IDENTIFICATION OF GRADUATE LEVEL COMPETENCIES IN
FOODSERVICE SYSTEMS MANAGEMENT

by

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INTRODUCTION

Graduate students seeking master's degrees in our field range from those who desire the degree as one of the routes to membership in The American Dietetic Association (ADA) to those who wish to attain expertise in a specific area. ADA, however, does not specify curricula for the master's degree and qualifying experience means of attaining membership.

Dietetic educators have been concerned about the lack of unified standards for graduate education of dietitians. Students who have completed a coordinated undergraduate program in dietetics or a post-baccalaureate internship, traineeship, or three years planned work experience undoubtedly are seeking specialization at the graduate level. Other students, however, may have completed a traditional dietetics program and elected to attain ADA membership by completing a master's degree followed by six months experience. Students transferring from other disciplines will not have satisfied all of the Plan IV academic requirements for ADA membership and will need to take courses from the undergraduate curriculum, some of which may carry graduate credit, depending on the policies of the college or university. This last category of students may not become proficient in a specialty because of the proportion of credits in their graduate programs devoted to fulfilling Plan IV requirements.

The concern of dietetic educators in the Foodservice Systems Management Education Council (FSMEC) led to appointment of an ad hoc committee in 1977 charged with developing a position paper on graduate education at the master's level (1). At the tenth biennial conference of FSMEC in

1979 (2), the chairman of this committee reported identification of the following issues:

- need to define graduate education in foodservice systems management,

- need to clarify goals and objectives of graduate programs in foodservice systems management,

- need to identify roles in the profession for which graduate education is appropriate,

- need to identify a specific body of knowledge that warrants graduate education in foodservice systems management, and

- need to identify appropriate supporting disciplines as components of graduate programs.

A working paper was presented and feedback was requested. Subsequently, the committee members decided that research was essential for the production of a sound position paper. This decision led to a research project at Kansas State University (KSU) partially funded by FSMEC.

The purpose of this study, stimulated by the Foodservice Systems Management Education Council, was to secure information from administrators of dietetic services and educators in foodservice systems management concerning their expectations for competencies of dietitians with an advanced degree. Piper (3) stressed the need for continuing exchange between educators and practitioners to result in maximum benefit in curriculum development, faculty enrichment, combined research efforts, and mutual respect. The competencies identified by Loyd and Vaden (4) and Mariampolski et al. (5) for entry level dietitians and foodservice managers plus competencies for graduate education identified by FSMEC members were used as the basis for the research. Specific objectives for the research were to differentiate competencies at the bachelor's degree level, those appropriate at the master's level, or those for which

experience is primarily important; identify the extent of experience required to develop competency; and compare ratings provided by practitioners and educators who evaluated the competency statements.

REVIEW OF LITERATURE

Graduate Education

Jencks and Riesman (6) stated that the American graduate school has become one of the central institutions of American culture. They suggested that the overall quality of American intellectual life depended more on graduate education than on any other single institution.

The master's degree was defined by The American Home Economics Association (7) as a respected academic award given in recognition of the successful completion of a planned program of post-baccaulaureate study in a chosen field. The doctor's degree in a professional field was defined as the highest college or university award given in that field in recognition of the completion of a planned program in preparation for creative and scholarly research, teaching, and leadership.

Sussman (8) described graduate education as the capstone of the educational process and the source of scholars and scholarship. He indicated that the importance of graduate education could not be overestimated. In 1978, the Council on Postsecondary Accreditation (COPA) and the Council of Graduate Schools (CGS) in the United States (9) defined graduate education as the set of academic experiences offered to a graduate student which must be completed satisfactorily to justify the award of a graduate degree such as master or doctor.

Quinton (10) defined one who had successfully completed a course of graduate study as a master or a doctor. Quinton described the master as one who had mastered a craft or art, who knew how to exercise a skill and

was thus fit to be imitated by apprentices. The doctor was described as one who had mastered a science and was qualified to convey that knowledge to others, a capacity that involved understanding the grounds on which the knowledge rests.

Objectives

Neal (11) named three objectives that graduate schools should pursue to fulfill the social role of graduate education. The first concern should be that the awarded degrees signify a minimum level of competence to permit the graduate to practice in those occupations for which the degree is appropriate. The social, cultural, and economic future of the nation depends on vigorous advancement and growth of graduate education and production of competent practitioners. The second objective should prepare graduates to perpetuate and extend the studied discipline. Neal suggested mastery of the art of communication be a qualification for all those attaining a graduate degree. The third objective of graduate education should be the performance of research pertinent to the discipline of the anticipated professional practice and relevant to the needs of society.

According to Bowen (12), the success of a graduate program is reflected by its graduates. He asserted that graduate study imparts extraordinary motivation and dedication and imbues the products of graduate study with a humane outlook on life. This was the start on the path of life-long education which Bowen described as a major goal of all true educators.

Gould (13) contended that products of graduate education need ability to act with superior intelligence, a sense of the past, an

awareness of beauty, and a desire to make excellence, culture, and equality prevail. He described a need for persons who can use their minds and sensibilities with analytical and creative power in any field of endeavor.

The COPA/CGS Joint Task Force (9) identified three major, traditional, and nationally-recognized purposes of graduate education:

advanced education and intellectual development of able and motivated individuals in a variety of forms and disciplines essential to the pursuit of specific careers;

production of new knowledge through research and intellectual inquiry or application of knowledge toward the solution of technological, social, economic, and political problems and issues; and

preservation and transmission of knowledge and the extension of our cultural heritage to successive generations.

The members of the ad hoc committee of FSMEC (2) adapted a statement of major purposes of graduate education in administrative dietetics from the COPA/CGS statement:

- intellectual development of able and motivated individuals;

- production of knowledge through research and intellectual inquiry

- application of knowledge to the solution of technological, social, economic, and political problems and issues;

- preservation and transmission of knowledge; and

- extension of cultural heritage to successive generations.

The FSMEC committee members further stated that a profession looks to those who have earned advanced degrees for leadership in scholarly and professional activities. Graduate study is intended to increase materially a person's conceptual ability and capacity for independent action in scholarly and professional pursuits.

Bowen (14) abstracted from the International Conference on the Philosophy of Graduate Education four basic propositions about the nature and uses of advanced study.

1. The basic objective of advanced study is to help interested persons, during their lifetimes, achieve mastery of a field of knowledge.

2. Since any field of knowledge may be used in various ways, only one of which is teaching, persons who undertake advanced study should be helped to acquire reasonable versatility and mobility in their careers and in other lifetime experiences.

3. Advanced study should be conducted in ways that will help individuals to become well-educated and cultivated persons as well as professional experts.

4. Advanced study in the aggregate should bring about certain outcomes for society; e.g., manning the institutions of society with competent professionals and leaders, providing a pool of human resources to meet social exigencies, serving as carriers and developers of the cultural heritage, and promoting sound national economic development.

Bowen concluded the access to advanced study should be very open and strongly encouraged and should be guided primarily by the free choices of individual students rather than by strong social control.

Vlastos (15) formulated the purpose of graduate education as the advancement and communication of knowledge. Advancement would be accomplished through research and communication by teacher-scholars with the following five distinct groups:

- fellow specialists in a field of research,

- graduate students,

- undergraduate students,

- colleagues in other fields, and

- the public at large.

Approaches

The Panel on Alternate Approaches to Graduate Education (16) reported that graduate schools include a variety of institutions and departments performing many roles. Diversity of institutions is recognized as the greatest potential source of strength the graduate system possesses, if close working relationships are developed among graduate institutions and undergraduate and secondary school affiliates. The Panel concluded the standards and methodologies of advanced research by graduate institutions need to be extended into servicing social needs. Graduate schools were urged to become more conscious of their potential contribution in developing intellectual pursuits and research activities that can identify the critical issues of the age and aid in shaping sane choices.

The Council on Postsecondary Accreditation and the Council of Graduate Schools in the United States (9) identified two types of graduate programs, distinguishable by primary objectives as either research or practice oriented. Research oriented programs prepare students for scholarly or research activity directed mainly toward the acquisition of new knowledge, and practice oriented types prepare for professional practice directed toward the application or transmission of existing knowledge. The distinction between the types of graduate programs does not imply a sharp dichotomy. In many instances, the purposes and requirements of the programs have merged to become indistinguishable. The ad hoc committee of FSMEC (2) concurred with the COPA/CGS statement in the distinction between the research and practice oriented graduate programs.

Societal Needs

Gould (13) cited that graduate education in the United States originated because of a social need for precise, objective data in the

1870's and 1880's. Gould described the shortage of well trained scholars in that era of "lady school teachers, clergymen-professors, and earnest gentlemen-teachers." Graduate education was an attempt to provide serious, objective, scientific research. Graduate schools came into existence to furnish objective scientific researchers for the expanding democratic polity, emerging industrial society, and new universities.

Also, Gould (13) noted the present need for increased interest in the human condition and decreased emphasis upon remote, pure research. He suggested that a new social premium should be put on creativity and imagination and bold rather than incremental thought. Gould also reported the increased role of graduate schools in continuing education. With the rapid rate of advance of knowledge, graduate schools have become involved in updating and re-training.

Jones (17) reported that the social role of graduate schools changes as the complexity of public administration and problems demand increasingly higher levels of education. He viewed graduate education as a prerequisite to leadership roles in all segments of society as graduates fill key positions in industry, government, education, and some independent professions.

Harrington (18) asserted that improvement in the quality of life and the environment was the goal of graduate work. Graduate education through research has given America the highest of living standards with a short work week plus the ability to abolish poverty, blight, and pollution.

The guidelines for graduate education developed by The American Home Economics Assocation (7) included the statement that members who have earned advanced degrees are relied on to assume leadership in scholarly and professional activities. Graduate study increases the student's

capacity for independent action in scholarly and professional pursuits.

The FSMEC ad hoc committee (2) members stated that a primary concern in graduate education is to make knowledge a more effective resource for changing societal needs. Effective change requires a strong theoretical framework characterized by a vital scientific humanism, awareness of interdependencies of individual and society, and commitment to the principles of free disciplined inquiries.

Attributes

The FSMEC committee (2) concluded that the graduate curriculum provides for increasing the depth of a student's knowledge based on undergraduate education and experience. In graduate study, a student is motivated to review the literature beyond the range of textbooks and relate this knowledge to practical, theoretical, and academic problems.

Opportunities are provided for graduate students to collate, present, interpret, and defend conclusions from relevant publications through seminars and courses. The graduate program shall provide for the development of problem solving, analytical, and research capabilities (2).

Graduate Education for the Profession of Dietetics

The ADA Committee on Goals of Education for Dietetics (19) identified goals for the lifetime education of the dietitian. The report of this committee indicated these goals denote qualities that beginners in the profession should have attained to some degree and which should continue to grow with experience. The goals also identified the unique role of the dietitian as being nutritional care. One of the goals stressed the significance of scientific inquiry and the evaluation and utilization of new research findings.

The ADA position paper on education for the profession of dietetics
(20) indicated that the baccalaureate degree provides the graduate with
the foundation for a beginning position in dietetics or for study in a
specialty area. In the beginning position, optimally the dietitian should
work under the guidance of a dietitian who has in-depth education and
experience in a specialty area. In-depth study leading to an advanced
degree in a defined specialty area of dietetics should facilitate career
advancement to the level of specialist. Four specialty areas were defined:
administrator of dietetic services, general practitioner of dietetics,
nutrition educator, and clinical nutrition specialist.

Study Commission on Dietetics

The Study Commission on Dietetics (21) found few data on the graduate
education of the dietitians other than that 25 percent of the members of
The American Dietetic Association (ADA) held advanced degrees. The Com-
mission recommended that graduate education not be isolated from under-
graduate education, and that the ADA form a wholistic instrumentality for
monitoring, catalyzing, and encouraging dietetic education. A need for
more graduate opportunities, which could be met by substantial increases
in number of students in each of the existing programs, and encouragement
of more institutions to enter the field, was recognized.

The Commission proposed differentiation as the prescription for
graduate education as opposed to generalization at the undergraduate
level. Master's degree programs in the several specialized branches of
dietetic practice were recommended. Master's programs should be presented
by universities with the appropriate resources, including other graduate
programs relevant to the specialization. The length of the recommended
programs would depend upon the field of specialization, previous education

of the student, and amount and character of the student's experience as a practitioner. The Study Commission concluded that dietetic education would be more effective and efficient if science (knowledge) and art (skill) were learned concurrently.

According to Hart (22), the resulting proliferation of coordinated undergraduate programs has had repercussions in graduate education. Master's degree programs have been established to prepare clinical instructors in coordinated undergraduate and technician programs. The focus of these graduate programs is on a strong academic background in nutrition, management, or community nutrition coupled with courses in education. Also, Hart identified the need for administrative master's and doctoral curricula to educate directors for coordinated programs. Such graduate programs would provide a background in dietetics, administration, allied health education, and higher education.

Graduate Education for the Administrative Dietitian

An administrator of dietetic services should be competent in the management of complex foodservice operations using a systems approach and integrating nutrition principles. Furthermore, the practitioner in this role will serve as an executive who participates in defining objectives and formulating policies and also, employs all the tools of business management, automation, creative planning, and delegation. The practitioner at the entry level preferably will work under the guidance of a specialist, whereas career advancement to the level of specialist will be through in-depth study leading to an advanced degree in a defined specialty area (20).

In 1972, the Board of Trustees of the American Hospital Association approved the "Proposed Guidelines for Selection of a Hospital Food

Service Administrator" (23). They indicated that a foodservice administrator should have a comprehensive knowledge of the principles of foodservice administration, a detailed knowledge of normal nutrition, and a general understanding of therapeutic nutrition. The requisite knowledge must include principles of procurement, production, distribution, and sanitation, and in addition, availability of resources and functions of management.

Also, the American Hospital Association recognized the value of formal academic attainment but stated that the foodservice field has many organized experience programs which aid in producing competent executives. They indicated that possession of a degree may be as important in establishing prestige in horizontal relationships as it is as a source of professional knowledge. The professional skills and competencies for a foodservice administrator were outlined as follows:

- possess technical skills pertinent to procurement, production, and service;
- teach tasks associated with procurement, production, and service;
- provide positive direction and assistance to superiors in the establishment of standards and goals;
- communicate between superiors and subordinates;
- initiate action for change based on evaluation of the department;
- develop rapport with other departments; and
- assist other community agencies if requested.

In 1973 Blaker (24) described the role of the administrative dietitian as the management of resources that make nutritional care possible. She advised hospital administrators seeking an administrative dietitian to look for one who had done advanced work in institutional management.

Blaker asserted that the administrative dietitian needs to be on the administrative team of the organization in order to accomplish this goal.

