ENTRY-LEVEL COMPETENCIES FOR

DIETETIC TECHNICIANS

By

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DIETETIC TECHNICIANS

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CHAPTER I

INTRODUCTION

Origin and Importance of Study

The American Dietetic Association (ADA) is concerned with estab-

lishing competencies for dietetic practitioners. Since the inception of

the professional association, competencies associated with tasks/skills

receive considerable attention by educators and practitioners. Appro-

priate competencies in equating the effectiveness of each person's

performance are not well-defined for most educational programs or as

prerequisites for dietetic positions. Recently top priority has been

given by the profession to the identification of competencies for the

entry-level dietitian and para-professional (ADA, 1974b).

The American Home Economics Association (AHEA) (1974) states:

One ultimate outcome or product of home economics programs
continues to be highly qualified facilitators of learning.
Competencies are becoming a major basis for determining the
effectiveness of professional programs in order to assess
job performances (p. 1).

AHEA (1974) believes:

. . . program accountability within the profession demands
delineation and clarification of the bases for evaluating
professional competence prior to and during employment.
Statements of expected competencies would serve as guide-
lines for developing criteria for the educative process
(p. 1).

In the past years establishment of tasks/skills performances of

those entering the dietetic profession has been subjective and seldom

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measured or evaluated. The need for statements of competencies for the dietetic technician has long been recognized. It is necessary that dietetic educators become involved in determining competencies for para-professional as the entry-level positions.

Statement of the Problem

In 1972 the Study Commission on Dietetics found areas in which the current system of educating dietitians is inadequate. One finding of the Commission (1972, p. 3) is that: "The amount and quality of nutrition science learning seems inadequate to form a firm base for the practice of a health service which must be clearly professional in its competency."

The findings of the Study Commission (ADA, 1974a) also clearly indicate changes are needed if the entire continuum of dietetic human-power is to be achieved and quality nutritional care given to patients and clients. Occupational analysis proves to be the most objective and effective means for manpower evaluation and for defining competencies. The development of competencies for the entire dietetic career ladder would provide clearer identity of the dietitian as a professional and as a home economist.

In 1976 the American Dietetic Association completed a study which framed the labor market and personnel problems of the para-professional. One of the proposals is to: "Determine personnel needs of employers in terms of tasks/competencies both with and without the presence of full professionals for supervision" (ADA, 1976, p. 1).

Identification of entry-level competencies could provide the profession with guidelines for educational programs, and a system for

evaluation and data for curriculum development. Competencies would eliminate much of the variation identified by the commission. Consequently, the achievement of competencies could assist the dietetic technician to better meet the needs of individuals who seek nutritional care.

Purpose and Objectives of the Study

The general purpose of this study is to identify competencies for the entry-level dietetic technician in foodservice management. Such identification could be utilized in curriculum development, a system for evaluation and provide the dietetic profession with guidelines for in-service training programs. The objectives of this research are:

1. To identify a list of priority entry-level competencies for dietetic technicians in foodservice management based on responses of selected dietetic technician educators.

2. To analyze the entry-level competencies identified by the respondents for the dietetic technician in foodservice management.

3. To make recommendations for curriculum development, evaluation and in-service training programs for entry-level dietetic technician programs.

Hypotheses

In the development and execution of this study, the following null hypotheses are to be tested:

H_1: There will be no significant differences in the educational

background of the respondents and the prioritizing of the
competencies.

H_2: There will be no significant differences in the region of the
United States where the respondents are employed and the
priority ratings of competencies.

H_3: There will be no significant difference in the years of expe-
rience of the respondents in para-professional programs and
the priority ratings of competencies.

H_4: There will be no significant differences in the priority
rating of competencies by respondents employed in nutrition
care programs and the priority rating by respondents employed
in foodservice management programs.

Limitations

The following limitations are acknowledged by the researcher:

1. The dietetic technician curriculum is so new that the program
   is, in and of itself, a limitation.

2. The responses of the population are limited because of the lack
   of knowledge and understanding of educational terminology and
   methods.

3. All respondents in the study will willingly participate in the
   study. It is assumed no coercion is present.

4. It is assumed that all responses are voluntarily made by the
   respondents and that each respondent is capable of making, and
   did make, honest and unbiased responses.

Definitions of Terms

Several terms have specific meanings for this study. In order to avoid misinterpretation, the following definitions are given:

Dietetic Technician:

A technically skilled person who has successfully completed an associate degree program which meets the educational standards established by The American Dietetic Association. The dietetic technician working under the guidance of a Registered Dietitian (R.D.) or an ADA dietitian, has responsibilities in assigned areas in foodservice management, in teaching foods and nutrition principles; and in dietary counseling (ADA, 1974b, p. 664).

American Dietetic Association, The: "A professional organization responsible for establishing educational and supervised clinical experience requirements and standards of practice in the profession of dietetics" (ADA, 1974b, p. 661).

Dietetic Practitioner: "An individual who performs activities in fulfilling a professional pattern in nutrition care" (ADA, 1974b, p. 665).

Nutritional Care:

The application of the science and art of human nutrition in helping people select and obtain food for the primary purpose of nourishing their bodies in health or disease throughout the life cycle. This participation may be in single or combined functions; in foodservice systems management to groups; in extending knowledge of food and nutrition principles; in teaching these principles for application according to particular situations; and in dietary counseling (ADA, 1969, p. 2).

Dietetic Technician in Foodservice Management: "A dietetic technician who, through coordinated effort, applies the principles and practices of management to an organization's operation" (ADA, 1974b, p. 664).

Entry-Level: The lowest level or beginning stage of responsibility in a job category.

Competency: Knowledge, skills, attitudes, understanding, and judgment which a student demonstrates at a predetermined proficiency level.

Curriculum: The body of courses offered in an educational institution.

Foodservice: This term is used as one word in deference to the Foodservice Systems Management Education Council, which feels there is a distinct connotation in one word that is not implied in "food service" as two words.

R.D.: The trademark of The American Dietetic Association for Registered Dietitian.

ADA Dietitian: A specialist educated for the profession which is responsible for the nutritional care of individuals and groups. This care includes the application of the science and art of human nutrition in helping people select and obtain food for the primary purpose of nourishing their bodies in health or disease through the life cycle.

Cognitive Domain: "Deals with knowledge, intellectual abilities, and skills. Major categories of the cognitive domain include knowledge, comprehension, application, analysis, synthesis and evaluation" (Bloom, 1956, p. 205).

Knowledge--cognitive domain: "Involves the recall of specifics and universals, the recall of methods and processes, or the recall of a pattern, structure, or setting" (Bloom, 1956, p. 205).

Comprehension--cognitive domain:

This represents the lowest level of understanding. It refers to a type of understanding or apprehension such that the individual knows what is being communicated and can make use of the material or idea being communicated without necessarily relating it to other materials or seeing its fullest implications (Bloom, 1956, p. 205).

Application--cognitive domain:

The use of abstractions in particular and concrete situations.
The abstractions may be in the form of general ideas, rules of
procedures, or generalized methods. The abstractions may also
be technical principles, ideas, and theories which must be
remembered and applied (Bloom, 1956, p. 206).

