.0	45.7	34.3	2.14 ± .73
		work	40	67.5	27.5	5.0	1.38 ± .59
60	delegates	B.S.	32	40.6	50.0	9.4	1.68 ± .64
		con. ed.	25	--	28.0	72.0	2.72 ± .46
		work	29	69.0	24.1	6.9	1.38 ± .62
61a	coordinates departmental systems	B.S.	34	35.3	58.8	5.9	1.71 ± .58
		con. ed.	26	--	23.1	76.9	2.77 ± .43
		work	30	73.3	23.3	3.3	1.30 ± .54
61b	coordinates interdepartmental systems	B.S.	39	28.2	48.7	23.1	1.95 ± .73
		con. ed.	32	--	21.9	78.1	2.78 ± .42
		work	36	75.0	25.0	--	1.25 ± .44
61c	coordinates resources within department	B.S.	35	37.1	54.3	8.6	1.71 ± .62
		con. ed.	28	3.6	25.0	71.4	2.68 ± .55
		work	31	71.0	29.0	--	1.29 ± .46

Table 16: (cont.)

item number	competency	experience	N	degree of influence: very helpful	of some help	little or no help	mean and s.d.
				%	%	%	
62a	monitors production and service	B.S.	43	74.4	25.6	--	1.26 ± .44
		con. ed.	36	2.8	22.2	75.0	2.72 ± .51
		work	40	67.5	25.0	7.5	1.40 ± .63
62b	supervises personnel effectively	B.S.	36	50.0	41.7	8.3	1.58 ± .65
		con. ed.	29	3.4	37.9	58.6	2.55 ± .57
		work	34	64.7	35.3	--	1.35 ± .49
62c	monitors receiving, storage and sanitation	B.S.	36	77.8	22.2	--	1.22 ± .42
		con. ed.	29	--	44.8	55.2	2.55 ± .51
		work	33	60.6	33.3	6.1	1.46 ± .62
63	implements new systems	B.S.	50	32.0	58.0	10.0	1.78 ± .62
		con. ed.	42	14.3	45.2	40.5	2.26 ± .70
		work	46	60.9	34.8	4.3	1.44 ± .58
64	designs inventory system	B.S.	14	50.0	42.9	7.1	1.57 ± .65
		con. ed.	11	18.2	18.2	63.6	2.46 ± .82
		work	11	63.6	27.3	9.1	1.46 ± .69
65	evaluates effectiveness of nutrition care services	B.S.	58	48.3	41.4	10.3	1.62 ± .67
		con. ed.	51	15.7	52.9	31.4	2.16 ± .67
		work	53	71.7	28.3	--	1.28 ± .46
66	uses effective merchandising techniques	B.S.	36	58.3	36.1	5.6	1.47 ± .61
		con. ed.	31	12.9	45.2	41.9	2.29 ± .69
		work	33	60.6	30.3	9.1	1.49 ± .67

Table 16: (cont.)

item number	competency	experience	N	degree of influence: very helpful	degree of influence: of some help	degree of influence: little or no help	mean and s.d.
				%	%	%	
67	relates medical status to nutrition care plan	B.S.	54	75.9	20.4	3.7	1.28 ± .53
		con. ed.	49	34.7	51.0	14.3	1.80 ± .68
		work	51	62.7	35.3	2.0	1.39 ± .53
68	acts appropriately during union organization	B.S.	15	13.3	53.3	33.3	2.20 ± .68
		con. ed.	14	14.3	14.3	71.4	2.57 ± .76
		work	14	50.0	35.7	14.3	1.64 ± .75
69	determines and justifies new equipment needs	B.S.	33	39.4	57.6	3.0	1.64 ± .55
		con. ed.	27	7.4	11.1	81.5	2.74 ± .59
		work	30	30.0	56.7	13.3	1.83 ± .65
70	evaluates client acceptance	B.S.	48	41.7	37.5	20.8	1.79 ± .77
		con. ed.	40	10.0	37.5	52.5	2.43 ± .68
		work	44	59.1	31.8	9.1	1.50 ± .67
71	implements policies and procedures	B.S.	50	44.0	44.0	12.0	1.68 ± .68
		con. ed.	43	--	34.9	65.1	2.65 ± .48
		work	47	63.8	29.8	6.4	1.43 ± .62
72	supervises nutrition care personnel	B.S.	36	27.8	55.6	16.7	1.89 ± .67
		con. ed.	30	--	33.3	66.7	2.67 ± .48
		work	33	72.7	27.3	--	1.27 ± .45

Table 17: Chi square analysis for responsibility ratings which differentiate among three groups by position title[1] ($P \leq .05$)

item number	competency	groups by position title: administrator[2] (N=21)	clinician[3] (N=18)	generalist[4] (N=15)
		%	%	%
1	evaluates effectiveness of systems	95.2	66.7	93.3
2	plans nutrition education	85.7	88.9	53.3
3	obtains nutrition education materials	81.0	100.0	60.0
4	uses performance appraisal	85.7	38.9	93.3
5	plans food production	52.4	11.1	60.0
6	develops department goals	95.2	27.8	73.3
7	develops job descriptions	66.7	33.3	93.3
8	identifies labor laws	52.4	11.1	53.3
9	recommends changes in nutritional care	81.0	100.0	60.0
12	plans master schedule	71.4	11.1	66.7
13	uses management techniques	85.7	50.0	80.0
14	utilizes outside agencies for continuing care	57.1	83.3	40.0
18	plans sanitation schedule	52.4	5.6	60.0

[1]Scale A responses "major" or "some" responsibility.

[2]Associate, assistant and department director, head clinical and head administrative dietitian.

[3]Clinical and community dietitian.