In The American Dietetic Association position paper on the administrative dietitian (25), the role of the specialist in administration of dietetic services was described by identifying the following functions of the director of a foodservice system:

- program planning and resource allocation,
- establishing and maintaining standards for technical operations,
- manpower planning and development,
- effecting fiscal accountability,
- developing communication networks,
- designing foodservice facilities,
- planning and managing change, and
- executing control.

The position paper also contained the statement that the administrative dietitian should gain competence in management either at the undergraduate or graduate level.

In the 1981 Position Paper on recommended salaries and employment practices for members of The American Dietetic Association (26), education and experience were correlated with salaries. Three management positions of director, associate director, and assistant director were listed as requiring experience and specialized preparation. Conversely, specialized preparation was not indicated for the position of administrative dietitian and a list of responsibilities preceded the salary recommendation.

Research in Competency Identification in Dietetics

In 1972, the Executive Board of The American Dietetic Association commissioned Cagguila (27) to develop entry level competencies for the generalist dietitian. Although this document (28) has not been adopted officially by The American Dietetic Association, it has been used as a base for many research projects on entry level competencies for dietitians.

Research has been conducted on identifying competencies for dietitians. The members of the Foodservice Systems Management Education Council developed Terminal Performance Objectives (TPO) and Enabling Objectives (EO) for entry level competencies in management (29). These objectives, which were refined and edited by an ad hoc committee of FSMEC, were based on the management competencies in Plan IV, ADA minimum academic requirements. Bell (30) defined a TPO as a major performance component of a competency and EO as a specific performance or behavior relating directly to the TPO.

Slomski (31) reported a study designed to develop a list of specific skills considered essential for competency of an entry level dietitian. This study based on the ADA Plan IV was undertaken to provide guidelines for the coordinated undergraduate program at the University of Southern Mississippi.

Loyd and Vaden (4) obtained information from hospital dietetic practitioners concerning their expectations for the performance or competency of entry level dietitians in both management and clinical practice. The competencies developed by Cagguila (28) were modified and used as the basis for the research instrument. They emphasized the value of competencies for the development and evaluation of curricula in

dietetic education. Also, Loyd and Vaden (4) indicated that competencies could be the basis for terminal performance objectives, enabling objectives, course content, and didactic and clinical learning experiences.

Bedford (32) developed a set of affective competencies and identified related measurable behaviors for the entry level dietitian. Chambers (33) attempted to measure the status of graduates from general dietetic programs based on ADA Plan IV competencies, but the results were not conclusive due to needed refinement in the instrument.

Holmes (34) developed an instrument based on the competency statements from Loyd and Vaden (4) to identify competencies essential for graduates of coordinated and traditional programs in dietetics. Instruments were sent to a national sample of dietetic educators in coordinated programs and dietetic internships. Results indicated that both groups agreed that approximately 85 percent of the competencies were expected of graduates from a coordinated program and only 29 percent from traditional programs.

Baird (35), using the Loyd and Vaden (4) competency statements, conducted a study to determine the dimensions of the roles of a hospital administrative dietitian and a clinical dietitian as perceived by practitioners in these two areas. She concluded that the tenets of the dietetic profession relative to specialization as indicated by the publications of leaders in the profession are not in harmony with the perceptions of practitioners.

Morales et al. (36) described an effective methodology to analyze competencies in one dietetic practice area, menu planning, using a national sample of administrative practitioners. This study evolved from the research of Cagguila (28) and Loyd and Vaden (4). Subcompetencies and descriptors were rated on two scales by hospital dietitians.

Analysis of data was based on levels of practice of the respondents. Differences were not found between the experienced and entry level dietitian on the importance scale; time consideration revealed a number of significant differences, however. The more experienced practitioners rated many of the menu planning activities as more time consuming than did those less experienced.

Meeks and Zallen (37) conducted a study to evaluate dietitians' perceptions of the adequacy of their professional education in preparation for entry level practice. Thirty-six essential and five desirable but not essential competencies identified by Loyd and Vaden (4) were used.

Rinke's (38) research pertained to employers' perceptions of the adequacy of educational preparation in administration regarding the route to ADA membership, i.e. internship, coordinated undergraduate program, traineeship, or advanced degree program. Administrative competencies identified in the Loyd and Vaden (4) study were considered important for the entry level dietitian.

Mariampolski et al. (5) developed competency statements for entry into commercial foodservice management from the administrative statements evaluated by Loyd and Vaden (4). His competency statements were validated by commercial foodservice managers. Data were analyzed and the statements classified into technical, human, and conceptual skills as defined by Katz (39). Recommendations for further definition and refinement of these statements resulted (5).

Hoadley et al. (40) conducted a study to identify areas of responsibility dietitians were willing to delegate to dietetic technicians. Eighty-two competency statements, adapted from those by Loyd and Vaden (4), were used as the basis for research. Administrative activities

emerging as appropriate functions for delegation were mostly routine operational activities.

Lafferty (41) conducted research to develop a methodology which could be used to determine the level of competency required by dietitians in foodservice management positions at various levels of practice. The research population was drawn from dietitians listed in the Division of Management Practice within the ADA Council on Practice. She concluded that the research methodology was valid for developing competency statements for dietitians in foodservice management positions at different levels of practice.

METHODOLOGY

The Sample

The sample for the study included educators in foodservice systems management and administrators of dietetic services (practitioners) who had completed an advanced degree or were enrolled in a graduate program. The educators included members of the Foodservice Systems Management Education Council (FSMEC) and other educators in administrative dietetics or foodservice management. Program directors of approved Plan IV dietetic education programs, coordinated undergraduate programs, and dietetic internships were asked to complete the survey instrument if they were responsible for teaching in the management area. If not, they were asked to have the faculty member in their program with this responsibility complete the instrument.

The criteria established for the practitioners were membership in The American Dietetic Association and employment in dietetic practice in a position which involved some degree of management responsibilities. A list was requested from data processing services at The American Dietetic Association which was to include ADA members who were directors, associate or assistant directors, or foodservice administrators and who had completed or were enrolled in an advanced degree program. After removing names of educators duplicated on the list of practitioners, 450 were selected using a computer generated list of random numbers.

The sample totalled 900 potential respondents including 450

practitioners and 450 dietetic educators. Of the 450 educators, 90 were FSMEC members.

The Instrument

The research instrument for this study consisted of two sections: Part I, 65 competency statements for classification according to educational level and experience necessary for performance; and Part II, items to provide demographic information about the respondent and the respondent's present position.

The first draft of Part I of the instrument consisted of 21 competency statements identified by Loyd and Vaden (4) as beyond expectation or desirable, but not expected for the entry level administrative dietitian and 26 identified by FSMEC members. At the Tenth FSMEC Conference in 1979, members were asked to list competencies of the person with an advanced degree in foodservice systems management (2). Their suggestions were reviewed in relation to the competencies identified by Loyd and Vaden (4) and duplicate statements were eliminated.

The competency statements from both sources were grouped by the research review committee into eight categories according to the functions of the administrative dietitian designated in the ADA Position Paper on the administrative dietitian (25):

- Program planning and resource allocation,
- Establishing and maintaining standards for technical operations,
- Executing control,
- Effecting fiscal responsibility,
- Manpower planning and development,
- Developing communication networks,

- Designing foodservice facilities, and

- Planning and managing change.

The statements were grouped to facilitate completion of the questionnaire and ensure the comprehensiveness of the competency list. Also, the plan was to ask respondents to identify additional competencies expected of the administrative dietitian with an advanced degree within each of these categories.

In the first draft, a scale related to level of education expected for the dietitian to perform each competency was developed. After reviewing this draft, the research committee revised the scale for indicating level of education for clarification. Consideration of the doctorate level was eliminated because the objective of the study concerned competencies for master's degree level practitioners. The revised scale, labeled Scale A, was as follows:

1 = Expected for the administrative dietitian with a bachelor's degree

2 = Expected for the administrative dietitian with a master's degree

3 = Expectation depends on individual's professional experience, not related to level of education.

A second scale (Scale B) was devised for identifying level of experience needed for performance of each competency:

1 = No work experience beyond basic requirements for ADA membership (CUP, internship, etc.)

2 = Less than one year of work experience

3 = One to three years

4 = Four to five years

5 = Six to ten years

6 = Over ten years

This scale was adapted from that used in the study by Morales et al. (36) in which levels of practice were related to practitioners' ratings of selected competencies in administration.

In the second revision, 22 competencies identified by Loyd and Vaden (4) as essential at entry level for dietitians in administrative positions were added to include a basis for differentiation between competencies required at the baccalaureate level and those at the master's level. Four competencies of managers in commercial foodservice identified by Mariampolski et al. (5) also were added to provide a more comprehensive list of appropriate competencies. The sources of the competency statements are detailed in Appendix A.

The initial and revised lists were reviewed and duplicate statements were eliminated. In the expanded list, 11 of the statements from FSMEC members were duplicative of the statements added from Loyd and Mariampolski. The research committee recategorized some of the competencies more appropriately. Minor wording changes and clarifications were made in the questionnaire instructions. Some of the competencies were edited slightly for clarification. A copy of the final instrument is in Appendix B.

Distribution of the Instrument

Since most of the competencies had been used in previous studies and standard survey methodology was used, a pilot study or pretest was not considered necessary. The questionnaire, a prestamped return envelope, and a cover letter were mailed via first class to the study participants. Separate cover letters were mailed to the FSMEC members, the dietetic education program directors, and the dietetic practitioners

to explain the intent of the study and the importance of participation by each group (Appendix C).

Approximately four weeks after the mailing, a questionnaire, return envelope, and follow-up letter were mailed to the nonrespondents. Separate follow-up letters were sent to each of the three groups in the sample (Appendix D).

Techniques known to increase participation in survey research were employed (42). The questionnaire was printed on colored paper, a hand-written signature was used on all cover letters, and commemorative stamps were used. Letterhead stationery and envelopes identifying the sponsoring institution were utilized.

Data from the returned instruments were coded, key punched on 80-column computer cards, and analyzed using the Statistical Package for the Social Sciences (43). Three computer cards were needed for the data from each questionnaire.

RESULTS AND DISCUSSION

General Information

Survey Returns

After initial and follow-up mailings 539 research instruments (60 percent) were received, 283 from educators and 256 from practitioners. Data analysis was limited to 400 responses, however, because some forms were not complete, were returned after data analysis was initiated, or respondents did not meet the established criteria of working toward or having received a graduate degree and being currently employed. The latter reason applied to practitioner respondents. Thus, a total of 263 educator and 137 practitioner responses were included in the data pool.

Characteristics of the Survey Participants

Characteristics of the study participants are shown in Table 1. A majority of the participants held master's degrees, and a few of the educators and about one-fourth of the practitioners had completed some graduate work toward a master's degree. More educators than practitioners had completed some graduate work toward a Ph.D. Only a few practitioners held the Ph.D., whereas about 30 percent of the educators had a doctoral degree.

Over half of each respondent group gained membership in The American Dietetic Association (ADA) through the internship route. The master's degree with experience or assistantship was the second most frequent route. The least frequent route to membership was the coordinated

Table 1: Characteristics of the survey sample[1]

characteristic	educators		practitioners	
	N	%	N	%
level of education				
graduate work, degree not complete	11	4.2	32	23.5
master's degree	141	54.0	91	66.9
doctoral work, degree not complete	32	12.3	7	5.2
doctorate	77	29.5	6	4.4
route to ADA membership				
dietetic internship	147	57.0	82	60.3
coordinated undergraduate program	3	1.2	2	1.5
master's degree with experience or assistantship	83	32.2	31	22.8
doctoral degree	11	4.3	--	--
dietetic traineeship	6	2.3	8	5.8
bachelor's degree with experience	5	1.8	10	7.4
other	3	1.2	3	2.2
years of ADA membership				
< 5 years	45	17.1	26	19.0
6-10 years	64	24.3	31	22.6
11-15 years	45	17.1	23	16.8
16-20 years	30	11.4	16	11.7
21-25 years	28	10.7	14	10.2
> 25 years	51	19.4	27	19.7
years of dietetic practice				
none	59	22.4	--	--
< 5 years	92	35.0	54	39.4
6-10 years	49	18.6	26	19.0
11-15 years	28	10.6	17	12.4
16-20 years	13	4.9	18	13.2
21-25 years	7	2.7	8	5.8
> 25 years	15	5.8	14	10.2
years in dietetic education				
none	41	15.6	87	63.5
< 5 years	89	33.8	36	26.3
6-10 years	65	24.7	10	7.3
11-15 years	39	14.8	3	2.2
16-20 years	17	6.6	--	--
21-25 years	8	3.0	1	.7
> 25 years	4	1.5	--	--

[1]N varies because of nonresponses.

undergraduate program (CUP), which was not surprising because many of the group entered the profession before the advent of CUPs.

Over 80 percent of the educators and practitioners had been ADA members for more than five years and nearly 20 percent had been ADA members for more than 25 years. Almost one-fourth of the educators had not been in dietetic practice.

Present Positions of Survey Respondents

Present positions of the survey sample are shown in Table 2. A majority of the educators indicated their primary position as college or university faculty. The second most frequent primary position title for educators was internship director. About 10 percent reported they were directors of coordinated undergraduate programs.

The practitioners held a wide variety of positions. About 40 percent reported they were directors. The second most frequent response was associate or assistant director or head of administrative services. The remainder were distributed among other positions. Practitioners meeting the criterion on education were retained in the sample if their positions included a management component.

Three-fourths of the educators were employed in colleges or universities. About 20 percent indicated they worked in hospitals or medical centers, whereas over half of the practitioners were employed in health-care institutions. Government agencies were the second most frequent employer for practitioners.