Analysis--cognitive domain:

The breakdown of a communication into its constituent elements
or parts such that the relative hierarchy of ideas is made
clear and/or the relations between the ideas expressed are
made explicit (Bloom, 1956, p. 206).

Synthesis--cognitive domain:

The putting together of elements and parts so as to form a
whole. This involves the process of working with pieces,
parts, elements, etc., and arranging and combining them in
such a way as to constitute a pattern or structure not
clearly there before (Bloom, 1956, p. 206).

Evaluation--cognitive domain:

Judgments about the value of material and methods for given
purposes. Quantitative and qualitative judgments about the
extent to which materials and methods satisfy criteria. Use
of a standard appraisal (Bloom, 1956, p. 207).

Affective Domain:

Objectives which emphasize a feeling tone, an emotion, or a
degree of acceptance or rejection. Objectives are expressed
as interest, attitudes, appreciations, values, and emotional
set or biases. This domain includes various levels: receiv-
ing, responding, valuing, organization and characterization
(Krathwohl, 1956, p. 7).

Receiving--affective domain: "The learner be sensitized to the

existence of a certain phenomena and stimuli; that is, that he be will-

ing to receive or to attend to them (Krathwohl, 1956, p. 176).

Responding--affective domain:

The term indicates the desire that a child become sufficiently
involved in or committed to a subject, phenomena, or activity
that he will seek it out and gain satisfaction from working
with it or engaging in it (Krathwohl, 1956, p. 178).

Valuing--<u>affective</u> <u>domain</u>:

This abstract concept of worth is in part a result of the
individual's own valuing or assessment, but it is much more a
social product that has been slowly internalized or accepted
and has come to be used by the student as his own criterion
of worth (Krathwohl, 1956, p. 180).

Organization--<u>affective</u> <u>domain</u>:

As the learner successively internalizes values, he encounters
situations for which more than one value is relevant. This
category is intended as the proper classification for objec-
tives which describe the beginnings of the building of a value
system (Krathwohl, 1956, p. 182).

Characterization--<u>affective</u> <u>domain</u>:

At this level of internalization the values already have a
place in the individual's value hierarchy, are organized into
some kind of internally consistent system, have controlled the
behavior of the individual for a sufficient time that he has
adapted to behavior (Krathwohl, 1956, p. 184).

Psychomotor Domain:

Objectives which emphasize some muscular or motor skill, some
manipulation of material and objects, or some act which
requires a neuromuscular co-ordination. The various levels
include perception, set, guided responses, mechanism, and com-
plex overt response (Krathwohl, 1956, p. 7).

Perception--<u>psychomotor</u> <u>domain</u>:

This is an essential first step in performing a motor act. It
is the process of becoming aware of sense organs. It is the
central portion of the situtation--interpretation-action chain
leading to purposeful motor activity (Simpson, winter, 1966-67,
p. 1).

Set--<u>psychomotor</u> <u>domain</u>: "Is a preparatory adjustment or readiness

for a particular kind of action or experience. Three aspects of set have

been identified: mental, physical, and emotional" (Simpson, winter,

1966-67, p. 3).

Guided Responses--<u>psychomotor</u> <u>domain</u>: "This is an early step in

the development of skill. Emphasis is upon the abilities which are

components of the more complex skill" (Simpson, winter, 1966-67, p. 4).

Mechanism--psychomotor domain: "Learned response has become habitual. At this level, the learner has achieved a certain confidence and degree of skill in the performance of the act" (Simpson, winter, 1966-67, p. 5).

Complex Overt Response--psychomotor domain: "At this level, the individual can perform a motor act that is considered complex because of the movement pattern required" (Simpson, winter, 1966-67, p. 5).

Prioritized: A listing by order of importance or urgency (the verb form of the noun priority).

Top Priority Competencies: Competencies ranked as being of most importance by the respondents in the study.

Second Priority Competencies: Competencies of secondary importance as ranked by the respondents in the study.

Preview

Chapter I states the nature and scope of the investigation. Chapter II contains a review of related literature and Chapter III delineates the procedure of the research, the instrument used, the population and the statistical plan. Chapter IV reports and discusses the data gathered, and Chapter V summarizes the investigation and states general conclusions.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The studies which follow are chosen for inclusion in this chapter
because of their close relationship to the problem. In order to estab-
lish relevance, research is grouped into three categories:

1. Overview of Dietetic Technician Education and the American

    Dietetic Association Studies;

2. Studies of Competencies;

3. Studies of the DELPHI Technique.

A computer search has been done to locate meaningful studies.

Sources included in this search are books, periodicals, journals, dis-
sertations, pamphlets, and unpublished research reports.

Overview of Dietetic Technician Education and

the American Dietetic Association Studies

The challenge of dietetic education is to educate the dietetic
practitioner (Scott, 1960). Post-secondary schools and colleges should
teach the graduate to cope with the challenges of tomorrow and adapt to
a rapidly changing world (Robinson, 1963). The American Dietetic
Association (ADA) accepts the responsibility for the education of the
dietetic practitioners (Ohlson, 1952; Hallahan, 1974) which prepares

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them for the demands of improving the nutrition of human beings in this changing society (ADA, 1970).

The ADA's involvement in the development of the para-professional programs began in 1924 (Hughes, 1951). Since that time, ADA members have participated in programs initiated to meet evolving dietetic personnel needs.

In 1972, the Study Commission on Dietetics determined that no complete or precise descriptions of the education for dietetic technician is stated and that the current system of educating the dietetic practitioner is inadequate. Some of the Commission's (1972) findings are:

1. The amount and quality of nutrition science learning seems inadequate to form a firm base for the practice of a health service which needs to be clearly professional in its competency.

2. It appears that there is a great variation in the quality of instruction and learning opportunities.

3. Dietetic education appears to lack a clear identity within higher education and its institutions. Its attractiveness recruiting potential may thus be impaired.

4. As a health science, dietetic education is not sufficiently related to other health professionals (p. 3).

These findings clearly indicate that changes are needed in the entire continuum of dietetic education, if efficient utilization of dietetic manpower is to be achieved and quality nutritional care given to patients and clients. The findings require the identification of competencies for all levels of dietetic practitioners. Another comment frequently heard by the Commission (1972) is:

. . . that dietitians are reluctant to delegate some of their activities and, thus, frequently are working at a level below their true professional competence. Virtually all pointed out the need for dietetic technicians to make it more possible for dietitians to function at a truly professional level (p. 32).

Establishment of the competencies for the vertical and horizontal career ladder in dietetics will benefit the 250 colleges and universities offering dietetic majors, the 36 coordinated undergraduate programs, 73 internships, 63 dietetic technician programs, and 160 dietetic assistants' programs (ADA, 1974a). Curriculum planners in the above mentioned programs are working from experience and not from a well defined list of competencies in the levels of dietetic practice (Doherty, 1973). The lack of competencies accounts for the great variation in the quality of dietetic education mentioned in The Profession of Dietetics (1972). Establishment of the dietetic competencies would provide guidance for the curriculum planner and lead to more uniform programs of better quality (ADA, 1974a).