[4]Administrative staff dietitian, generalist, and food production manager.

Table 17: (cont.)

item number	competency	groups by position title: administrator (N=21)	clinician (N=18)	generalist (N=15)
		%	%	%
19	develops nutrition care plan	76.2	94.4	53.3
20	participates in health team activities	61.9	83.3	40.0
22	develops standardized recipes	47.6	11.1	53.3
24a	uses menu planning principles	76.2	38.9	80.0
24b	incorporates individual requirements into menus	85.7	44.4	66.7
24c	considers resources in menu planning	71.4	22.2	80.0
25	redesigns systems	76.2	22.2	73.3
27	communicates nutrition care to appropriate personnel	81.0	100.0	66.7
28	maintains current knowledge in management	66.7	22.7	80.0
30	maintains current records in personnel and fiscal control	52.4	22.2	73.3
31	prepares proposals	71.4	33.3	66.7
32	determines man-hour requirements	47.6	11.1	53.3
35	solves problems	85.7	44.4	93.3
36a	interviews and selects clinical personnel	76.2	35.3	40.0
38	develops staffing patterns for clinical personnel	81.0	22.2	46.7
41	identifies those requiring nutritional care	61.9	100.0	60.0

Table 17: (cont.)

item number	competency	groups by position title: administrator (N=21)	clinician (N=18)	generalist (N=15)
		%	%	%
42	develops policies and procedures	100.0	38.9	73.3
43	provides nutrition counselling	81.0	100.0	53.3
44a	interviews and selects administrative personnel	57.1	11.1	53.3
44b	orients new administrative personnel	57.1	11.1	60.0
47	plans budget	52.4	11.1	46.7
52	assesses nutritional status	71.4	100.0	53.3
53	analyzes previous nutritional intake	66.7	100.0	46.7
54	evaluates socio-psychological factors in nutrition care	66.7	94.4	46.7
55	develops systems	100.0	50.0	80.0
58	identifies and analyzes problems in nutrition care	81.0	100.0	66.7
59	plans orientation and in-service for department	66.7	22.2	73.3
60	delegates	66.7	11.1	80.0
61a	coordinates departmental systems	76.2	22.2	66.7
61b	coordinates interdepartmental systems	81.0	33.3	73.3
61c	coordinates resources within department	81.0	11.1	80.0
62a	monitors production and service	76.2	38.9	73.3
62b	supervises personnel effectively	66.7	22.2	86.7

Table 17: (cont.)

item number	competency	groups by position title: administrator (N=21)	clinician (N=18)	generalist (N=15)
		%	%	%
62c	monitors receiving, storage and sanitation	66.7	11.1	73.3
63	implements new systems	90.5	33.3	86.7
64	designs inventory systems	23.8	--	33.3
66	uses effective merchandising techniques	81.0	16.7	73.3
67	relates medical status to nutrition care plan	66.7	100.0	53.3
69	determines and justifies new pieces of equipment	61.9	5.6	66.7
70	evaluates client acceptance	85.7	33.3	73.3

PROFESSIONAL EXPERIENCE OF GRADUATES FROM A COORDINATED UNDERGRADUATE PROGRAM IN DIETETICS: A METHOD OF PROGRAM EVALUATION

by

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ABSTRACT

Effective program evaluation is mandated by the Essentials for the Coordinated Undergraduate Program in Dietetics, an American Dietetic Association document. In recognition of this need, the Department of Dietetics, Restaurant, and Institutional Management at Kansas State University distributes program evaluation instruments to graduates within a year after graduation. The purpose of this study was to evaluate the coordinated program at KSU by a survey of graduates in practice from four to eight and a half years. Specific objectives were to (a) ascertain the influence of the development of competency by the undergraduate program, graduate study, continuing education, and work experience, and (b) examine the career patterns of graduates by the employment record from the first to the current or most recent position.

The 109 graduates since the program's inception in 1971 through December 1975, were the research population. An instrument consisting of three parts was developed. Part A, demographic information, requested information on educational background, professional involvement, factors affecting acceptance of positions, salary, and attitudes toward education and competency. Part B provided a chart for employment background. Part C consisted of seventy-two statements, five of which had multiple parts, for a total of eighty-two competencies for evaluation on two scales. Scale A indicated the degree of responsibility required in the present position and Scale B rated the contribution of professional experiences in developing each competency. Data from ninety-two graduates were analyzed.

Nearly half the graduates first entered clinical positions and one-fourth began as generalists. Current positions for fifty per cent of the graduates reflect a movement to positions as administrators, educators, and consultants. These positions, as described in The American Dietetic Association Position Paper on employment practices, require advanced preparation and experience.

Degree of responsibility in the present position was completed by 82.6 per cent of the respondents. Responsibility ratings were divided into five classifications: typical, frequent, common, occasional, and rare. Statements were further examined in relation to levels of "essentiality" for the entry-level dietitian as identified in the Loyd study. More than half the responsibilities were essential for entry-level, but those categorized as desirable but not essential and beyond entry-level practice represented almost half the responsibilities of the graduates.

To ascertain the effect of professional experiences in the development of each competency, graduates rated work and undergraduate education as having the greatest influences in the development of professional competency. Continuing education was rated "very helpful" in maintaining current knowledge and contributed in varying degrees to the development of other competencies. The master's degree generated limited responses and therefore was not analyzed. Fifty-three statements, identified as differences according to position titles, showed that practitioners functioning as generalists had similar responsibilities to administrators, but the responsibilities of the clinicians did not resemble either administrators or generalists.

An important finding was the support found among the graduates surveyed for the coordinated undergraduate program. Results should assist with program revision, curriculum development, and additional evaluation.