Data on time devoted to various job responsibilities also are shown in Table 2. As expected, the educators spent most of their time in teaching or educational administration. The practitioners reported some degree of responsibility for teaching but were involved primarily in

Table 2: Present position of survey sample

characteristic	educators		practitioners	
	N	%	N	%
primary position title				
director	19	7.4	53	39.0
associate or assistant director or head of administrative services	14	5.4	20	14.7
associate or assistant director or head of clinical services	1	0.4	11	8.2
administrative staff dietitian	5	1.9	6	4.4
generalist (administrative and clinical responsibilities)	--	--	7	5.1
research dietitian	--	--	3	2.2
internship director	29	11.1	--	--
coordinated program director	21	8.0	--	--
college or university faculty	164	62.8	9	6.6
health care facility consultant	3	1.1	7	5.1
public health or community nutritionist	1	0.4	5	3.7
other	4	1.5	15	11.0
primary employer				
not applicable, self employed	2	0.8	5	3.8
hospital or medical center	51	19.5	75	55.1
college/university--foodservice	10	3.8	2	1.5
college/university--education	192	73.6	12	8.8
government agency, federal, state, or local	6	2.3	18	13.2
business/industry	--	--	9	6.6
other	--	--	15	11.0
percent of time in dietetic practice (including consulting)				
none	138	52.5	18	13.1
< 10%	62	23.6	11	8.0
11-50%	31	11.9	8	5.9
51-75%	17	6.6	23	16.8
76-99%	14	5.4	39	28.5
100%	--	--	38	27.7

Table 2: (cont.)

characteristic	educators		practitioners	
	N	%	N	%
percent of time in teaching and educational administration				
none	5	1.9	48	35.0
< 10%	10	3.8	35	25.6
11-50%	43	16.3	40	29.2
51-75%	37	14.1	4	2.9
76-99%	81	30.8	6	4.4
100%	87	33.1	4	2.9
percent of time in research				
none	173	65.8	107	78.1
< 10%	44	16.7	20	14.6
11-50%	45	17.1	7	5.1
51-75%	1	0.4	--	--
76-99%	--	--	1	0.7
100%	--	--	2	1.5
percent of time in other categories				
none	247	93.9	124	90.4
< 10%	11	4.2	3	2.2
11-50%	3	1.1	2	1.5
51-75%	--	--	2	1.5
76-99%	1	0.4	3	2.2
100%	1	0.4	3	2.2
areas of principal responsibility of educators				
internship teaching and administration	53	21.5		
educational administration (other than internship)	19	7.8		
undergraduate teaching	119	48.4		
graduate teaching and research	4	1.6		
combination of graduate and undergraduate teaching	51	20.7		

dietetic practice. Only a few of the practitioners were involved in research to any appreciable extent (i.e., over 10 percent of their time). Two-thirds of the educators did not report research responsibilities and less than 20 percent devoted more than 10 percent of their time to research.

When queried more specifically about their primary academic responsibilities, almost half of the educators reported they were involved mainly in undergraduate teaching and 20 percent reported their primary responsibility included teaching at both the undergraduate and graduate levels. Approximately 30 percent were primarily responsible for educational administration of an internship or collegiate program. Only a few were concerned primarily with graduate teaching and research.

Identification of Competencies by Educational Level

The 65 competency statements listed in the instrument were classified according to the consensus response on educational level required. On Scale A of the instrument, respondents were asked to indicate the level of education to develop competency. Categories of the scale were:

(a) bachelor's level,
(b) master's level, and
(c) depends on individual's professional experience, not related to level of education.

Three classifications were defined. Those competencies for which 50 percent or more of the respondents indicated a master's degree was required constituted the first classification. If 50 percent or more agreed that only a baccalaureate degree was required, these competencies were classified as B.S. level. Those competencies for which fewer than 50 percent were in agreement on level of education were placed in a no consensus classification. In no instance did 50 percent or more of the

respondents agree that competency development was dependent on professional experience and was not related to level of education. Detailed responses are included in Table 12 in Appendix E. Consensus responses are shown in the text of the report.

Master's Level Competencies

Nine competencies were identified in the M.S. required classification. Table 3 lists competencies identified by a majority of the respondents as requiring a master's degree for development.

One competency was identified in each of the following functional categories:

     I. Program planning and resource allocation,

   IV. Effecting fiscal accountability,

    V. Manpower planning and development, and

  VII. Designing foodservice facilities.

The competency within the Program planning and resource allocation category was related to direction of research in foodservice systems management. The competencies identified as master's level within categories IV, V, and VII were concerned with financial analysis, task analysis, and development of computer systems.

Three competencies in Category II, Establishing and maintaining standards for technical operations, were concerned with development of in-depth knowledge and utilization of industrial engineering and forecasting techniques. In Category VIII, Planning and managing change, application of research to operations and evaluation of new developments in the field were considered to require graduate education for competency.

Table 3: Competencies in foodservice systems management identified as master's degree level of education

competency	consensus response[1,2]
	%[3]
I. Program planning and resource allocation	
2. Conducts and/or directs research that is applicable to foodservice systems management.	87
II. Establishing and maintaining standards for technical operations	
11. Demonstrates depth of knowledge and expertise in specialized areas.	57
24. Utilizes appropriate industrial engineering techniques.	56
25. Utilizes mathematical forecasting techniques and models.	62
IV. Effecting fiscal accountability	
38. Uses a variety of financial analysis techniques to evaluate operational performance.	64
V. Manpower planning and development	
42. Conducts task analysis and work sampling studies for developing new positions and evaluating job descriptions and specifications.	50

[1]Consensus = 50% or more of the sample agreed that master's degree is required for competency development.

[2]Respondents were asked to indicate:
    1 = Expected for the administrative dietitian with a bachelor's degree
    2 = Expected for the administrative dietitian with a master's degree
    3 = Expectation depends on individual's professional experience, not related to level of education.

[3]N varies from 380 to 398 because of nonresponses.

Table 3: (cont.)

	competency	consensus response
		%
VII.	Designing foodservice facilities	
	59. Develops computerized systems in foodservice management.	69
VIII.	Planning and managing change	
	60. Applies research methodology and results to operations.	78
	61. Evaluates new developments in foodservice systems and management for application to operations.	50

Bachelor's Level Competencies

Forty-four of the competencies were classified by a majority as
bachelor's level (Table 4). Fourteen competencies were within function
II, Establishing and maintaining standards for technical operations.
Twelve competencies were in the Manpower planning and development category
and eight were concerned with Executing control. Three competencies
related to Program planning and resource allocation and Developing communi-
cation networks. Two competencies were in the category on Planning and
managing change. Maintenance of accurate records was the one B.S. level
competency in Category IV, Effecting fiscal accountability. The one in
Category VII, Designing foodservice facilities, concerned justification of
specifications for equipment.

No Consensus Classification

Twelve competencies were classified as no consensus because of lack
of agreement reached among respondents regarding level of education (Table
5). Apparently, these competencies are based largely on experience and
are not a direct function of education. In the Program planning and
resource allocation responsibility, four competencies fell in the no
consensus classification and two each were in the Executing control and
Effecting fiscal accountability categories. These competencies concerned
coordination and evaluation of systems, budgetary planning, and financial
analysis.

The remaining four in the no consensus classification were related to
Manpower planning and development and Planning and managing change. These
comments are not to imply that education is not important in the develop-
ment of these competencies. A premise of the study was that the basic
education of the dietitian is at the baccalaureate level. These

Table 4: Competencies in foodservice systems management identified as
bachelor's level of education

competency	consensus response[1]
	%[2]
I. Program planning and resource allocation	
3. Develops long and short term departmental goals and objectives.	52
4. Develops policies and procedures that are consistent with the institution, personnel constraints, and characteristics of clients.	60
5. Develops standards for evaluating client satisfaction regarding food and service.	73
II. Establishing and maintaining standards for technical operations	
9. Applies work measurement techniques in evaluating productivity and establishing standards.	52
10. Coordinates utilization of equipment and personnel.	75
12. Develops methods for evaluating client acceptance.	72
13. Develops purchasing specifications that ensure quality and quantity control.	72
14. Develops standardized recipes to provide a consistent basis for quality and quantity control.	83
15. Establishes and implements policies regarding personnel employment and management.	55
16. Implements policies and procedures in appropriate areas.	74
17. Maintains quality and quantity controls through routine monitoring of receiving, storage, and sanitation procedures.	85

[1]Consensus = 50% or more of the sample agreed that bachelor's degree
is required for competency development. Refer to Table 3 for response
categories.

[2]N varies from 389 to 398 because of nonresponses.

Table 4: (cont.)

competency	consensus response
	%
18. Plans daily food production schedules.	85
19. Plans menus which conform to budget and/or cost requirements, equipment, time, and personnel availability.	78
20. Plans menus which incorporate nutritional requirements and preferences of individuals or groups within the institution or program.	89
21. Plans menus which incorporate principles of good menu planning; i.e., adequate nutritional content, color, texture, shape, and variety.	91
22. Plans sanitation schedules and procedures that conform to state and local regulations.	84
23. Uses effective merchandising techniques in presentation of food to patients and/or clients (e.g., menu design).	78
III. Executing control	
26. Analyzes menus as to nutritional content, cost, and client acceptance.	84
27. Analyzes problems related to area of responsibility.	65
28. Coordinates departmental subsystems.	51
30. Designs an inventory control system.	51
32. Implements energy conservation procedures in all operational areas.	57
33. Maintains quality and quantity controls through personnel supervision and identification of factors influencing personnel productivity and performance.	56
34. Maintains quality and quantity controls through routine monitoring of food items produced and served.	79

Table 4: (cont.)

competency	consensus response
	%
35. Modifies systems and procedures to solve problems within area of responsibility.	51
IV. Effecting fiscal accountability	
36. Maintains accurate and appropriate records for personnel management, fiscal control, and reporting purposes.	67
V. Manpower planning and development	
40. Assumes responsibility for own and subordinates' actions.	73
41. Conducts continuing in-service training of administrative personnel.	65
44. Delegates appropriate functions to supervisory personnel.	68
45. Determines manhour requirements that relate to menu and budget specifications.	54
46. Develops job descriptions and specifications for personnel.	75
47. Encourages personnel to provide optimal food-service by example and adequate reinforcement.	78
48. Identifies state, local, and federal labor laws that affect personnel management.	75
49. Initiates performance appraisal program for foodservice operations.	55
50. Orients new administrative personnel.	59
51. Plans a master schedule for personnel.	72
52. Plans orientation and in-service training programs for all personnel involved with foodservice.	72
54. Utilizes performance appraisal as an evaluation as well as motivational tool for personnel.	58

Table 4: (cont.)

competency	consensus response
	%
VI. Developing communication networks	
55. Communicates effectively with clients, peers, personnel, and others, both verbally and in writing.	79
56. Maintains effective communication with personnel through regular conferences and meetings.	74
57. Routinely prepares accurate and appropriate reports.	76
VII. Designing foodservice facilities	
58. Justifies specifications for equipment and facilities.	51
VIII. Planning and managing change	
63. Maintains current knowledge of new methods and systems in administrative management.	59
64. Modifies menu as indicated by analysis of nutritional content, cost, and client acceptance.	79

Table 5: Competencies in foodservice systems management not categorized by educational level[1]

		$\%^2$ indicating:		
	competency	B.S. required	M.S. required	depends on experience
		%	%	%
I.	Program planning and resource allocation			
	1. Conceptualizes the broad spectrum of managerial responsibilities.	39	35	26
	6. Develops systems to support organizational goals.	33	44	23
	7. Prepares proposals to justify requests for external or internal funding.	32	40	28
	8. Redesigns systems.	19	45	35
III.	Executing control			
	29. Coordinates subsystems in department with appropriate subsystems in other departments.	40	31	29
	31. Evaluates effectiveness of systems and procedures.	43	35	22
IV.	Effecting fiscal accountability			
	37. Plans a budget that conforms to departmental or program financial requirements.	46	25	29
	39. Uses the balance sheet and income statement for decision making.	46	31	23

[1]Competencies for which a consensus was not reached on educational level. Refer to Table 3 for response categories.

[2]N varies from 385 to 397 because of nonresponses.

Table 5: (cont.)

	competency	% indicating:		
		B.S. required	M.S. required	depends on experience
		%	%	%
V.	Manpower planning and development			
	43. Coordinates a management team.	28	42	30
	53. Selects administrative personnel.	39	30	30
VIII.	Planning and managing change			
	62. Implements new systems.	35	36	29
	65. Utilizes appropriate management practices during union organization.	47	23	29

competencies in the no consensus group, however, apparently are based largely on experience in addition to education and are not a function of educational level per se.

Experience Required for Competency Development

A subsequent analysis of data involved identification of experience levels in relation to educational levels. This analysis permitted identification of competencies which are primarily the responsibility of educators versus those for which competency development is shared by educators and employing institutions.

The six experience levels on the research instrument were collapsed into four. Few respondents specified that over 10 years experience was required for developing any of the competencies; therefore, the six to 10 year and over 10 year levels were combined. Also, the less than one year experience and one to three years levels were combined. The resultant categories were:

- No work experience beyond basic requirements for ADA membership (CUP, internship, etc.)
- 3 or less years
- 4 to 5 years
- 6 or more years

Master's Level Competencies

In Table 6, data on experience are shown for the nine competencies classified by a majority as requiring the M.S. degree. Data are presented for the total survey sample and for those indicating the master's degree as the required level of education. Up to three years experience was considered necessary for competency development from both perspectives.

Table 6: Consensus responses on degree of experience required for competencies identified as master's degree level

| competency | % indicating ≤ 3 yrs. experience[1] | |
	respondents specifying M.S.[2]	total sample[3]
	%	%
I. Program planning and resource allocation		
2. conducts and/or directs research	59	57
II. Establishing and maintaining standards for technical operations		
11. demonstrates specialized knowledge	62	56
24. utilizes industrial engineering techniques	68	67
25. utilizes mathematical forecasting	68	67
IV. Effecting fiscal accountability		
38. uses financial analysis techniques	60	57
V. Manpower planning and development		
42. evaluates job descriptions	69	67
VII. Designing foodservice facilities		
59. develops computerized systems	52	55
VIII. Planning and managing change		
60. applies research methodology	60	62
61. evaluates new developments	62	61

[1] Respondents were asked to indicate degree of experience required to develop competence. Data were categorized as:
    No work experience beyond basic requirements for ADA membership (CUP, internship, etc.)
    3 years or less
    4-5 years
    6 years or more

[2] Consensus response (i.e., ≥ 50% of group agreed) on degree of experience of respondents who specified the competency was master's degree level.

[3] % of total sample indicating up to 3 years experience required for development of competency.

Bachelor's Level Competencies

Responses indicating experience needed for those competencies iden-
tified as requiring a bachelor's degree for competency development are
reported in Table 7. Up to three years experience was specified for 28
of the 44 competencies in the bachelor's category (Table 7).

Respondents specifying B.S. level agreed that no experience beyond
basic education for the dietitian should be required for developing
competency for 12 of the items examined. Half of these competencies were
concerned with Establishing and maintaining standards for technical opera-
tions; for example, recipe development, monitoring subsystems, planning
production, menu planning, and sanitation. Within the functional respon-
sibility related to Executing control, an additional competency was con-
cerned with analysis of menus. In responsibility V, Manpower planning
and development, two competencies were considered as areas in which the
entry level dietitian should be competent to practice. The last three
competencies considered to be the primary responsibility of the academic
program were concerned with communication skills, preparation of accurate
and appropriate reports, and responsibility for maintaining current
knowledge. No consensus on experience level was indicated for the remain-
ing four of the B.S. level competencies; no experience or up to three
years was indicated by most respondents, however.