The Dietetic Technician Follow-Up Study Report (1976) presents two findings of importance. They are:

1. Present Dietetic Technician employers indicate very high acceptance of dietetic technicians, and appear fully aware of their capabilities and usefulness. Graduates, however, are concerned that this acceptance has not been fully realized across a wider range of work settings and job locations.

2. Dietetic technicians training programs appear to be largely relevant, training problems exist that appear to be in the area of foodservice management, where the tasks/skills required on-the-job have varied importance over the range of job surveyed (p. ii).

The well educated dietetic technician would be an asset to any program delivering nutritional care. Indeed the dietetic technician has the distinguishing characteristics of a professional as recently defined: "the possession of a body of knowledge, a set of attitudes, and a group of skills" (Ferguson, 1968, p. 199). The acquisition of these characteristics--knowledge, attitude, and skill--by the technician become the

responsibility of the educational program (Doherty, 1973).

The American Dietetic Association (1976), with input from many dietetic educators who have experience in developing such programs, has established guidelines for the construction of curriculum patterns. The guidelines developed for the dietetic technicians are:

The dietetic technician with competency in foodservice management may function under the supervision of a Registered Dietitian, as in a large operation, or under the supervision of an administrator with a Registered Consulting Dietitian, as in a skilled nursing facility, intermediate care facility or other community nutrition program.

An efficient foodservice operation requires assessment, planning, implementation, and evaluation. This technician participates in these activities in varying degrees of depth; but it is the Registered Dietitian, whose preparation qualifies her to carry the responsibility, who must direct the overall assessment of the situation; planning of departmental goal and implementation of the total program; and the evaluation of efforts, whether by direct authority or through the consultation process.

The dietetic technician assists in the assessment, planning, implementation, and evaluation of the foodservice operation through such activities as:

a. planning menus
b. developing and/or testing products
c. procuring and storing food, supplies, and equipment
d. selecting, training, scheduling and supervising employees
e. supervising food production and service
f. maintaining established standards of sanitation and safety
g. maintaining quality control
h. preparing budget data
i. maintaining cost control systems
j. evaluating employee performance, products service, merchandising, etc.
k. recommending new foodservice systems
l. implementing new foodservice systems
m. maintaining an adequate system of patient nutritional care (ADA, 1976, p. 7).

The American Dietetic Association provides personnel and internal facilitating resources to review and approve educational programs. The

ADA resources are and will continue to be supplemented by outside sources

of financial support:

a. For education programs that encourage career mobility and
advancement with the profession.

b. For concurrent development of competencies for the dieti-
tian, and the dietetic technician on a coordinated
continuum (ADA, 1976, p. iii).

Studies of Competencies

White (1959) explains that competencies are an organism's capacity

to interact with its environment. Competencies imply control over

environmental factors, both physical and social, according to Hersey

and Blanchard (1972). One of the main desires in a human being is the

desire for competency. In fact, White believes that the competency

motive in adults reveals itself as a desire for mastery and professional

growth. According to Houston and Hawsam (1972), competency signifies

adequacy for the tasks.

Competency, Weidenback (1969) says, encompasses both skill and

capability. Skills are defined as deft, dexterous actions. Capability

means adroit, purposeful handling of situations. Implied is the think-

ing process based on knowledge and understanding in which the action is

appropriate, goal-directed, timely, adequate, and effective.

A competency is far more than an observable performance, according

to Johnson and Shearron (1973). They declare that a competency is based

on sound knowledge, thorough processes, and acceptable values combined

to provide rational and creative behavior toward attaining an objective.

Johnson et al. (1973, p. 56) made a search of the literature before

defining competency as a "rational preformance which satisfactorily met

the objectives for a desired condition." They say that "rational" means the performer has direction and purpose. The individual knows precisely why he or she is doing what he or she is doing. "Performance" is more than observable behavior for it includes the manipulation of ideas and the making of judgments and decisions.

Chickering (1972) identifies competency as a three-tined pitchfork. One tine he calls "intellectual competency," another "physical and manual skills," and the third tine, "social and interpersonal competency." He explains that the handle is, in a sense, competency. Without the handle one could not pitch much hay even if the tines are sound and the individual has confidence in his/her ability to cope with what he/she sets out to do. All parts of the pitchfork are interrelated, and each tine is fostered or inhibited by a different set of conditions or experiences.

McAshan (1974) describes a competency as the statement of a goal or specific intent that identifies a desired end to be achieved through a program's activities. Chickering (1972) suggests that college students are engaged in identifying and testing their competencies, when their operational role is defined as student behaviors. Implicit in any statement of competencies is a philosophical commitment which is often difficult to explicate. A justification for starting with competencies is that point of departure avoiding philosophical disagreements to impede progress. Dressell (1968) reports competencies as:

> The ability to engage in productive activity; the master of
> techniques for acquiring and utilizing knowledge, and the com-
> petency in communication skills; the awareness of values,
> issues, and problems; and, the demand for a cumulative, coher-
> ent and united college experience (p. 213).

Studies of the DELPHI Technique

The DELPHI Technique is a means for securing convergent opinion without bringing the experts together in face-to-face confrontation. This convergent opinion of experts is usually gained through the use of successive questionnaires and feedback with each round of questions being designed to produce more carefully considered group opinions (Gray, 1970). The DELPHI Technique in its simplest form:

> . . . eliminates committee activity among the experts alto-
> gether and replaces it with a carefully designed program of
> individual interrogations (usually best conducted by a ques-
> tionnaire) interspersed with information input and opinion
> feedback (Helmer, 1967, p. 76).

The DELPHI, developed by Norman Dalkey and associates at the Rand Corporation, is used for the achievement of various objectives cited by Van DeVen and Delbecq (1974), including those that are to develop a range of possible alternatives. In addition, the DELPHI technique explores or develops a range of possible alternatives, correlating informed judgments on a topic spanning a wide range of disciplines that might generate a consensus on the part of the respondent group. Developing and improving group consensus is adopted in many different situations as stated by Armstrong et al. (1975). In such cases, a convergence of opinions is advisable or desirable. Evaluators find the DELPHI useful in formative evaluation for goal definition, linking measurable objectives to adopted goals and standards.

The DELPHI method of controlled interaction among respondents represents a deliberate attempt to avoid the disadvantages associated with more conventional experts (Dalkey and Helmer, 1963). The gradual formation of opinion is more conducive to independent thoughts by panelists

by not bringing them together in one place. An attempt is made to over-
come undue psychological influences of a round-table discussion method
of achieving consensus such as persuasion by the group member with the
greatest supposed authority or loudest voice (Cyphert and Grant, 1971;
Helmer, 1969). For the future, the DELPHI process operates on the
principle that "several heads are better than one" in making subjective
conjectures.

The assumptions are made by Weaver (1971) that experts are so be-
cause they are objective, that they take into account new and discrepant
information and construct logically sound decisions about the future.
Methods utilized are non-data based and rely on collective judgment.