Although the study was concerned primarily with identification of
graduate level competencies, this group of baccalaureate level competen-
cies was examined closely because of the implications for education.
These competencies should be of particular concern to educators because
of the major responsibility of the academic program in developing pro-
ficiency for practice.

Table 7: Responses on degree of experience required for competencies identified as bachelor's degree level[1]

competency	% indicating no experience		% indicating ≤ 3 yrs. experience	
	respondents specifying B.S.[2]	total sample	respondents specifying B.S.	total sample
	%	%	%	%
I. Program planning and resource allocation				
3. develops department goals	20	14	68[3]	60
4. develops policies and procedures	17	12	74	72
5. evaluates client satisfaction	36	32	59	59
II. Establishing and maintaining standards for technical operations				
9. applies work measurement techniques	33	21	59	65
10. coordinates equipment and personnel	38	30	59	64
12. evaluates client acceptance	40	32	55	60
13. develops purchasing specifications	36	27	58	61
14. develops standardized recipes	55	48	42	47

[1]Data presented limited to two experience levels, no experience beyond basic requirements and ≤ 3 years experience, because few respondents specified > 3 years needed for development of competency. Refer to Table 6 for experience categories.

[2]% of respondents who specified the competency was bachelor's degree level.

[3]underlined is the consensus response; i.e., 50% or more agreement on degree of experience required for competency development.

Table 7: (cont.)

competency	% indicating no experience		% indicating ≤ 3 yrs. experience	
	respondents specifying B.S. %	total sample %	respondents specifying B.S. %	total sample %
15. establishes and implements personnel policies	18	10	68	68
16. implements policies and procedures	49	38	47	54
17. monitors receiving, storage, and sanitation	58	52	39	44
18. plans food production	55	50	44	48
19. considers resources in menu planning	38	31	58	61
20. plans nutritious menus	52	48	45	48
21. plans acceptable menus	69	66	29	31
22. plans sanitation schedules	55	51	43	46
23. uses effective merchandising techniques	48	42	49	53
III. Executing control				
26. analyzes menus	57	49	41	45
27. analyzes problems	32	24	65	65
28. coordinates departmental subsystems	19	12	70	69
30. designs inventory system	26	16	64	66
32. implements energy conservation	31	22	61	62
33. supervises personnel effectively	21	14	68	65
34. monitors production and service	45	38	52	54
35. solves problems	16	10	75	69
IV. Effecting fiscal accountability				
36. maintains records	33	24	61	60

Table 7: (cont.)

competency	% indicating no experience		% indicating ≤ 3 yrs. experience	
	respondents specifying B.S.	total sample	respondents specifying B.S.	total sample
	%	%	%	%
V. Manpower planning and development				
40. assumes responsibility	50	41	43	48
41. conducts in-service training	44	30	49	58
44. delegates	35	26	57	60
45. determines manhour requirements	20	13	68	65
46. develops job descriptions	40	31	54	57
47. provides motivational environment	54	45	43	47
48. identifies labor laws	49	40	46	50
49. initiates performance appraisal program	26	16	64	66
50. orients new personnel	33	21	58	60
51. plans master schedule	34	26	58	62
52. plans orientation and in-service training	35	28	57	59
54. uses performance appraisal	26	16	62	63
VI. Developing communication networks				
55. communicates effectively	68	58	30	38
56. maintains effective communications	44	35	52	56
57. prepares reports	51	42	46	50
VII. Designing foodservice facilities				
58. specifies equipment and facilities	21	12	61	59

Table 7: (cont.)

competency	% indicating no experience		% indicating ≤ 3 yrs. experience	
	respondents specifying B.S.	total sample	respondents specifying B.S.	total sample
	%	%	%	%
VIII. Planning and managing change				
63. maintains current knowledge	53	38	42	47
64. modifies menus	44	36	51	54

No Consensus Classification

In the no consensus category, experience was hypothesized to play a major role in development of proficiency for those 12 competencies. Competency number 8, redesigns systems, required four or more years experience according to reports of survey respondents (Table 8). With one other exception, the majority of the group believed up to three years experience to be necessary. The exception was on competency number 1 for which a consensus was not reached on desired experience.

Comparison of Educators' and Practitioners' Responses

Educators' and practitioners' responses were compared to determine the extent of agreement between the two segments of the sample on educational level required for competency development. A comparison of educators' and practitioners' evaluations is presented in Table 9. Responses of the two groups were similar on about three-fourths of the competency statements. In instances for which responses were related to the group membership of the respondents, differences were not great enough to affect classification of the competency according to educational level with only one exception.

In the M.S. required level, educators and practitioners disagreed only on competency 2 which was concerned with direction of research. In this instance, a higher percentage of educators specified master's level. Even though most of the practitioners also indicated master's level, the percentage was less than was true for the educators.

Educators and practitioners disagreed regarding level of education to develop proficiency on 12 of the bachelor's level competencies. Greater proportions of the educators than the practitioners believed that

Table 8: Responses on degree of experience required for competencies not categorized by educational level

competency	% of sample indicating each level of experience		
	no experience	≤ 3 yrs.	4 yrs. or more
	%	%	%
I. Program planning and resource allocation			
1. conceptualizes managerial responsibilities	19	41	41
6. develops systems	6	57	37
7. requests funding	4	56	41
8. redesigns systems	1	35	64
III. Executing control			
29. coordinates interdepartmental subsystems	6	64	31
31. evaluates systems and procedures	10	65	25
IV. Effecting fiscal accountability			
37. plans budget	5	59	36
39. uses balance sheet and income statement	12	56	31
V. Manpower planning and development			
43. coordinates management team	3	55	42
53. selects personnel	5	55	40
VIII. Planning and managing change			
62. implements new systems	4	57	39
65. acts appropriately during union organization	13	56	31

[1] % underlined is the consensus response; i.e., 50% or more agreed on degree of experience required for competency development.

Table 9: Comparison of educators' and practitioners' evaluation of educational level required for competency development[1]

competency	% of educators specifying each educational level[2]			% of practitioners specifying each educational level			χ^2 value[3]
	BS	MS	depends on experience	BS	MS	depends on experience	
	%	%	%	%	%	%	
master's degree level:							
2. conducts and/or directs research	5	91	4	7	80	13	11.4
bachelor's degree level:							
10. coordinates equipment and personnel	81	4	16	65	15	20	17.7
13. develops purchasing specifications	78	8	14	62	15	24	11.7
14. develops standardized recipes	89	3	8	72	11	17	18.1
18. plans food production	89	1	10	78	2	20	8.3
19. considers resources in menu planning	83	6	11	67	7	26	15.2
23. uses effective merchandising techniques	82	2	16	71	6	24	7.5
26. analyzes menus	89	4	17	75	13	12	14.8

[1]Data presented were limited to those instances in which the χ^2 values (P $\leq$ .05) indicated responses were related to group (i.e., educator vs. practitioner).

[2]Refer to Table 3 for response categories.

[3]All χ^2 values are significant at or beyond .05.

Table 9: (cont.)

competency	% of educators specifying each educational level			% of practitioners specifying each educational level			χ^2 value
	BS	MS	depends on experience	BS	MS	depends on experience	
	%	%	%	%	%	%	
34. monitors production and service	83	5	12	72	8	20	6.8
40. assumes responsibility	77	10	14	65	12	23	7.1
46. develops job descriptions	80	10	11	68	15	17	6.8
48. identifies labor laws	81	10	10	64	20	16	15.1
57. prepares reports	80	7	13	68	10	22	6.8
no consensus on educational level							
29. coordinates interdepartmental subsystems	44	28	29	32	38	29	6.3
39. uses balance sheet and income statement	52	26	23	37	39	24	9.8

coordination of equipment and personnel, development of specifications, and development of recipes were competencies that could be attained at the bachelor's level. The same pattern was shown on assessment of three additional competencies: plans production, considers resources, and uses merchandising techniques. The role of experience in developing competency was emphasized to a somewhat greater degree among the practitioners than among educators with regard to analyzing menus, monitoring production and service, and assuming responsibility for own and subordinate's actions. In two instances of the remaining three on which educators and practitioners disagreed to some extent, a somewhat greater percentage of the practitioners believed the master's level was the preferred educational level or that competency development depended on experience rather than level of education. A slightly higher percentage of the practitioners believed that preparation of reports was a function of experience.

Educators and practitioners disagreed somewhat on two competencies which fell into the category of no consensus on level of education. In both instances, a higher percentage of practitioners than educators believed graduate education was the recommended educational level.

Analysis of Competencies According to Source

Educational and experience classifications of competencies identified in this study were examined in relation to the source of the statements. A summary of this analysis is presented in Table 10.

FSMEC members suggested 15 competencies for which they believed an advanced degree was required. Seven of these were classified by respondents in this study as requiring a master's degree and three were not classified by educational level although between 35 and 45 percent

Table 10: Analysis of competencies according to source

source[1]	competency no.[2]	classification[3] educ. level	degree of experience	source	competency no.	classification educ. level	degree of experience
FSMEC	1.	N.C.	no consen.	Loyd, Essential	10.	B.S.	≤ 3 yrs.
	2.	M.S.	≤ 3 yrs.		12.	B.S.	≤ 3 yrs.
	7.	N.C.	≤ 3 yrs.		14.	B.S.	no exper.
	9.	B.S.	≤ 3 yrs.		16.	B.S.	≤ 3 yrs.
	11.	M.S.	≤ 3 yrs.		17.	B.S.	no exper.
	15.	B.S.	≤ 3 yrs.		18.	B.S.	no exper.
	24.	M.S.	≤ 3 yrs.		19.	B.S.	≤ 3 yrs.
	25.	M.S.	≤ 3 yrs.		20.	B.S.	no exper.
	40.	B.S.	no exper.		21.	B.S.	no exper.
	43.	N.C.	≤ 3 yrs.		22.	B.S.	no exper.
	49.	B.S.	≤ 3 yrs.		23.	B.S.	no consen.
	55.	B.S.	no exper.		26.	B.S.	no exper.
	59.	M.S.	≤ 3 yrs.		27.	B.S.	≤ 3 yrs.
	60.	M.S.	≤ 3 yrs.		33.	B.S.	≤ 3 yrs.
	61.	M.S.	≤ 3 yrs.		34.	B.S.	≤ 3 yrs.
					44.	B.S.	≤ 3 yrs.
Loyd, Beyond entry level	3.	B.S.	≤ 3 yrs.		47.	B.S.	no exper.
	8.	N.C.	≥ 4 yrs.		52.	B.S.	≤ 3 yrs.
	30.	B.S.	≤ 3 yrs.		54.	B.S.	≤ 3 yrs.
	37.	N.C.	≤ 3 yrs.		56.	B.S.	≤ 3 yrs.
	53.	N.C.	≤ 3 yrs.		57.	B.S.	no exper.
	58.	B.S.	≤ 3 yrs.		63.	B.S.	no exper.
Loyd, Desirable	4.	B.S.	≤ 3 yrs.		64.	B.S.	≤ 3 yrs.
	6.	N.C.	≤ 3 yrs.				
	13.	B.S.	≤ 3 yrs.				
	28.	B.S.	≤ 3 yrs.				
	29.	N.C.	≤ 3 yrs.				
	31.	N.C.	≤ 3 yrs.	Mariampolski, Beyond entry level	32.	B.S.	≤ 3 yrs.
	35.	B.S.	≤ 3 yrs.		38.	M.S.	≤ 3 yrs.
	36.	B.S.	≤ 3 yrs.		39.	N.C.	≤ 3 yrs.
	41.	B.S.	≤ 3 yrs.				
	42.	M.S.	≤ 3 yrs.				
	45.	B.S.	≤ 3 yrs.				
	46.	B.S.	≤ 3 yrs.				
	48.	B.S.	≤ 3 yrs.				
	50.	B.S.	≤ 3 yrs.				
	51.	B.S.	≤ 3 yrs.	Mariampolski, Desirable	5.	B.S.	≤ 3 yrs.
	62.	N.C.	≤ 3 yrs.				
	65.	N.C.	≤ 3 yrs.				

[1]Source of competencies evaluated in this study:
FSMEC = Competencies identified by participants at the Tenth Biennial Conference of the Food-
service Systems Management Education Council.
Loyd = Competencies from Loyd and Vaden study (4) of entry level competencies for dietitians
classified as:
Beyond--competency rated beyond entry level expectations;
Desirable--competency rated desirable, not essential, at entry level; and
Essential--competency rated essential at entry level.
Mariampolski = Competencies from study by Mariampolski et al. (5) of entry level competencies in
commercial foodservice. Categories same as Loyd and Vaden.

[2]Refers to item number of competency on instrument (Appendix B) used in this research. Refer to
Tables 3-5 for statements.

[3]Educational and experience classifications identified in this research.
Educational levels = B.S., bachelor's level; M.S., master's level; or N.C., no consensus on level.
Experience levels = no experience beyond entry level (no exper.); ≤ 3 years; ≥ 4 years; or no
consensus (no consen.).

indicated the M.S. Also, on those three, many respondents believed competency development depended on experience. The remaining five were identified as B.S. level; however, experience in addition to education was considered a requisite for three.

Six competency statements in this study were originally classified by Loyd and Vaden (4) as beyond entry level. Respondents in this study concurred indicating experience was necessary for developing proficiency in all six competency areas.

All of the 17 competency statements classified as desirable but not essential for the entry level dietitian by Loyd and Vaden (4) were designated by respondents in this study as requiring up to three years experience. One of these competencies, evaluates job descriptions, was identified as requiring a master's degree; also, five of the no consensus competencies were in this group.

All 23 of the Loyd statements designated as essential at entry level were classified as requiring only a bachelor's degree in this study. Ten of the 12 competencies classified as not requiring experience beyond basic qualifications for ADA membership were in Loyd's essential category.

Of the four statements from Mariampolski et al. (5) which were used in this study, three were considered beyond expectation at entry level and one desirable but not essential in their research. Results indicated the majority of respondents in this study believed experience was needed in addition to basic educational requirements to develop competency. A master's degree was indicated as necessary for one of these four competencies.

SUMMARY AND CONCLUSIONS

Summary

Standards for graduate education of dietitians have not been developed. Students pursue graduate study for a variety of reasons. Those who have completed a coordinated undergraduate program in dietetics or a post-baccaulaureate internship, traineeship, or three years planned work experience generally are seeking specialization at the graduate level. Other students, however, may have completed a traditional dietetics program and elected to attain membership in The American Dietetic Association (ADA) by completing a master's degree followed by six months work experience. Students transferring from other disciplines will not have satisfied all of the minimum academic requirements (Plan IV) for ADA membership and will need to take courses from the undergraduate curriculum. This last category of students may not become proficient in a specialty, dependent on university policies, because of the proportion of credits in their graduate programs devoted to fulfilling Plan IV requirements.

The concern of dietetic educators in the Foodservice Systems Management Education Council (FSMEC) led to appointment of an ad hoc committee in 1977 charged with developing a position paper on graduate education at the master's level. At the tenth biennial conference in 1979, a working paper elucidating the key issues was presented, and feedback was requested. Subsequently, the committee decided that research was essential for the production of a sound position paper.

The purpose of this study, stimulated by the Foodservice Systems Management Education Council, was to secure information from

administrators of dietetic services and educators in foodservice systems
management concerning their expectations for competencies of dietitians
with an advanced degree. The competencies identified by Loyd and Vaden
(4) for entry-level dietitians and by Mariampolski et al. (5) for com-
mercial foodservice managers plus competencies for graduate education
identified by FSMEC members were used as the basis for the research.
Specific objectives were to differentiate competencies at the bachelor's
degree level, at the master's level, or those for which experience is
primarily important; identify the extent of experience required to develop
competency; and compare ratings provided by practitioners and educators
who evaluated the competency statements.

The sample for the study included educators in foodservice systems
management and administrators of dietetic services (practitioners) who
had completed an advanced degree or were enrolled in a graduate program.
The educators included members of the Foodservice Systems Management
Education Council and other educators in administrative dietetics or
foodservice management. The criteria established for the practitioners
were membership in The American Dietetic Association and employment in
dietetic practice in a position which involved some degree of management
responsibilities. The sample totalled 900 potential respondents includ-
ing 450 practitioners and 450 dietetic educators. After initial and
follow-up mailings, 60 percent were returned.

The research instrument consisted of two sections; Part I, 65 compe-
tency statements to be classified according to educational level and
experience necessary for performance; and Part II, demographic informa-
tion about the respondent and the respondent's present position.
Competency statements were grouped into eight categories according to the

functions of the administrative dietitian designated in the ADA Position Paper on the administrative dietitian (25).

The instrument was developed and evaluated through two drafts by the research committee. Two scales were used for assessment of the competencies. *On Scale A respondents were asked to identify level of education necessary for competency development and on Scale B, level of experience needed for performance of each competency.*

After data analysis, competencies were classified according to the consensus response on educational level required. Three classifications were defined. Those competencies for which 50 percent or more of the respondents indicated a master's degree was required fell into the first classification. If 50 percent or more agreed the competencies were baccaulaureate level, those were classified as B.S. level competencies. For those competencies for which fewer than 50 percent were in agreement on level of education, a no consensus classification was used. A subsequent analysis of data involved identification of experience levels in relation to education levels. *Findings from the analysis of educational level and degree of experience for competency development are summarized in Table 11.*

Nine competencies were identified in the M.S. required classification. The M.S. level competencies concerned direction of research in foodservice systems management, financial analysis, task analysis, development of computer systems, utilization of industrial engineering and forecasting techniques, evaluation of new developments in the field, and development of in-depth knowledge. Respondents concurred that up to three years of dietetic practice would be required in addition to advanced education for development of each of these competencies.

Table 11: Summary of consensus responses[1] on level of education and degree of experience required for development of competency in foodservice systems management

competency	educational level	experience level
		yrs.

I. Program planning and resource allocation

1. conceptualizes managerial responsibilities	no consensus	$0\text{-}3$[2]
2. conducts and/or directs research	M.S.	≤ 3
3. develops department goals	B.S.	≤ 3
4. develops policies and procedures	B.S.	≤ 3
5. evaluates client satisfaction	B.S.	≤ 3
6. develops systems	no consensus	≤ 3
7. requests funding	no consensus	≤ 3
8. redesigns systems	no consensus	≥ 4

II. Establishing and maintaining standards for technical operations

9. applies work measurement techniques	B.S.	≤ 3
10. coordinates equipment and personnel	B.S.	≤ 3
11. demonstrates specialized knowledge	M.S.	≤ 3
12. evaluates client acceptance	B.S.	≤ 3
13. develops purchasing specifications	B.S.	≤ 3
14. develops standardized recipes	B.S.	no exper.[2]
15. establishes and implements personnel policies	B.S.	≤ 3
16. implements policies and procedures	B.S.	≤ 3
17. monitors receiving, storage, and sanitation	B.S.	no exper.
18. plans food production	B.S.	no exper.
19. considers resources in menu planning	B.S.	≤ 3
20. plans nutritious menus	B.S.	no exper.

[1]50% or more of respondents agreed.

[2]0 and no exper. indicate no work experience beyond basic requirements for ADA membership.

Table 11: (cont.)

	competency	educational level	experience level
			yrs.
21.	plans acceptable menus	B.S.	no exper.
22.	plans sanitation schedules	B.S.	no exper.
23.	uses effective merchandising techniques	B.S.	0-3
24.	utilizes industrial engineering techniques	M.S.	≤ 3
25.	utilizes mathematical forecasting	M.S.	≤ 3

III. Executing control

	competency	educational level	experience level
26.	analyzes menus	B.S.	no exper.
27.	analyzes problems	B.S.	≤ 3
28.	coordinates departmental subsystems	B.S.	≤ 3
29.	coordinates interdepartmental subsystems	no consensus	≤ 3
30.	designs inventory system	B.S.	≤ 3
31.	evaluates systems and procedures	no consensus	≤ 3
32.	implements energy conservation	B.S.	≤ 3
33.	supervises personnel effectively	B.S.	≤ 3
34.	monitors production and service	B.S.	≤ 3
35.	solves problems	B.S.	≤ 3

IV. Effecting fiscal accountability

	competency	educational level	experience level
36.	maintains records	B.S.	≤ 3
37.	plans budget	no consensus	≤ 3
38.	uses financial analysis techniques	M.S.	≤ 3
39.	uses balance sheet and income statement	no consensus	≤ 3

V. Manpower planning and development

	competency	educational level	experience level
40.	assumes responsibility	B.S.	no exper.
41.	conducts in-service training	B.S.	≤ 3
42.	evaluates job descriptions	M.S.	≤ 3
43.	coordinates management team	no consensus	≤ 3
44.	delegates	B.S.	≤ 3
45.	determines man-hour requirements	B.S.	≤ 3
46.	develops job descriptions	B.S.	≤ 3
47.	provides motivational environment	B.S.	no exper.

Table 11: (cont.)

	competency	educational level	experience level
			yrs.
48.	identifies labor laws	B.S.	≤ 3
49.	initiates performance appraisal program	B.S.	≤ 3
50.	orients new personnel	B.S.	≤ 3
51.	plans master schedule	B.S.	≤ 3
52.	plans orientation and in-service training	B.S.	≤ 3
53.	selects personnel	no consensus	≤ 3
54.	uses performance appraisal	B.S.	≤ 3

VI. Developing communication networks

55.	communicates effectively	B.S.	*no exper.*
56.	maintains effective communication	B.S.	≤ 3
57.	prepares reports	B.S.	no exper.

VII. Designing foodservice facilities

58.	specifies equipment and facilities	B.S.	≤ 3
59.	develops computerized systems	M.S.	≤ 3

VIII. Planning and managing change

60.	applies research methodology	M.S.	≤ 3
61.	evaluates new developments	M.S.	≤ 3
62.	implements new systems	no consensus	≤ 3
53.	maintains current knowledge	B.S.	no exper.
64.	modifies menus	B.S.	≤ 3
65.	acts appropriately during union organization	no consensus	≤ 3

Twelve competencies were classified as "no consensus" because of lack of agreement among respondents reached regarding level of education. Apparently these 12 competencies are based largely on experience and are not a direct function of education. The analysis of experience data revealed that the competency in this category on systems redesign would require four or more years experience; all others require up to three years experience according to survey reports.

The remaining 44 competencies were identified as requiring a bachelor's degree for development. For these competencies, the majority agreed that no experience beyond basic requirements for the entry-level dietitian should be required for 12, whereas up to three years were specified for all but four others in the bachelor's category. On those four, a consensus was not reached; however, most respondents indicated no experience beyond basic requirements or up to three years in dietetic practice.

The final analysis involved a comparison of educator and practitioner responses to determine the extent of agreement between the two segments of the sample on level of education required for competency development. Of the 65 competency statements evaluated in the study, the two groups agreed on educational level in responses to 50 items. On those for which responses were related significantly to group membership, the magnitude of the disagreement was relatively small. For example, the difference between responses of the two groups was not great enough to affect classification according to educational level except on only one competency.

Conclusions

The purpose of this study was to secure information from administrators of dietetic services and educators in foodservice systems management concerning their expectations for competencies of dietitians with an advanced degree. The need for such information was expressed by the Foodservice Systems Management Education Council in order to address the formulation of guidelines for graduate education in foodservice systems management.

The categorization of competency statements into educational and experience levels will be useful in developing a statement on graduate education in foodservice systems management. The nine M.S. level competency statements identified provide a starting point for developing objectives in graduate programs.

Elucidation of B.S. level competencies will serve to direct graduate curriculum away from these areas of competency and toward the more appropriate areas identified as master's level. Also, the differentiation of B.S. level competencies by extent of experience required provides a framework for identifying performance areas for which the educational institution is primarily responsible and those for which responsibility should be shared by educators and employers. The 12 competencies in the no consensus category on educational level are other job functions for which the dual responsibility of educators and employing institutions was suggested for competency development.
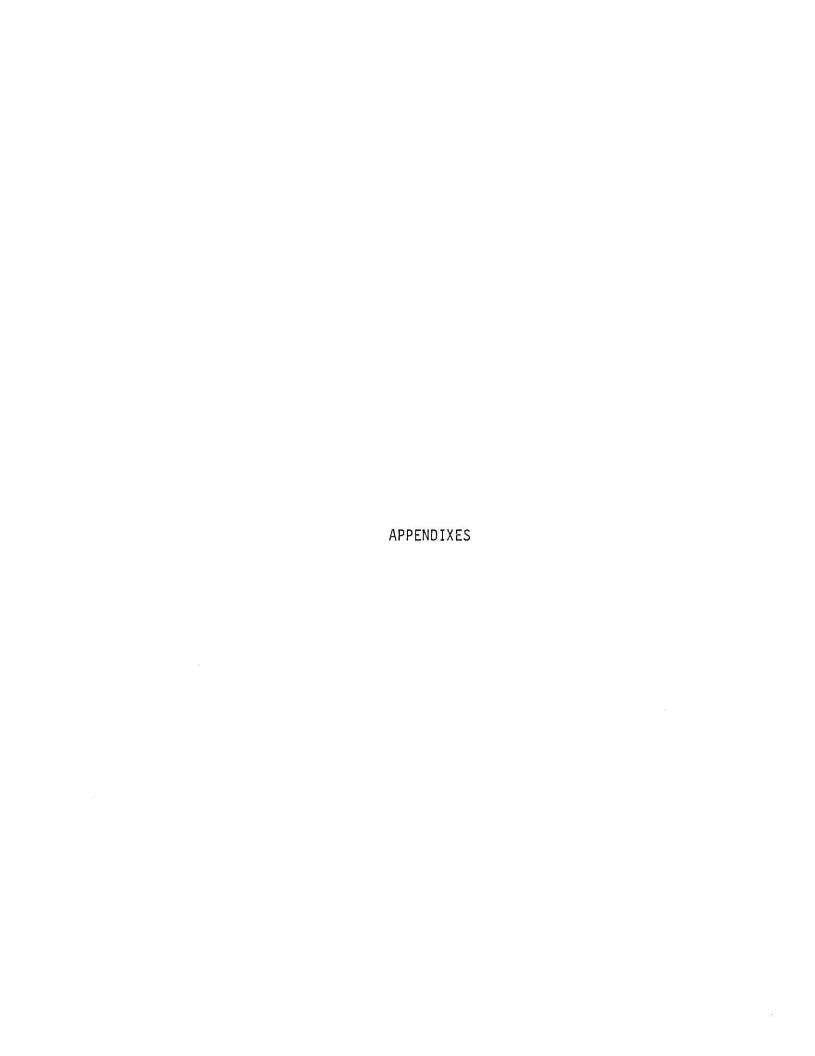
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APPENDIXES

APPENDIX A

Sources of Competencies in Foodservice Systems Management for

Identification of Educational and Experience Level

Sources of Competencies in Foodservice Systems Management for
Identification of Educational and Experience Level

Competency	Source[1]

I. PROGRAM PLANNING AND RESOURCE ALLOCATION

	Competency	Source
1.	Conceptualizes the broad spectrum of managerial responsibilities.	FSMEC
2.	Conducts and/or directs research that is applicable to foodservice systems management.	FSMEC
3.	Develops long and short term departmental goals and objectives.	L1, Beyond
4.	Develops policies and procedures that are consistent with the institution, personnel constraints, and characteristics of clients.	L7, Desir.
5.	Develops standards for evaluating client satisfaction regarding food and service.	M20, Desir.
6.	Develops systems to support organizational goals.	L3, Desir.
7.	Prepares proposals to justify request for external or internal funding (e.g., capital budget requests).	FSMEC
8.	Redesigns systems.	L5, Beyond

II. ESTABLISHING AND MAINTAINING STANDARDS FOR TECHNICAL OPERATIONS

	Competency	Source
9.	Applies work measurement techniques in evaluating productivity and establishing standards.	FSMEC
10.	Coordinates utilization of equipment and personnel.	L27c, Essen.
11.	Demonstrates depth of knowledge and expertise in specialized areas.	FSMEC
12.	Develops methods for evaluating client acceptance.	L15, Essen.

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[1]FSMEC = Graduate level competency in foodservice systems management identified by participants at Tenth Foodservice Systems Management Education Council Conference in 1979.

L = Competency from Loyd and Vaden study (4) of competencies for entry level dietitians. Number refers to the competency from the administrative list.

    Essen. = competency rated essential at entry level
    Desir. = competency rated desirable, not essential, at entry level
    Beyond = competency rated beyond entry level expectations

M = Competency identified by Mariampolski et al. (5) for entry level manager in commercial foodservice. Categories same as Loyd and Vaden.