The Process Described

The DELPHI technique provides systematic solicitation and collation
of judgments through a set of carefully designed sequential question-
naires interspersed with summarized information and feedback derived
from earlier responses (Helmer, 1969; Van DeVen and Delbecq, 1974). The
process, referred to as a series of intensive interrogations of samples
of individuals, mostly by experts, is accomplished by means of mailed
questionnaires concerning some important problems or questions. Mailings
are interspersed with controlled feedback to the participants (Dalkey
and Helmer, 1963; Van DeVen and Delbecq, 1974; Helmer, 1969).

The DELPHI technique is adopted in many different situations. Per-
sons are asked to make anonymous forecasts concerning a series of items
on a questionnaire (Judd, 1970), or to generate several concise state-
ments of events that are mailed to each respondent (Weaver, 1971; Van
DeVen and Delbecq, 1974; Anderson et al., 1975). The responses are

gathered by an intermediary who summarizes and returns the information to each participant who in turn might revise his or her opinions and ratings (Van DeVen and Delbecq, 1974; Armstrong et al., 1975). This process could be repeated two, three, four or more times (Judd, 1970). Responses are summarized into a feedback report and sent back to the respondents along with another questionnaire which is designed to probe more deeply into the ideas generated in the previous questionnaire. A final summary and feedback report is developed and usually mailed to various panel members (Van DeVen and Delbecq, 1974).

Helmer (1969) asks the respondents whose opinions are outside the 75 percent majority to state briefly why the opinion is lower or higher and these respondents also are given the chance to change previous estimates. The procedure is refined by requiring respondents to state how expert they consider themselves to be with regard to the questions asked (Helmer, 1966, 1969; Judd, 1970).

Characteristics of DELPHI Process

The facilitative characteristics of the DELPHI process that increase decision-making performance are discussed by Van DeVen and Delbecq (1974). The isolated generation of written ideas results in a high quantity of items. Writing responses to the questions force respondents to think through the complexity of a problem and to submit specific ideas. Search behavior is acknowledged to be proactive, since respondents could not react to the ideas of others. The period of "problem of mindedness" is controlled and separated by "solution mindedness" and by the use of different questionnaires for each phase of problem solving. Freedom from conformity pressures facilitates the anonymity and isolation

of respondents. They explain that the DELPHI process tends to conclude with a moderately perceived sense of closure, accomplishments, and attachment.

Weaver (1971) justifies this intuitive methodology for organizing and sharing on the grounds that it prevents professional status and high position from offering judgments as frequently as when panels of experts meet. The intention is to assume that rational judgment is made and that certain leaders are not influencing the thinking of others.

The respondents in the DELPHI process never meet (Helmer, 1966) and that is probably the reason for the efficiency of the technique according to Armstrong et al. (1975). The DELPHI process avoids the various prima donna behaviors that might vitiate any round-table discussions. The anonynity provided the participants (Cypert and Grant, 1971; Judd, 1970; Armstrong et al., 1975; Weaver, 1971) apparently encourages reflective openness to new ideas and options. For whatever causes and however antagonistic the initial positions and complex the questions, Armstrong et al. (1975) finds that when the process is used, competing opinions apparently converge and synthesize. Diverse opinions blend into distinct and clearly-stated majority and minority opinions. Repeated rounds of feedback are described as generating lively interest and might promote deep exploration and elicit fine perceptions and distinctions.

Communication and interpretation difficulties among respondents are created because of the absence of verbal clarification or comment on the feedback report of ideas generated by anonymous group respondents (Van DeVen and Delbecq, 1974). Because no opportunity exists for face-to-face problem solving in this process, conflicting or incompatible ideas on the feedback are resolved by simple pooling and adding of the votes of group

respondents. Thus, while the majority rule procedure identifies group priorities, conflicts are not always resolved.

The DELPHI process is but the initial step as seen by Armstrong et al. (1975), since the process attempts to obtain consensus and may not necessarily be the "best" judgment. Considerable labor, tabulations, record keeping, and mailings are entailed in the technique.

Summary

Chapter II presents an overview of dietetic technician education and the American Dietetic Association studies, studies of competencies, and studies of the DELPHI Technique. The review of the studies confirms the need for stating a more precise description of the competencies in order to provide better quality education for dietetic technicians. Competency based education is found to be effective in meeting this goal. The DELPHI Technique is an intellectual tool used to elicit individual ideas from constituents and has as its goal the reaching of a convergence of opinions.

CHAPTER III

DESIGN OF THE STUDY

Chapter III describes the procedures used to execute the study, in-
cluding population designation, instrument selection, data collection,
and data analysis. The general purpose of this study is to identify
prioritized entry-level competencies for the dietetic technician in
foodservice management. Identification of such competencies could be
utilized in curriculum and program development, evaluation, and in-
service training for educational programs.

Population

There are 63 dietetic technician programs throughout the United
States; however, of these 63, only 24 are certified by The American
Dietetic Association. The certified dietetic technician programs are
located in the states of Alabama, California, Florida, Georgia, Iowa,
Massachusetts, Michigan, Minnesota, Missouri, New York, Oklahoma,
Pennsylvania, Virginia, Washington, and Wisconsin. The states of
California, Florida, Massachusetts, Michigan, Minnesota, Missouri, Okla-
homa, Pennsylvania, and Wisconsin have two certified dietetic technician
programs; only one certified program exists in each of the listed remain-
ing states.

The American Dietetic Association has divided the United States
into six geographic educational areas. Each of these areas contains at

least two certified programs. Area A contains programs in the states of
California and Washington; Area B, the states of Iowa, Michigan,
Minnesota, and Wisconsin; Area C, the states of Missouri, Oklahoma,
and Illinois; Area D, the states of Alabama, Florida, and Georgia; Area
E, the states of Pennsylvania and Virginia; and Area F, the states of
Massachusetts and New York. Figure 1, page 23, shows these educational
areas.

The decision has been made to contact all (24) of the program
directors to assess their interest in participating in the research
study. The directors are to be sent a letter explaining the study and
an invitation to participate in the study. If they accept the invita-
tion, a professional information sheet and DELPHI Form No. I is to be
enclosed in the letter for them to complete and return in the enclosed,
self-addressed, stamped envelope. This responding group represents the
population for this study.

Instrument Selection

A modified DELPHI technique is to be used. Three sequential mail-
ings of DELPHI forms are to be used to obtain the prioritized entry-level
competencies for the dietetic technician in foodservice management.
Scannell (1972) indicates that most of the changes in rankings have been
made between the second and third DELPHI form and the few (minority
views) had relatively little effect on the fourth DELPHI form. In addi-
tion, Cyphert and Grant (1971) conclude that:

> Virtually all (99 percent) of the respondents' change in
> opinion occurred on DELPHI Form III which informed them of
> the first 'consensus' reached by the group. With hindsight,
> one seriously questions the need for going beyond DELPHI
> Form III (p. 273).