Competency	Source

13. Develops purchasing specifications that ensure quality and quantity control. — L24, Desir.
14. Develops standardized recipes to provide a consistent basis for quality and quantity control. — L16, Essen.
15. Establishes and implements policies regarding personnel employment and management. — FSMEC
16. Implements policies and procedures in appropriate areas. — L8, Essen.
17. Maintains quality and quantity controls through routine monitoring of receiving, storage, and sanitation procedures. — L35c, Essen.
18. Plans daily food production schedules. — L17, Essen.
19. Plans menus which conform to budget and/or cost requirements, equipment, time, and personnel availability. — L13c, Essen.
20. Plans menus which incorporate nutritional requirements and preferences of individuals or groups within the institution or program. — L13b, Essen.
21. Plans menus which incorporate principles of good menu planning; i.e., adequate nutritional content, color, texture, shape, and variety. — L13a, Essen.
22. Plans sanitation schedules and procedures that conform to state and local regulations. — L26, Essen.
23. Uses effective merchandising techniques in presentation of food to patients and/or clients (e.g., menu design). — L34, Essen.
24. Utilizes appropriate industrial engineering techniques. — FSMEC
25. Utilizes mathematical forecasting techniques and models. — FSMEC

III. EXECUTING CONTROL

26. Analyzes menus as to nutritional content, cost, and client acceptance. — L14, Essen.
27. Analyzes problems related to area of responsibility. — L38, Essen.
28. Coordinates departmental subsystems. — L27a, Desir.
29. Coordinates subsystems in department with appropriate subsystems in other departments. — L27b, Desir.
30. Designs an inventory control system. — L25, Beyond
31. Evaluates effectiveness of systems and procedures. — L4, Desir.
32. Implements energy conservation procedures in all operational areas. — M41, Beyond
33. Maintains quality and quantity controls through personnel supervision and identification of factors influencing personnel productivity and performance. — L35b, Essen.
34. Maintains quality and quantity controls through routine monitoring of food items produced and served. — L35a, Essen.

	Competency	Source

35. Modifies systems and procedures to solve problems within area of responsibility. — L39, Desir.

IV. EFFECTING FISCAL ACCOUNTABILITY

36. Maintains accurate and appropriate records for personnel management, fiscal control, and reporting purposes. — L21, Desir.
37. Plans a budget that conforms to departmental or program financial requirements. — L20, Beyond
38. Uses a variety of financial analysis techniques to evaluate operational performance. — M2, Beyond
39. Uses the balance sheet and income statement for decision making. — M19, Beyond

V. MANPOWER PLANNING AND DEVELOPMENT

40. Assumes responsibility for own and subordinates' actions. — FSMEC
41. Conducts continuing in-service training of administrative personnel. — L11c, Desir.
42. Conducts task analysis and work sampling studies for developing new positions and evaluating job descriptions and specifications. — L36, Desir.
43. Coordinates a management team. — FSMEC
44. Delegates appropriate functions to supervisory personnel. — L28, Essen.
45. Determines manhour requirements that relate to menu and budget specifications. — L18, Desir.
46. Develops job descriptions and specifications for personnel. — L9, Desir.
47. Encourages personnel to provide optimal foodservice by example and adequate reinforcement. — L30, Essen.
48. Identifies state, local, and federal labor laws that affect personnel management. — L32, Desir.
49. Initiates performance appraisal program for foodservice operations. — FSMEC
50. Orients new administrative personnel. — L11b, Desir.
51. Plans a master schedule for personnel. — L19, Desir.
52. Plans orientation and in-service training programs for all personnel involved with foodservice. — L10, Essen.
53. Selects administrative personnel. — L11a, Beyond
54. Utilizes performance appraisal as an evaluation as well as motivational tool for personnel. — L37, Essen.

VI. DEVELOPING COMMUNICATION NETWORKS

55. Communicates effectively with clients, peers, personnel, and others, both verbally and in writing. — FSMEC

Competency	Source

56. Maintains effective communication with personnel through regular conferences and meetings.   L29, Essen.
57. Routinely prepares accurate and appropriate reports.   L22, Essen.

VII. DESIGNING FOODSERVICE FACILITIES

58. Justifies specifications for equipment and facilities.   L23, Beyond
59. Develops computerized systems in foodservice management.   FSMEC

VIII. PLANNING AND MANAGING CHANGE

60. Applies research methodology and results to operations.   FSMEC
61. Evaluates new developments in foodservice systems and management for application to operations.   FSMEC
62. Implements new systems.   L6, Desir.
63. Maintains current knowledge of new methods and systems in administrative management.   L2, Essen.
64. Modifies menu as indicated by analysis of nutritional content, cost, and client acceptance.   L14, Essen.
65. Utilizes appropriate management practices during union organization.   L33, Desir.

APPENDIX B

Final Research Instrument

KSU Letterhead

GRADUATE EDUCATION COMPETENCY STATEMENTS

This study involves the identification of competencies expected of administrative dietetic practitioners with a master's degree. A list of competencies was compiled and classified according to the eight functions delineated in the ADA position paper on the administrative dietitian (JADA 67:478, 1975).

For each of the competencies listed, please indicate your expectation for the performance of the dietetic practitioner with a master's degree using Scales A and B below. You will note that some statements may seem very similar; (e.g., one may concern development of methods and another implementation). The administrative dietitian may be expected to perform in one aspect but not the other in relation to academic preparation and experience.

Scale A. Please indicate level of education required for each of the competencies listed, using the following scale:

1 = Expected for the administrative dietitian with a bachelor's degree
2 = Expected for the administrative dietitian with a master's degree
3 = Expectation depends on individual's professional experience, not related to level of education

Scale B. Please specify the extent of professional experience you believe is required, according to the following scale:

1 = No work experience beyond basic requirements for ADA membership (CUP, internship, etc.)
2 = Less than 1 year of work experience
3 = 1 - 3 years
4 = 4 - 5 years
5 = 6 - 10 years
6 = over 10 years

Thank you for your cooperation! Please return the completed questionnaire in the envelope provided.

Part I. COMPETENCY ASSESSMENT

For each of the competencies listed, please indicate your expectation for the performance of the dietetic practitioner with a master's degree using Scales A and B.

Scale A.

Please indicate level of education required for each of the competencies listed, using the following scale:

1 = Expected for the administrative dietitian with a bachelor's degree
2 = Expected for the administrative dietitian with a master's degree
3 = Expectation depends on individual's professional experience, not related to level of education

Scale B.

Please specify the extent of professional experience you believe is required according to the following scale:

1 = No work experience beyond basic requirements for ADA membership (CUP, internship, etc.)
2 = Less than 1 year of work experience
3 = 1 - 3 years
4 = 4 - 5 years
5 = 6 - 10 years
6 = over 10 years

	Scale A Level of Education (Circle)			Scale B Extent of Work Experience (Circle)					

I. PROGRAM PLANNING AND RESOURCE ALLOCATION

		Scale A			Scale B					
1.	Conceptualizes the broad spectrum of managerial responsibilities.	1	2	3	1	2	3	4	5	6
2.	Conducts and/or directs research that is applicable to foodservice systems management.	1	2	3	1	2	3	4	5	6
3.	Develops long and short term departmental goals and objectives.	1	2	3	1	2	3	4	5	6
4.	Develops policies and procedures that are consistent with the institution, personnel constraints, and characteristics of clients.	1	2	3	1	2	3	4	5	6
5.	Develops standards for evaluating client satisfaction regarding food and service.	1	2	3	1	2	3	4	5	6
6.	Develops systems to support organizational goals.	1	2	3	1	2	3	4	5	6
7.	Prepares proposals to justify requests for external or internal funding (e.g., capital budget requests).	1	2	3	1	2	3	4	5	6
8.	Redesigns systems.	1	2	3	1	2	3	4	5	6

Suggestions for other responsibilities in this category expected of administrative dietitian with master's degree.

II. ESTABLISHING AND MAINTAINING STANDARDS FOR TECHNICAL OPERATIONS

9.	Applies work measurement techniques in evaluating productivity and establishing standards.	1	2	3	1	2	3	4	5	6
10.	Coordinates utilization of equipment and personnel.	1	2	3	1	2	3	4	5	6
11.	Demonstrates depth of knowledge and expertise in specialized areas.	1	2	3	1	2	3	4	5	6
12.	Develops methods for evaluating client acceptance.	1	2	3	1	2	3	4	5	6
13.	Develops purchasing specifications that ensure quality and quantity control.	1	2	3	1	2	3	4	5	6

	Scale A Level of Education (Circle)			Scale B Extent of Work Experience (Circle)					
14. Develops standardized recipes to provide a consistent basis for quality and quantity control.	1	2	3	1	2	3	4	5	6
15. Establishes and implements policies regarding personnel employment and management.	1	2	3	1	2	3	4	5	6
16. Implements policies and procedures in appropriate areas.	1	2	3	1	2	3	4	5	6
17. Maintains quality and quantity controls through routine monitoring of receiving, storage, and sanitation procedures.	1	2	3	1	2	3	4	5	6
18. Plans daily food production schedules.	1	2	3	1	2	3	4	5	6
19. Plans menus which conform to budget and/or cost require-ments, equipment, time, and personnel availability.	1	2	3	1	2	3	4	5	6
20. Plans menus which incorporate nutritional requirements and preferences of individuals or groups within the institution or program.	1	2	3	1	2	3	4	5	6
21. Plans menus which incorporate principles of good menu planning; i.e., adequate nutritional content, color, texture, shape, and variety.	1	2	3	1	2	3	4	5	6
22. Plans sanitation schedules and procedures that conform to state and local regulations.	1	2	3	1	2	3	4	5	6
23. Uses effective merchandising techniques in presentation of food to patients and/or clients (e.g., menu design).	1	2	3	1	2	3	4	5	6
24. Utilizes appropriate industrial engineering techniques.	1	2	3	1	2	3	4	5	6
25. Utilizes mathematical forecasting techniques and models.	1	2	3	1	2	3	4	5	6

Suggestions for other responsibilities in this category expected of administrative dietitian with master's degree.

III. EXECUTING CONTROL

	Scale A			Scale B					
26. Analyzes menus as to nutritional content, cost, and client acceptance.	1	2	3	1	2	3	4	5	6
27. Analyzes problems related to area of responsibility.	1	2	3	1	2	3	4	5	6
28. Coordinates departmental subsystems.	1	2	3	1	2	3	4	5	6
29. Coordinates subsystems in department with appropriate subsystems in other departments.	1	2	3	1	2	3	4	5	6
30. Designs an inventory control system.	1	2	3	1	2	3	4	5	6
31. Evaluates effectiveness of systems and procedures.	1	2	3	1	2	3	4	5	6
32. Implements energy conservation procedures in all operational areas.	1	2	3	1	2	3	4	5	6
33. Maintains quality and quantity controls through personnel supervision and identification of factors influencing personnel productivity and performance.	1	2	3	1	2	3	4	5	6
34. Maintains quality and quantity control through routine monitoring of food items produced and served.	1	2	3	1	2	3	4	5	6

	Scale A Level of Education (Circle)			Scale B Extent of Work Experience (Circle)					
35. Modifies systems and procedures to solve problems within area of responsibility.	1	2	3	1	2	3	4	5	6

Suggestions for other responsibilities in this category expected of administrative dietitian with master's degree:

IV. EFFECTING FISCAL ACCOUNTABILITY

36. Maintains accurate and appropriate records for personnel management, fiscal control, and reporting purposes.	1	2	3	1	2	3	4	5	6
37. Plans a budget that conforms to departmental or program financial requirements.	1	2	3	1	2	3	4	5	6
38. Uses a variety of financial analysis techniques to evaluate operational performance.	1	2	3	1	2	3	4	5	6
39. Uses the balance sheet and income statement for decision making.	1	2	3	1	2	3	4	5	6

Suggestions for other responsibilities in this category expected of administrative dietitian with master's degree:

V. MANPOWER PLANNING AND DEVELOPMENT

40. Assumes responsibility for own and subordinates' actions.	1	2	3	1	2	3	4	5	6
41. Conducts continuing in-service training of administrative personnel.	1	2	3	1	2	3	4	5	6
42. Conducts task analysis and work sampling studies for developing new positions and evaluating job descriptions and specifications.	1	2	3	1	2	3	4	5	6
43. Coordinates a management team.	1	2	3	1	2	3	4	5	6
44. Delegates appropriate functions to supervisory personnel.	1	2	3	1	2	3	4	5	6
45. Determines manhour requirements that relate to menu and budget specifications.	1	2	3	1	2	3	4	5	6
46. Develops job descriptions and specifications for personnel.	1	2	3	1	2	3	4	5	6
47. Encourages personnel to provide optimal foodservice by example and adequate reinforcement.	1	2	3	1	2	3	4	5	6
48. Identifies state, local, and federal labor laws that affect personnel management.	1	2	3	1	2	3	4	5	6
49. Initiates performance appraisal program for foodservice operations.	1	2	3	1	2	3	4	5	6
50. Orients new administrative personnel.	1	2	3	1	2	3	4	5	6
51. Plans a master schedule for personnel.	1	2	3	1	2	3	4	5	6
52. Plans orientation and in-service training programs for all personnel involved with foodservice.	1	2	3	1	2	3	4	5	6

	Scale A Level of Education (Circle)			Scale B Extent of Work Experience (Circle)					
53. Selects administrative personnel.	1	2	3	1	2	3	4	5	6
54. Utilizes performance appraisal as an evaluation as well as motivational tool for personnel.	1	2	3	1	2	3	4	5	6

Suggestions for other responsibilities in this category expected of administrative dietitians with master's degree:

VI. DEVELOPING COMMUNICATION NETWORKS

55. Communicates effectively with clients, peers, personnel, and others, both verbally and in writing.	1	2	3	1	2	3	4	5	6
56. Maintains effective communication with personnel through regular conferences and meetings.	1	2	3	1	2	3	4	5	6
57. Routinely prepares accurate and appropriate reports.	1	2	3	1	2	3	4	5	6

Suggestions for other responsibilities in this category expected of administrative dietitians with master's degree:

VII. DESIGNING FOODSERVICE FACILITIES

58. Justifies specifications for equipment and facilities.	1	2	3	1	2	3	4	5	6
59. Develops computerized systems in foodservice management.	1	2	3	1	2	3	4	5	6

Suggestions for other responsibilities in this category expected of administrative dietitian with master's degree:

VIII. PLANNING AND MANAGING CHANGE

60. Applies research methodology and results to operations.	1	2	3	1	2	3	4	5	6
61. Evaluates new developments in foodservice systems and management for application to operations.	1	2	3	1	2	3	4	5	6
62. Implements new systems.	1	2	3	1	2	3	4	5	6
63. Maintains current knowledge of new methods and systems in administrative management.	1	2	3	1	2	3	4	5	6
64. Modifies menu as indicated by analysis of nutritional content, cost, and client acceptance.	1	2	3	1	2	3	4	5	6
65. Utilizes appropriate management practices during union organization.	1	2	3	1	2	3	4	5	6

Suggestions for other responsibilities in this category expected of administrative dietitians with master's degree:

Please turn over and complete Part II.

Part II. GENERAL INFORMATION

Please provide the following information:

1. Years of ADA membership:

    _____ Years

2. Indicate years of professional experience in dietetic practice and education since first becoming an ADA member (full and part-time):

    _____ Years in dietetic practice

    _____ Years in dietetic education

    _____ Years in combined role (education/ practice)

3. Please indicate your level of education.

    _____ (1) Bachelor's
    _____ (2) Graduate work, degree not complete
    _____ (3) Master's degree
    _____ (4) Doctoral work, degree not complete
    _____ (5) Doctorate

4. What was your route to ADA membership?

    _____ (1) Dietetic internship
    _____ (2) Coordinated undergraduate program
    _____ (3) Combined dietetic internship-master's degree program
    _____ (4) Master's degree with experience or assistantship
    _____ (5) Doctoral degree
    _____ (6) Dietetic traineeship
    _____ (7) Bachelor's degree with experience
    _____ (8) Other, please specify:
    _____

5. Indicate current employment status:

    _____ (1) Retired
    _____ (2) Not employed at present time
    _____ (3) Employed part-time (less than 30 hours per week)
    _____ (4) Employed full-time

IF CURRENTLY EMPLOYED, please complete questions 6 to 9.

6. Indicate which of the following best describes your primary position title:

    _____ (1) Director
    _____ (2) Associate or assistant director or head of administrative services
    _____ (3) Associate or assistant director or head of clinical services
    _____ (4) Administrative staff dietitian
    _____ (5) Clinical staff dietitian
    _____ (6) Generalist (administrative and clinical responsibilities)
    _____ (7) Research dietitian
    _____ (8) Internship director
    _____ (9) Coordinated program director
    _____ (10) College or university faculty
    _____ (11) Private practice--Nutrition counseling
    _____ (12) Health care facility consultant
    _____ (13) Public health or community nutritionist
    _____ (14) Other, please specify:
    _____

7. Indicate which of the following best describes your primary employer:

    _____ (1) Not applicable, self employed
    _____ (2) Hospital or medical center
    _____ (3) College/university--Foodservice
    _____ (4) College/university--Education
    _____ (5) Government agency, federal, state, or local
    _____ (6) Business/industry
    _____ (7) Other, please specify:
    _____

8. Consider your present position as 100% and indicate the % devoted to each of these catagories:

    _____ (1) Dietetic practice (including consulting)
    _____ (2) Teaching and educational administration
    _____ (3) Research
    _____ (4) Other, please specify:
    _____

9. If you are currently employed in dietetic education, please indicate your primary responsibility (over 50% of your time):

    _____ (1) Internship teaching and administration
    _____ (2) Educational administration (other than internship)
    _____ (3) Undergraduate teaching
    _____ (4) Graduate teaching and research
    _____ (5) Combination of graduate and under- graduate teaching

APPENDIX C

Correspondence for Initial Distribution of Questionnaires

KSU Letterhead

April 10, 1981

Dear FSMEC Member:

At Kansas State University we are conducting a study to identify the competencies expected of an administrative dietitian with a master's degree. A preliminary list of competency statements has been developed. We are interested in obtaining the reactions of educators and dietetic practitioners who hold advanced degrees to these statements.

An outline of this study was presented at the recent eleventh biennial FSMEC Conference at the University of Oklahoma. In the business meeting, the members voted to provide partial support for the study. Results will be used in developing a position paper on graduate education in foodservice systems management for consideration at the twelfth conference in 1983. A paper based on the study will be presented as a part of the FSMEC session during the annual meeting of The American Dietetic Association in Philadelphia in September, 1981.

Participation in this study will give you the opportunity to express your beliefs about performance expectations of administrative dietitians with a master's degree and will help us refine the competency list. The outcome of this research will provide guidance in the design of curricula for graduate programs in administrative dietetics and will assist in role delineation for the profession.

We need your input to help provide a comprehensive picture of the expectations for the practitioner with advanced education. All information will be confidential; the questionnaire is identified by code number for follow-up purposes only. If you have comments, please feel free to express them.

Completion of the questionnaire should take only about 20 minutes of your time--will you please return it to us by the end of the week? A stamped addressed return envelope is enclosed for your convenience. Thank you for your cooperation and time.

Sincerely,

Marian C. Spears, Ph.D., R.D.   Mary Jane Seal, R.D.
Professor and Head   Graduate Student
Dietetics, Restaurant and
Institutional Management

ns
Enclosure

KSU Letterhead

April 10, 1981

Dear CUP, Internship, or Plan IV Director:

At Kansas State University, we are conducting a study to identify the competencies expected of an administrative dietitian with a master's degree. A preliminary list of competency statements has been developed. We are interested in obtaining the reactions of educators and dietetic practitioners who hold advanced degrees to these statements. If your responsibilities do not include teaching foodservice management courses, would you please ask the appropriate person in your department to complete the enclosed questionnaire?

An outline of this study was presented at the recent Eleventh Biennial Foodservice Systems Management Education Council (FSMEC) Conference at the University of Oklahoma. At the business meeting, the Council voted to provide partial support for the study. Results of the study will be used in developing a position paper on graduate education to be considered at the twelfth conference in 1983. A paper based on the study will be presented as a part of the FSMEC session during the annual meeting of The American Dietetic Association in Philadelphia in September, 1981.

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-over-

Completion of the questionnaire should take only about 20 minutes of your time--will you please return it to us by the end of the week? A stamped addressed return envelope is enclosed for your convenience. Thank you for your cooperation and time.

Sincerely,

Marian C. Spears

Marian C. Spears, Ph.D., R.D.
Professor and Head
Dietetics, Restaurant and
Institutional Management

Mary Jane Seal, R.D.
Graduate Student

P.S. A brochure describing the Foodservice Systems Management Education Council is enclosed. You or a member of your staff might be interested in becoming a member. Dues are only $5!

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Enclosures

KSU Letterhead

Letter to Practitioner Sample

April 10, 1981

Dear Colleague:

At Kansas State University we are conducting a study to identify the competencies expected of an administrative dietitian with a master's degree. A preliminary list of competency statements has been developed. We are interested in obtaining the reactions of dietetic practitioners who hold advanced degrees and educators to these statements.

This study will give you the opportunity to express your beliefs about performance expectations of administrative dietitians with a master's degree and will help us to refine the competency list. The outcome of this research will provide guidance in the design of curricula for graduate programs in administrative dietetics and will assist in role delineation in the profession.

We need your input to help provide a comprehensive picture of the expectations for the practitioner with advanced education. All information will be confidential; the questionnaire is identified by code number for follow-up purposes only. If you have comments, please feel free to express them.

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Sincerely,

Marian C. Spears

Marian C. Spears, Ph.D., R.D.   Mary Jane Seal, R.D.
Professor and Head   Graduate Student
Dietetics, Restaurant and
Institutional Management

ns

APPENDIX D

Correspondence for Follow-Up Mailing

KSU Letterhead

May 8, 1981

Dear FSMEC Member:

About three weeks ago we mailed a questionnaire to you entitled
"Graduate Education Competency Statements." In the event that you
did not receive the questionnaire, let us briefly review the study
for you.

The objective is to identify the competencies expected of an admin-
istrative dietitian with a master's degree. A preliminary list of
competency statements has been developed. We are interested in
obtaining the reactions of educators and dietetic practitioners who
hold advanced degrees to these statements.

An outline of this study was presented at the recent eleventh
biennial FSMEC Conference at the University of Oklahoma. In the
business meeting, the members voted to provide partial support for
the study. Results will be used in developing a position paper on
graduate education in foodservice systems management for considera-
tion at the twelfth conference in 1983. A paper based on the study
will be presented as a part of the FSMEC session during the annual
meeting of The American Dietetic Association in Philadelphia in
September, 1981.

We hope you will assist us in the study by completing the question-
naire and returning it in the enclosed stamped envelope. All
information will be confidential; the questionnaire is identified by
code number for follow-up purposes only. Your response will help to
make this study a success!

We appreciate your participation and your concern with the quality of
dietetic education.

Sincerely,

Mary Jane Seal, R.D.   Marian C. Spears, Ph.D., R.D.
Graduate Student   Professor and Head
                                        Dietetics, Restaurant and
                                        Institutional Management

ns

Enclosure

KSU Letterhead

May 8, 1981

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The objective is to identify the competencies expected of an admin-
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help to make this study a success!

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dietetic education. For your information, a paper based on the study
will be presented as a part of the Foodservice Systems Management
Education Council session during the annual meeting of The American
Dietetic Association in Philadelphia in September, 1981.

Sincerely,

Mary Jane Seal, R.D.   Marian C. Spears, Ph.D., R.D.
Graduate Student   Professor and Head
                                        Dietetics, Restaurant and
                                        Institutional Management

ns

Enclosure

KSU Letterhead

Follow-Up Letter to Practitioners

May 8, 1981

Dear Colleague:

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"Graduate Education Competency Statements." In the event that you
did not receive the questionnaire, let us briefly review the study
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competency statements has been developed. We are interested in
obtaining the reactions of educators and dietetic practitioners who
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information will be confidential; the questionnaire is identified by
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We appreciate your participation and concern with the quality of
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Sincerely,

Mary Jane Seal, R.D.   Marian C. Spears, Ph.D., R.D.
Graduate Student   Professor and Head
                                        Dietetics, Restaurant and
                                        Institutional Management

ns

Enclosure

APPENDIX E

Supplemental Table (Table 12)

Table 12: Percentage distributions of responses on level of education and required professional experiences for competencies in foodservice systems management

competency	educational level	N	% indicating each level	required professional experience			
				none %	≤3 yrs. %	4-5 yrs. %	>6 yrs. %

I. Program planning and resource allocation

competency	educational level	N	%	none %	≤3 yrs. %	4-5 yrs. %	>6 yrs. %
1. conceptualizes managerial responsibilities	B.S.	150	38.6	42.7	43.3	12.7	1.3
	M.S.	137	35.2	2.9	46.7	38.0	12.4
	depends on exper.	102	26.2	3.9	28.4	42.2	25.5
2. conducts and/or directs research	B.S.	23	6.1	21.7	56.5	17.4	4.3
	M.S.	330	86.8	2.4	58.5	28.8	10.3
	depends on exper.	27	7.1	3.7	44.4	22.2	29.6
3. develops department goals	B.S.	202	51.7	20.3	68.3	9.4	2.0
	M.S.	89	22.8	7.9	57.3	21.3	13.5
	depends on exper.	100	25.6	5.0	45.0	40.0	10.0
4. develops policies and procedures	B.S.	233	59.9	17.2	74.2	6.9	1.7
	M.S.	67	17.2	3.0	80.6	11.9	4.5
	depends on exper.	89	22.9	4.5	57.3	28.1	10.1
5. evaluates client satisfaction	B.S.	284	72.6	36.3	59.2	3.9	0.7
	M.S.	50	12.8	20.0	56.0	20.0	4.0
	depends on exper.	57	14.6	22.8	57.9	14.0	5.3

Table 12: (cont.)

competency	educational level	N	% indicating each level	required professional experience			
				none %	≤3 yrs. %	4-5 yrs. %	≥6 yrs. %
6. develops systems	B.S.	129	32.9	14.0	69.0	14.0	3.1
	M.S.	174	44.4	1.7	54.6	34.5	9.2
	depends on exper.	89	22.7	2.2	43.8	40.4	13.5
7. requests funding	B.S.	126	32.1	7.9	72.2	13.5	6.3
	M.S.	157	39.9	3.2	49.0	32.5	15.3
	depends on exper.	110	28.0	0	45.5	34.5	20.0
8. redesigns systems	B.S.	76	19.4	1.3	56.6	27.6	14.5
	M.S.	177	45.3	0.6	33.3	42.9	23.2
	depends on exper.	138	35.3	1.4	24.6	42.0	31.9
II. Establishing and maintaining standards for technical operations							
9. applies work measurement techniques	B.S.	204	52.0	33.3	59.3	6.9	0.5
	M.S.	146	37.2	10.3	69.9	17.1	2.7
	depends on exper.	42	10.7	0	71.4	19.0	9.5
10. coordinates equipment and personnel	B.S.	295	75.3	37.6	58.6	3.7	0
	M.S.	29	7.4	0	86.2	3.4	10.3
	depends on exper.	68	17.3	7.4	79.4	10.3	2.9

Table 12: (cont.)

competency	educational level	N	% indicating each level	required professional experience none %	≤3 yrs. %	4-5 yrs. %	≥6 yrs. %
11. demonstrates specialized knowledge	B.S.	71	18.2	21.1	59.2	12.7	7.0
	M.S.	222	56.9	4.5	61.7	27.9	5.9
	depends on exper.	97	24.9	3.1	40.2	40.2	16.5
12. evaluates client acceptance	B.S.	284	72.3	40.1	55.3	3.9	0.7
	M.S.	68	17.3	7.4	77.9	8.8	5.9
	depends on exper.	41	10.4	12.2	63.4	17.1	7.3
13. develops purchasing specifications	B.S.	285	72.3	35.8	58.2	4.9	1.1
	M.S.	41	10.4	7.3	65.9	19.5	7.3
	depends on exper.	68	17.3	4.4	69.1	20.6	5.9
14. develops standardized recipes	B.S.	328	82.8	54.9	42.1	2.4	0.6
	M.S.	24	6.1	16.7	70.8	12.5	0
	depends on exper.	44	11.1	15.9	68.2	11.4	4.5
15. establishes and implements personnel policies	B.S.	215	54.8	18.1	68.4	12.1	1.4
	M.S.	90	23.0	0	70.0	24.4	5.6
	depends on exper.	87	22.2	1.1	66.7	27.6	4.6

Table 12: (cont.)

competency	educational level	N	% indicating each level	required professional experience			
			%	none %	≤3 yrs. %	4-5 yrs. %	>6 yrs. %
16. implements policies and procedures	B.S.	293	74.2	48.5	47.1	4.4	0
	M.S.	32	8.1	3.1	78.1	9.4	9.4
	depends on exper.	70	17.7	11.4	70.0	14.3	4.3
17. monitors receiving, storage, and sanitation	B.S.	338	85.4	58.0	39.3	2.4	0.3
	M.S.	7	1.8	14.3	71.4	0	14.3
	depends on exper.	51	12.9	13.7	72.5	9.8	3.9
18. plans food production	B.S.	333	84.9	55.3	43.5	0.9	0.3
	M.S.	4	1.0	0	100.0	0	0
	depends on exper.	55	14.0	21.8	69.1	7.3	1.8
19. considers resources in menu planning	B.S.	309	77.8	37.5	58.3	4.2	0
	M.S.	25	6.3	0	80.0	8.0	12.0
	depends on exper.	63	15.9	12.7	63.5	15.9	7.9
20. plans nutritious menus	B.S.	353	88.7	52.4	45.0	2.0	0.6
	M.S.	15	3.8	6.7	80.0	6.7	6.7
	depends on exper.	30	7.5	13.3	63.3	20.0	3.3

Table 12: (cont.)