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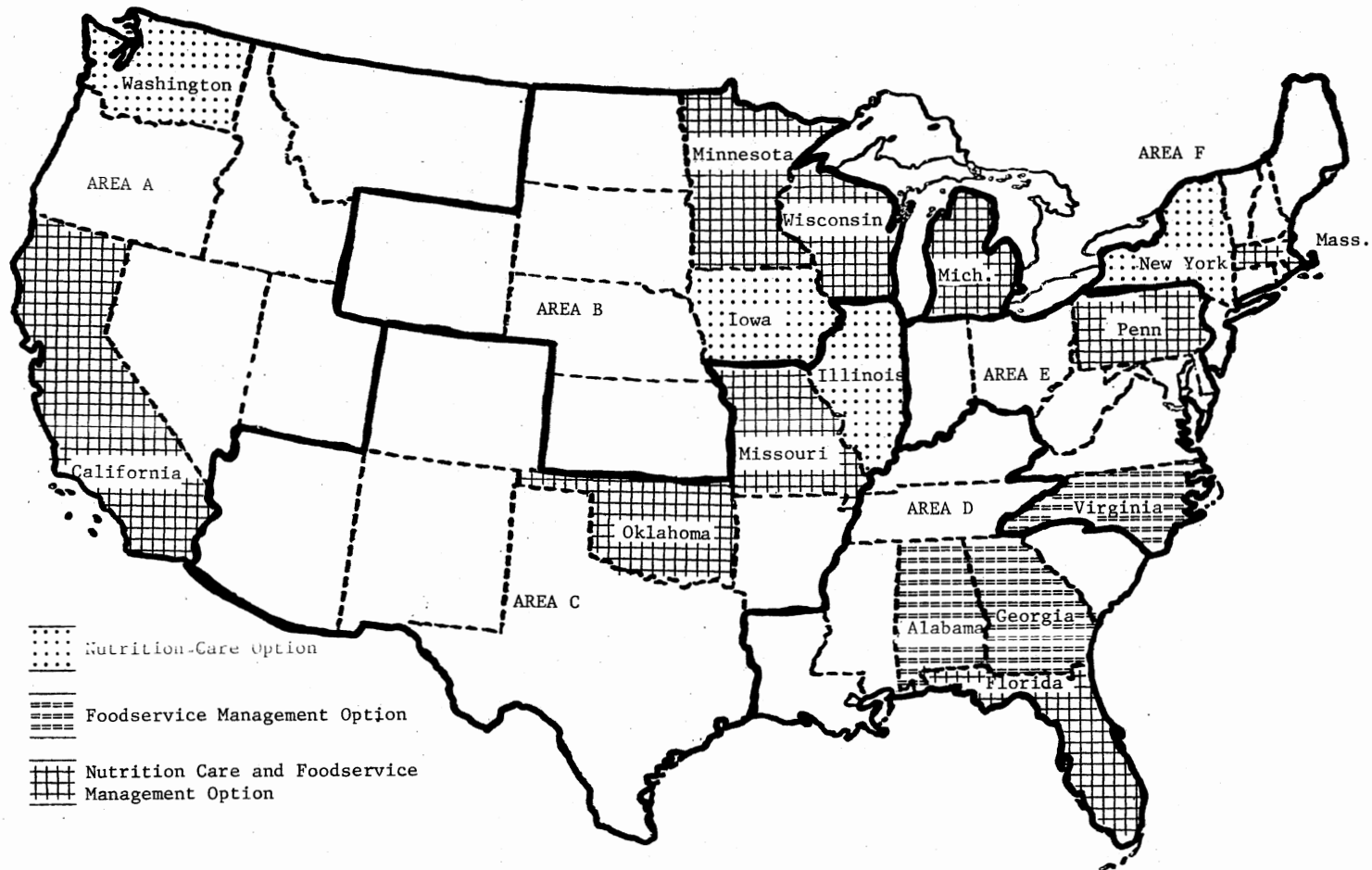
Figure 1. Dietetic Technician Programs in the Six ADA Educational Regions

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Thus, the modified process utilized in this study eliminates the fourth DELPHI Form mailing.

In using the modified DELPHI technique, the following three DELPHI Forms are used by the researcher to accomplish the purpose of this research:

DELPHI Form No. I--Requests the participants to list competencies they think best describe what the dietetic technician in foodservice management should be capable of demonstrating (Appendix A).

DELPHI Form No. II--Consists of a composite list of the competencies from the responses to the DELPHI Form No. I. Each participant is then asked to rank in order of priority on a six point scale from most important (one) to least important (six) each entry-level competency statement for dietetic technicians in foodservice management (Appendix B).

DELPHI Form No. III--Consists of the rankings of the top priority and second priority entry-level foodservice management competency statements from the responses to DELPHI Form No. II. Each participant is then asked to confirm the prioritized list of competencies as listed or revise their opinion and give the reason(s) for making any changes (Appendix C).

The three DELPHI forms (directions and construction details) are to be reviewed for clarity by graduate students in Home Economics and by selected faculty members in the College of Home Economics.

Data Collection

The data are to be collected from registered dietitians who agree

to participate in the study. All of the dietitians are directors of current certified ADA dietetic technician programs.

These participants are to sent a sequence of three DELPHI Forms to collect the data for prioritizing competencies for dietetic technicians in foodservice management. The first mailing to these participants contains the introductory letter inviting them to participate in the study. The mailing also contains general information about the details of the study, DELPHI Form No. I, and a professional information survey form. Appendix A contains these materials.

DELPHI Form No. I

In DELPHI Form No. I, the participant is requested to write the competencies that he or she believes are needed by dietetic technicians in foodservice management. The forms are coded by assigning a number to each director's name so that complete follow-through on all competency statements given by each participant is possible.

DELPHI Form No. II

A total of 631 competencies have been collected from the 23 DELPHI Form I's returned by the participants. The large number of competencies and the duplication of many concepts made it necessary for the author to form an Ad Hoc Committee to consider competencies that are duplicates and contain like concepts. This committee of two dietetic educators, a hospital dietitian and a home economics teacher educator is given the list of 631 competencies as submitted by the participants two weeks before the meeting so that they could have time to study each competency statement. The first action at the meeting is to divide all competencies

into major subject matter areas. Second, the committee examines each competency for duplication in each of the subject matter areas. Third, they review the duplications to select the most clearly stated of the competencies and uses them exactly as submitted by the respondents. Fourth, all similarly worded competencies are condensed thus eliminating redundancy and ambiguity. The end result of their deliberations is a list of 220 competencies containing all of the concepts of the original 631 competencies.

The Ad Hoc Committee also is to make judgments concerning the number of competencies which should be rated in top priority and the number in second priority. The committee has recommended that the participants rank 50 of the 220 competencies, 30 with top priority ranking and 20 with second priority ranking.

The competency statements are then listed alphabetically on DELPHI Form No. II in order to eliminate the possibility of researcher bias. The respondents are first asked to indicate by a "yes" or "no" check (√) whether the dietetic technician should possess that particular competency. Then, they are asked to rate the degree of importance of each competency from most important to least important. A one check (√) is "most" important and a six check (√) is "least" important. If the respondent indicates "yes" to a competency, then the six point continuum is to be marked the rate the item, otherwise no rating will be made. Although the participants are asked to rank each statement to eliminate confusion, the term "rate" is used when referring to the importance of the statements. A transmittal letter, DELPHI Form No. III, and a self-addressed, stamped envelope are mailed to the participants for the second step in the study. Appendix B contains these materials.

DELPHI Form No. III

Upon receipt of DELPHI Form No. II, the responses are tabulated
for each competency. The "yes" and "no" responses to the question,
"Should dietetic technicians in foodservice management possess this
competency?" are identified. The top priority and second priority
competencies are then determined. The two criteria used in this
determination are:

> Top Priority--Where less than 15 percent of the group of 21
> participants checks "no" to the question, "Should
> entry-level dietetic technicians in foodservice
> management possess this competency?"
>
> and
>
> 75 percent or more of the group ranks the com-
> petency statement as #1 or #2.

> Second Priority--Where less than 15 percent of the group of 21
> participants checks "no" to the question, "Should
> entry-level dietetic technicians in foodservice
> management possess this competency?"
>
> and
>
> 75 percent or more of the group ranks the com-
> petency statement as #1 or #2.

The competency statements are listed as top priority, or most im-
portant, and second priority and then used as the base for DELPHI Form
No. III. The participants are asked to review the "consensus responses"
of the top priority and second priority competency statements and agree
or disagree with the ranking of priorities, and if they disagree, to

indicate reason(s) for disagreement. A letter of transmittal, DELPHI

Form No. III, and a self-addressed, stamped envelope are then mailed to

the participants. These materials are found in Appendix C.

DELPHI No. III Analysis

Upon receipt of DELPHI Form No. III each competency statement is

analyzed according to priority ranking, subject matter area, and the

educational domains of learning. First, the researcher reviews and lists

the reason(s) given in the priority ranking of the competency statements

in which the participants disagree to determine if any over-all change

is needed in the final priority ranking.

Second, each competency statement is categorized into 10 major food-

service subject matter areas. The areas used are the ones identified by

the Ad Hoc Committee in their meeting on DELPHI No. I. The subject

matter areas include facility and equipment layout, sanitation and

safety, communications, purchasing, records, food preparation and

delivery, organization, nutrition, education and professional standards.

The last analysis of DELPHI Form No. III is made as a follow-up to

a recommendation by the researcher's doctoral committee. In this anal-

ysis each competency statement is classified according to the Taxonomy

of Educational Objectives (Bloom, 1961). Objectives are divided into

three categories of learning, called the cognitive, affective, and

psychomotor domains. The cognitive domain is concerned with rational

learning (knowing and thinking). Knowledge, use of the mind, and intel-

lectual abilities are emphasized. The affective domain deals with emo-

tional learning (caring and feeling). Attitudes, appreciations,

interests, values, and adjustments are considered. The psychomotor

domain relates to physical learning (doing and manipulating). The classifications of each competency statement into subject matter areas and domains of learning enables the writer to make suggestions and recommendations for curriculum development and in-service training programs for entry-level dietetic technicians in foodservice management.

Statistical Data Analysis

The researcher's question "What competencies do you think the dietetic technician in foodservice management should possess?" forms the basis for gathering the information needed to reach the research objectives. DELPHI Form No. I elicits responses from the participants in the form of entry-level competencies for dietetic technicians in foodservice management.

The competency statements are listed alphabetically on DELPHI Form No. II. The top priority and second priority competency statements are computed from rating competencies of DELPHI Form No. II. The responses to DELPHI Form No. III, which list the competency statements that received top priority and second priority ratings are compiled and any reason(s) for change in rating is noted.

The results of DELPHI Form No. III is to determine the acceptance of "yes" responses for each rating of priority. The z-test of proportions is utilized to test the null hypotheses. The null hypotheses are:

H_1: There is no significant difference in the educational background of the respondents and the competencies assigned.

H_2: There is no significant difference in the region of the United States where the respondents are employed and the priority ratings of competencies.

H_3: There is no significant difference in the years of experience of the respondents in para-professional programs and the priority ratings of competencies.

H_4: There is no significant difference in the ratings of competencies by respondents employed in nutrition care programs and the ratings by respondents employed in foodservice management programs.

The z-test for proportions is used to analyze the average proportions of "yes" responses. The average proportion of "yes" responses are computed by obtaining the proportion of "yes" responses for each competency statement, adding all proportions for the top priority competencies and all proportions for the second priority competencies, and dividing the sum of the proportions by the number of competency statements to obtain a weighted average called the average proportion. The average proportions are compared pairwise using the following proportion z-test (Bruning and Kintz, 1968, p. 199):

$$z = \frac{P_1 - P_2}{\sqrt{\frac{P_1(1 - P_1) + P_2(1 - P_2)}{N_1 + N_2}}}$$

P_1 = Proportions of Group 1

P_2 = Proportions of Group 2

N_1 = Number of people in Group 1

N_2 = Number of people in Group 2

The compted z-test values are then compared with the theoretical z-value using a level of significance of .05 for a two-tailed test. No significant differences will result if the computed z-test values are less than the theoretical z-value.

The prioritized list of entry-level competencies identified by the respondents is used to make suggestions and recommendations for curriculum development, evaluation and in-service training for dietetic technicians in foodservice management programs. The results of the study are to be mailed to each of the respondents.

Summary

In Chapter III, the researcher discussed the population that is participating in this study; the instrument selected to gather the research information; the procedure for collecting the necessary data and the statistical method that is used in obtaining information for data analysis. A more detailed report of the findings is presented in Chapter IV.

CHAPTER IV

FINDINGS

The information in this chapter is based on the data collected for
this study from three sequential DELPHI instruments. The development
and use of the forms are discussed and an analysis is made of the re-
sults of the professional information and of the final DELPHI instrument.
The statistical findings and their significance are presented and
evaluated.

Professional Information Analysis

The original population for the study is 24 directors of certified
dietetic technician programs. These directors represent the only
dietetic technician programs certified by the American Dietetic Associa-
tion (ADA) at this time. These programs are located in all six of the
educational regions of the ADA with at least two programs in each region.

Only 20 of the 24 directors, who agreed to take part in the study,
completed all three DELPHI forms. One participant, who failed to com-
plete DELPHI Form No. I, gives as her reason, disagreement with the
design of the study. Two participants did not return DELPHI Form No. II.
One director has never been available for the researcher to ascertain the
reasons, and the other non-participant gives a pending strike as her
reason for not returning the form. One participant failed to complete

DELPHI Form No. III giving as her reason lack of the necessary time to complete the form with the thoroughness it deserved.

Of the 20 participants, seven have been members of the American Dietetic Association for 10 to 14 years (35 percent), five for five to nine years (25 percent), four for 24 or more years (20 percent), two for 20 to 24 years (10 percent), and the two others for zero to four years and 15 to 19 years (10 percent) respectively. Thus, 60 percent of the group has from 5 through 14 years of membership in the ADA. Appendix D, Table VIII, summarizes the professional information of respondents.

Three (15 percent) of the respondents report holding the Ph.D. degree in Nutrition, Higher Education or Food Science; 12 (60 percent) hold the Master of Science degree in Human or Clinical Nutrition, Foods, or Dietetics and Nutrition, Home Economics Nutrition, Home Economics Education, Food Service Administration, Food Systems Administration, and Educational Administration and Supervision. Two (10 percent) hold the Master of Arts degree in Foods and Nutrition and Management Supervision in Nutrition, and three (15 percent) hold a Bachelor of Science degree in Dietetics; Foods; and Foods, Nutrition and Institution Administration. Thus, 17 (85 percent) of the participants have advanced degrees.