competency	educational level	N	% indicating each level	required professional experience			
			%	none %	<3 yrs. %	4-5 yrs. %	>6 yrs. %
21. plans acceptable menus	B.S.	361	90.9	69.0	28.8	1.7	0.6
	M.S.	5	1.3	0	80.0	0	20.0
	depends on exper.	31	7.8	38.7	48.4	12.9	0
22. plans sanitation schedules	B.S.	335	84.4	55.2	43.0	1.5	0.3
	M.S.	8	2.0	0	75.0	12.5	12.5
	depends on exper.	54	13.6	29.6	61.1	5.6	3.7
23. uses effective merchandis-ing techniques	B.S.	308	78.0	48.1	49.4	2.3	0.3
	M.S.	14	3.5	21.4	64.3	7.1	7.1
	depends on exper.	73	18.5	20.5	68.5	9.6	1.4
24. utilizes industrial engineering techniques	B.S.	104	26.7	19.2	71.2	7.7	1.9
	M.S.	218	55.9	6.0	68.3	21.6	4.1
	depends on exper.	68	17.4	4.4	58.8	27.9	8.8
25. utilizes mathematical forecasting	B.S.	98	24.9	28.6	66.3	4.1	1.0
	M.S.	243	61.7	6.2	67.5	21.4	4.9
	depends on exper.	53	13.5	9.4	66.0	11.3	13.2

Table 12: (cont.)

competency	educational level	N	% indicating each level	required professional experience			
				none	<3 yrs.	4-5 yrs.	>6 yrs.
			%	%	%	%	%
III. Executing control							
26. analyzes menus	B.S.	331	84.2	57.1	40.5	2.4	0
	M.S.	29	7.4	6.9	69.0	13.8	10.3
	depends on exper.	33	8.4	9.1	66.7	12.1	12.1
27. analyzes problems	B.S.	257	65.2	31.5	65.4	2.7	0.4
	M.S.	65	16.5	9.2	63.1	23.1	4.6
	depends on exper.	72	18.3	8.3	66.7	18.1	6.9
28. coordinates departmental subsystems	B.S.	201	51.0	19.4	69.7	10.9	0
	M.S.	102	25.9	3.9	73.5	13.7	8.8
	depends on exper.	91	23.1	3.3	61.5	27.5	7.7
29. coordinates interdepartmental subsystems	B.S.	157	40.1	10.2	68.8	18.5	2.5
	M.S.	123	31.4	4.9	65.9	17.9	11.4
	depends on exper.	112	28.6	0	54.5	35.7	9.8
30. designs inventory system	B.S.	199	50.5	25.6	64.3	9.5	0.5
	M.S.	126	32.0	7.1	65.9	19.8	7.1
	depends on exper.	69	17.5	2.9	68.1	26.1	2.9

Table 12: (cont.)

competency	educational level	N	% indicating each level	required professional experience			
			%	none %	$\leq$3 yrs. %	4-5 yrs. %	$\geq$6 yrs. %
31. evaluates systems and procedures	B.S.	168	42.6	19.6	64.9	14.3	1.2
	M.S.	138	35.0	5.1	68.1	18.8	8.0
	depends on exper.	88	22.3	1.1	59.1	29.5	10.2
32. implements energy conservation	B.S.	226	56.9	31.0	60.6	7.5	0.9
	M.S.	87	21.9	8.0	60.9	20.7	10.3
	depends on exper.	84	21.2	11.9	66.7	19.0	2.4
33. supervises personnel effectively	B.S.	221	55.8	21.3	67.9	10.4	0.5
	M.S.	88	22.2	2.3	64.8	26.1	6.8
	depends on exper.	87	22.0	5.7	57.5	28.7	8.0
34. monitors production and service	B.S.	313	79.4	45.4	51.8	2.9	0
	M.S.	25	6.3	0	60.0	28.0	12.0
	depends on exper.	56	14.2	16.1	64.3	19.6	0
35. solves problems	B.S.	201	51.0	15.9	75.1	8.5	0.5
	M.S.	105	26.6	1.9	66.7	21.9	9.5
	depends on exper.	88	22.3	4.5	59.1	26.1	10.2

Table 12: (cont.)

competency	educational level	N	% indicating each level	required professional experience			
				none %	≤3 yrs. %	4-5 yrs. %	≥6 yrs. %

IV. Effecting fiscal accountability

competency	educational level	N	%	none %	≤3 yrs. %	4-5 yrs. %	≥6 yrs. %
36. maintains records	B.S.	263	66.8	32.7	60.8	5.7	0.8
	M.S.	61	15.5	6.6	59.0	27.9	6.6
	depends on exper.	70	17.8	7.1	60.0	28.6	4.3
37. plans budget	B.S.	182	46.1	11.0	67.6	15.4	6.0
	M.S.	100	25.3	1.0	53.0	33.0	13.0
	depends on exper.	113	28.6	0	51.3	37.2	11.5
38. uses financial analysis techniques	B.S.	71	17.8	12.7	62.0	16.9	8.5
	M.S.	255	64.1	3.1	60.0	25.5	11.4
	depends on exper.	72	18.1	0	40.3	41.7	18.1
39. uses balance sheet and income statement	B.S.	183	46.1	25.1	61.2	10.9	2.7
	M.S.	122	30.7	1.6	53.3	32.0	13.1
	depends on exper.	92	23.2	1.1	51.1	37.0	10.9

V. Manpower planning and development

competency	educational level	N	%	none %	≤3 yrs. %	4-5 yrs. %	≥6 yrs. %
40. assumes responsibility	B.S.	289	73.0	50.2	42.6	5.9	1.4
	M.S.	40	10.1	15.0	60.0	17.5	7.5
	depends on exper.	67	16.9	17.9	62.7	14.9	4.5

Table 12: (cont.)

competency	educational level	N	% indicating each level	required professional experience			
				none %	≤3 yrs. %	4-5 yrs. %	≥6 yrs. %
41. conducts in-service training	B.S.	255	64.6	43.9	49.4	4.7	2.0
	M.S.	91	23.0	2.2	79.1	14.3	4.4
	depends on exper.	49	12.4	10.2	65.3	16.3	8.2
42. evaluates job descriptions	B.S.	153	38.8	20.9	64.7	12.4	2.0
	M.S.	197	50.0	4.1	68.5	19.8	7.6
	depends on exper.	44	11.2	0	63.6	29.5	6.8
43. coordinates management team	B.S.	112	28.4	6.3	62.5	25.0	6.3
	M.S.	164	41.5	2.4	59.1	23.2	15.2
	depends on exper.	119	30.1	0.8	42.0	42.9	14.3
44. delegates	B.S.	270	68.4	34.8	57.4	4.8	3.0
	M.S.	53	13.4	9.4	58.5	18.9	13.2
	depends on exper.	72	18.2	6.9	70.8	19.4	2.8
45. determines man-hour requirements	B.S.	211	53.7	20.4	67.8	9.0	2.8
	M.S.	106	27.0	3.8	66.0	19.8	10.4
	depends on exper.	76	19.3	2.6	56.6	35.5	5.3

Table 12: (cont.)

competency	educational level	N	% indicating each level	required professional experience none %	<3 yrs. %	4-5 yrs. %	>6 yrs. %
46. develops job descriptions	B.S.	297	75.2	39.7	53.9	4.7	1.7
	M.S.	47	11.9	4.3	57.4	34.0	4.3
	depends on exper.	51	12.9	2.0	72.5	25.5	0
47. provides motivational environment	B.S.	311	78.3	53.7	42.8	2.3	1.3
	M.S.	21	5.3	14.3	52.4	33.3	0
	depends on exper.	65	16.4	15.4	64.6	18.5	1.5
48. identifies labor laws	B.S.	298	75.1	49.3	45.6	2.7	2.3
	M.S.	52	13.1	13.5	59.6	19.2	7.7
	depends on exper.	47	11.8	12.8	68.1	14.9	4.3
49. initiates performance appraisal program	B.S.	216	54.5	25.5	64.4	8.3	1.9
	M.S.	115	29.0	4.3	69.6	17.4	8.7
	depends on exper.	65	16.4	3.1	64.6	24.6	7.7
50. orients new personnel	B.S.	233	59.4	33.0	57.5	7.7	1.7
	M.S.	74	18.9	5.4	63.5	21.6	9.5
	depends on exper.	85	21.7	2.4	64.7	24.7	8.2

Table 12: (cont.)

competency	educational level	N	% indicating each level	required professional experience			
				none	$\leq$3 yrs.	4-5 yrs.	$\geq$6 yrs.
			%	%	%	%	%
51. plans master schedule	B.S.	285	71.8	34.0	58.2	6.0	1.8
	M.S.	45	11.3	2.2	68.9	20.0	8.9
	depends on exper.	67	16.9	6.0	73.1	14.9	6.0
52. plans orientation and in-service training	B.S.	287	72.3	35.2	57.1	6.3	1.4
	M.S.	57	14.4	3.5	66.7	22.8	7.0
	depends on exper.	53	13.4	11.3	60.4	20.8	7.5
53. selects personnel	B.S.	153	39.1	8.5	66.7	20.9	3.9
	M.S.	119	30.4	0.8	50.4	36.1	12.6
	depends on exper.	119	30.4	4.2	44.5	33.6	17.6
54. uses performance appraisal	B.S.	226	57.8	26.1	61.9	10.2	1.8
	M.S.	81	20.7	2.5	67.9	19.8	9.9
	depends on exper.	84	21.5	1.2	60.7	28.6	9.5
VI. Developing communication networks							
55. communicates effectively	B.S.	311	78.9	67.5	30.2	1.9	0.3
	M.S.	24	6.1	12.5	70.8	12.5	4.2
	depends on exper.	59	15.0	23.7	66.1	8.5	1.7

Table 12: (cont.)

competency	educational level	N	% indicating each level	required professional experience			
				none	≤3 yrs.	4-5 yrs.	≥6 yrs.
			%	%	%	%	%
56. maintains effective communication	B.S.	291	73.9	44.3	51.5	3.8	0.3
	M.S.	31	7.9	3.2	64.5	25.8	6.5
	depends on exper.	72	18.3	11.1	72.2	15.3	1.4
57. prepares reports	B.S.	295	75.6	50.5	45.8	3.4	0.3
	M.S.	32	8.2	15.6	65.6	15.6	3.1
	depends on exper.	63	16.2	17.5	63.5	15.9	3.2
VII. Designing foodservice facilities							
58. specifies equipment and facilities	B.S.	199	50.9	21.1	61.3	15.6	2.0
	M.S.	106	27.1	1.9	63.2	26.4	8.5
	depends on exper.	86	22.0	4.7	50.0	31.4	14.0
59. develops computerized systems	B.S.	53	13.6	11.3	67.9	11.3	9.4
	M.S.	271	69.3	1.1	52.0	32.5	14.4
	depends on exper.	67	17.1	3.0	53.7	31.3	11.9
VIII. Planning and managing change							
60. applies research methodology	B.S.	52	13.3	15.4	71.2	11.5	1.9
	M.S.	305	78.2	3.0	60.0	26.2	10.8
	depends on exper.	33	8.5	6.1	60.6	24.2	9.1

Table 12: (cont.)

competency	educational level	N	% indicating each level	required professional experience			
				none %	≤3 yrs. %	4-5 yrs. %	>6 yrs. %
61. evaluates new developments	B.S.	109	28.3	11.9	66.1	19.3	2.8
	M.S.	192	49.9	2.1	62.0	25.0	10.9
	depends on exper.	84	21.8	0	51.2	35.7	13.1
62. implements new systems	B.S.	137	35.0	10.2	65.0	20.4	4.4
	M.S.	141	36.1	0	52.5	31.2	16.3
	depends on exper.	113	28.9	0	53.1	31.9	15.0
63. maintains current knowledge	B.S.	233	59.4	52.8	41.6	4.7	0.9
	M.S.	93	23.7	8.6	62.4	18.3	10.8
	depends on exper.	66	16.8	27.3	47.0	13.6	12.1
64. modifies menus	B.S.	308	78.8	43.5	51.3	4.2	1.0
	M.S.	43	11.0	2.3	62.8	25.6	9.3
	depends on exper.	40	10.2	12.5	67.5	12.5	7.5
65. acts appropriately during union organization	B.S.	186	47.3	22.0	57.0	17.2	3.8
	M.S.	92	23.4	2.2	62.0	21.7	14.1
	depends on exper.	115	29.3	5.2	50.4	34.8	9.6

IDENTIFICATION OF GRADUATE LEVEL COMPETENCIES IN
FOODSERVICE SYSTEMS MANAGEMENT

by

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B.S., Washington State University, 1976

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AN ABSTRACT OF A MASTER'S THESIS

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ABSTRACT

Dietetic educators have been concerned about the lack of standards for graduate education of dietitians. The concern of educators in the Foodservice Management Education Council (FSMEC) led to appointment of an ad hoc committee in 1977 charged with developing a position paper on graduate education. After elucidating key issues, the committee members decided that research was essential for the production of a sound paper.

The purpose of this research was to secure information from administrators of dietetic services and educators in foodservice systems management concerning their expectations for competencies of dietitians with an advanced degree. The sample for the study included 450 practitioners and 450 educators. After initial and follow-up mailings, 60 percent of the instruments were returned.

The competencies identified by Loyd and Vaden and Mariampolski et al. for entry-level dietitians and foodservice managers plus competencies for graduate education identified by FSMEC members were used as the basis for the research. The instrument was developed and evaluated through two drafts by the research committee. Two scales were used for assessment of the competencies; on Scale A respondents were asked to identify level of education necessary for competency development and on Scale B level of experience needed for performance of each competency.

Competencies were classified according to the consensus response on educational level required and three classifications were defined. Those competencies for which 50 percent or more of the respondents indicated a master's degree was required fell into the first classification. If 50

percent or more agreed the competencies were baccaulaureate level, these were classified as B.S. level competencies. If less than 50 percent were in agreement on level of education, a no consensus classification was used. A subsequent analysis of data involved identification of experience levels in relation to education levels.

Nine competencies were identified in the M.S. required classification, all of which were considered to require up to three years of dietetic practice to develop competency. In the no consensus category, the majority indicated four or more years experience would be required to become competent in the redesign of systems, whereas up to three years experience was the recommendation on experience for the remaining 11 competencies in this category.

In the bachelor's level competencies, the majority agreed that no experience beyond basic requirements for the entry level dietitian should be required for 12 of the competencies. Up to three years was specified for all others except one on which no consensus was reached regarding recommended experience.

The final analysis involved a comparison of educator and practitioner responses to determine the extent of agreement on level of education between the two segments of the sample. The groups generally tended to agree; for example the educators and practitioners responded similarly on about three-fourths of the competency statements.