Fifteen participants (75 percent) report completing the requirements for ADA membership by means of a dietetic internship. One participant (5 percent) completed the requirements by means of work experience and four (20 percent) through a Master's degree plus work experience.

The experience of these respondents in working with other dietetic programs vary as follows:

- Eight or 40 percent report prior association with a coordinated
  undergraduate program as faculty members or members of the
  training staff.

- Nine or 45 percent report prior association with dietetic assist-
  ant programs as director or faculty member.

Experience of respondents in working with dietetic technicians also
vary as follows:

- Eleven or 55 percent have been associated with dietetic techni-
  cian programs from three to five years.

- Five or 25 percent have been associated two years or less.

- Four or 20 percent have been associated five to eight years.

Thus, 15 participants (75 percent) have been working with dietetic tech-
nicians from three to eight years.

Of the 20 program directors, eight or 40 percent, emphasize nutri-
tion care and six or 30 percent emphasize foodservice management. Six
or 30 percent of the directors emphasize both nutrition care and food-
service management. Thus, 12 participants (60 percent) are actively
involved in the area for which the competencies are to be developed.

Besides carrying out directorship of the program, 14 (70 percent)
are also associated with classroom and field experience. One reports
also serving as an adviser, consultant.

DELPHI Analysis

The instruments used are titled DELPHI Form No. I, DELPHI Form No.
II, and DELPHI Form No. III. In Form No. I, the participants are re-
quested to list the competencies of an entry-level dietetic technician
in foodservice management. Form No. II provides the participants with a

list of their responses to DELPHI Form No. I consolidated into 220 competencies. Participants are asked to rank them in order of priority. Form No. III contains the consensus of all of the top and second priority ratings and requests that they agree or disagree with the priority rating.

DELPHI Form No. I (Appendix A) states the purpose of the study, defines and gives examples of entry-level competencies. As the first step, Form No. I is sent to the 24 directors of ADA certified dietetic technician programs. The educators are requested to list those entry-level competencies which they think best describe what the dietetic technician in foodservice management should be capable of demonstrating. No particular order for the listing has been requested.

Of the 24 directors invited to participate in the study, 23 responded with a total of 631 competencies in DELPHI Form No. I for dietetic technicians in foodservice management. An Ad Hoc Committee is formed to make recommendations on the competencies submitted. The end result of their deliberations is a list of 220 competencies, containing all of the concepts of the original 631 competencies. These 220 competencies are the basis for DELPHI Form No. II and are sent to the 23 participants who returned DELPHI Form No. I. Twenty-one of the participants have responded to DELPHI Form No. II in limiting competency statements of top priority to 30 and of second priority to 20 (Appendix B). Using pre-determined criteria, 64 competencies are selected from the 220 competency statements as top priority and second priority competencies, 11 top priority and 53 second priority. These 64 competencies provide the bases for DELPHI Form No. III (Appendix C). The 21 respondents who returned DELPHI Form No. II are sent DELPHI Form No. III and are asked

to indicate agreement or disagreement of the "consensus responses" of
ranking with each of the final competencies. Twenty of the 21 partic-
ipants have returned DELPHI Form No. III.

Analysis of Top Priority Responses

All 20 (100 percent) respondents agree that six of the 11 entry-
level competencies fall into the top priority category. These competency
statements are listed below. (The numerical sequence indicates the
alphabetized order of the original 220 competencies on DELPHI Form No.
II.)

1. Adheres to professional standards of behavior and attitude.

10. Assists dietitian with employee in-service classes which may
    include developing instructional materials, demonstrating use
    of standardized recipes, convenience food preparation.

24. Assists with cost control by compiling an accurate meal census,
    determining recipe and portion costs and preparing schedules.

58. Demonstrates personal characteristics which mark leadership
    ability among co-workers and gains the confidence of co-
    workers, subordinates and superiors.

77. Directs the preparation of quantity food within an established
    production system following standardized recipes, preparation
    and service methods and food handling techniques to insure
    acceptable standards.

171. Reports departmental status and problems to dietitian.

Seventeen respondents (85 percent) agree that nine of the 11 entry-
level competencies should be ranked as top priority. These competency
statements in addition to the ones mentioned above are:

33. Communicates effectively in talking with clientele and/or
employees.

52. Demonstrates ability in making on-the-job adjustments when
unexpected situations arise.

78. Directs the service and delivery of food to patients, students,
staff to client satisfaction.

Fifteen respondents (75 percent) agree that 10 of the 11 priority
competencies should be ranked as top. The additional competency to be
added to the nine already mentioned is:

92. Exhibit a broad understanding of food, its composition, basic
preparation principles, quantity production, availability,
processing, fabrication and marketing.

Therefore, of the 11 top priorities from DELPHI Form No. III, 15 of
the 20 participants (75 percent) rank 10 of the competencies as being of
top priority. One other competency is ranked as having top priority by
11 of the 20 participants (65 percent). This competency is:

32. Checks trays for quality, portion sizes and accuracy for all
regular, modified diets and nourishments.

Nine reasons for disagreeing with these top competencies are given
by the respondents. These reasons are shown in Appendix E, Table IX.

Classification of Top Priority Competencies by
Learning Domains and Subject Matter Areas

The 10 top priority competencies for entry-level from DELPHI Form
No. III ranked by 75 percent of the participants as being of top priority
are classified, by the researcher and two experts in the field of cur-
riculum and evaluation, according to the Taxonomy of Educational

Objectives (Bloom, 1961) and into foodservice subject matter areas.

Appendix F, Table X, gives the competency number, competency statement,

the domains of learning, and the subject matter areas. The analysis of

these competencies is discussed below.

Seven or 70 percent of the 10 top priority competencies are clas-

sified in the highest two levels of learning in the cognitive domain,

synthesis and evaluation. All 10 of the top priorities are classified

at the second or higher level of the affective domain. Two competency

statements (20 percent) are classified at the second or higher levels

of the psychomotor domain.

According to Krathwohl (1956, p. 8), "although one could place an

objective very readily in one of the three major domains or classes,

no objective in one class is entirely devoid of some components of the

other two classes." Accordingly it is to be noted that all of the com-

petencies having a cognitive aspect also have an affective side, and a

few encompass the psychomotor domain. This is shown in Appendix F,

Table X.

The analysis shows that in the cognitive domain of learning the 10

top priority competencies identified by the respondents are classified

as follows:

- Three competencies (30 percent) are classified at the third level,

    application.

- Four competency statements (40 percent) are classified at the

    fifth level, synthesis.

- Three competencies (30 percent) are classified at the highest or

    sixth level, evaluation.

In the affective domain, the 10 top priority competency statements
are classified as follows:

- Seven competencies (70 percent) are classified at the second
  level, responding.

- Two competencies (20 percent) are classified at the third level,
  valuing.

- And one competency (10 percent) reaches the highest level, char-
  acterization.

The analysis of the top priority competencies in the psychomotor
domain shows the following:

- In the third level, guided responses, and the fourth level,
  mechanism, one competency statement (9 percent) is classified
  at each of the levels (18 percent total).

Krathwohl's (1956) statement that the cognitive, affective, and
psychomotor behaviors are frequently achieved at the same time is
illustrated in competency 10. Competency 10, "Assists dietitian with
employee in-service classes which may include developing instructional
materials, demonstrating use of standardized recipes, convenience food
preparation," is classified as cognitive domain level 5, synthesis.
This level, according to Bloom (1961, p. 206), "involves the 'putting
together of elements and parts' so as to form a whole." The correspond-
ing affective domain for this competency is at level 2, responding.
According to Krathwohl (1956, p. 122) responding is when "the student
displays or demonstrates certain type of behavior that can be taken . . .
as evidence of acquiescence." In the psychomotor domain the competency
is at level 3, guided responses. Simpson (winter, 1966-67, p. 138)

states, "Guided response is the overt behavioral act of an individual under the guidance of the instructor."

Thus, two important findings are found in this analysis. All of the top priority competencies are classified in two domains--the cognitive and the affective--and further the competencies are classified in the upper levels of cognitive and affective learning.

In the major foodservice subject matter areas, the 10 top priority competencies are classified in five major areas. These areas are food preparation and delivery, professional standards, communications, education, and records. The analysis shows the following:

- Three competencies (36 percent) are placed in food preparation and delivery.

- Three competency statements (27 percent) are placed in the area of professional standards.

- Two competencies (18 percent) fit into the area of communications.

- In the areas of education and records, one competency (9 percent) is placed in each of the areas (18 percent total).

The main thrusts emphasized in food preparation and delivery include directing quantity food production, service and delivery methods, and food handling techniques. The area of professional standards covers the aspects of behavior and attitude, making adjustments, personal characteristics, and leadership.

Communications involve talking effectively with clientele and/or employees, and reporting departmental status and problems. In the area of education in-service training is stressed, and cost control is stressed in records.

The analysis of the subject matter category reveals one major finding. The finding shows all 10 (100 percent) of the top priority competencies are in the area of foodservice management.

Analysis of Second Priority Responses

In the second priority category all 20 (100 percent) respondents of DELPHI Form No. III agree with six entry-level competencies. These competencies are listed below. (The numerical sequence indicates the alphabetized order of the original 220 competencies on DELPHI Form No. II.)

7. Applies the technique of work simplification to improving tasks of various jobs.

20. Assists in the planning and service of special functions such as teas, dinners, luncheons and banquets.

23. Assists the dietitian/nutritionist with the adaptations and implementations of policies relating to employees of the division.

117. Maintains a preventive maintenance program for all equipment.

120. Maintains an established system of food sales and merchandising.

131. Makes production orders through written work sheets.

Fifteen respondents (75 percent) agree that 29 of the 53 entry-level competencies should be ranked as second priority. These competency statements in addition to the ones mentioned above are:

13. Assists in development of specifications for food, small equipment and supplies to assure quality and cost control.

17. Assists in maintaining a budget.

21. Assists in up-dating job descriptions and specifications for dietary department personnel.

25. Attends staff meetings and prepares appropriate records and reports such as cost control reports, productivity, etc.

30. Checks food deliveries against specifications and purchase orders.

34. Communicates with employees regarding motivation and grievances, studies reasons for absenteeism and turnover.

36. Compiles information for monthly reports on food cost, labor cost and supply cost.

37. Compiles inventories and other operational data.

49. Delegates duties to competent individuals.

63. Determines yield of products.

83. Estimates quantity of food for one day for specific number of servings.

100. Gathers information regarding food use and wastage.

105. Improves standards of food preparation.

112. Instructs proper use and care of equipment, utensils and supplies.

124. Maintains food production systems by supervision of specific units of production.

130. Maintains the use of standardized recipes as effective means of cost and inventory control.

136. Motivates employees to follow policies and procedures for nutritional care services.

167. Recommends changes in food service or production system.

168. Recommends improvements for facility and equipment layout.

201. Trains employees in order to achieve a predetermined goal providing job satisfaction both to self and to employees.

202. Understands how people learn and the principles of education as well as educational techniques and the ability to motivate.

203. Understands management system and suitability for a particular operation.

214. Uses of basic accepted accounting procedures and practices.

Thus, of the 53 second priority competencies from DELPHI Form No. III, 15 of the 20 participants (75 percent) rank 29 of the competencies as being of second priority. The remaining 24 competencies ranked as second priority (results of DELPHI Form No. II) are shown in Appendix G, Table XI.

One hundred and thirty-three reasons for disagreeing with these second priority competencies are given by the respondents. These reasons are shown in Appendix H, Table XII.

Classification of Second Priority Competencies by Learning Domains and Subject Matter Areas

Seventy-five percent of the participants agree that 29 of the 53 second priority competency statements should be ranked as second. The researcher will analyze these 29 competencies according to the Taxonomy of Educational Objectives (Bloom, 1961) and foodservice subject matter content. Appendix I, Table XIII, provides the domain level and subject matter area for each of the statements.

Twenty-four (83 percent) of the 29 second priority competencies are classified in the third or higher levels of the cognitive domain. Twenty-seven (93 percent) are classified at the second level of the

affective domain. Two competencies (six percent) are classified in the psychomotor domain.

The analysis of the second priority competencies in the cognitive domain are as follows:

- Thirteen competencies (48 percent) are classified at the fifth level, synthesis.

- Eleven competencies (41 percent) are classified at the third level, application.

- Two competencies (six percent) are classified at the second level, comprehension.

In the affective domain, the 29 second priority competency statements ranked by 75 percent of the respondents are as follows:

- Twenty-seven (93 percent) are classified at the second level, responding.

- Two competency statements (six percent) are classified at the first level, receiving.

In the psychomotor domain competencies ranked by the respondents are as follows:

- In the third level, guided responses, and the fourth level, mechanism, one competency each (three percent) is classified (six percent total).

Competence statement 20 illustrates that "no objective in one class is entirely devoid of some components of the other two classes" (Krathwohl, 1956, p. 8). Competency 20, "Assists in the planning and service of special functions such as teas, dinners, luncheons and banquets," is classified as affective domain level 2, responding, already described in the preceding section. In the cognitive domain

the competency is at level 3, _application_. "The use of abstractions in particular and concrete situations. The abstractions may be in the form of general ideas, rules of procedures or generalized methods" (Bloom, 1961, p. 205). In the psychomotor domain the competency is placed in level 3, _guided responses_, described in the preceding section.

Two important findings result from this analysis. All of the 29 competencies ranked as second priority by 75 percent of the participants, are involved in two domains of learning, the cognitive and the affective; two of these competencies are in all three domains, and the competencies are classified in the upper levels of learning.

In the major foodservice subject matter areas, the 29 second priority competencies are classified into eight major areas. These areas are food preparation and delivery, records, organization, education, facility and equipment layout, purchasing, communications, and sanitation and safety.

The analysis shows the following:

- Eight competencies (28 percent) are placed in _food preparation and delivery_.

- Six competencies (21 percent) are placed in _records_.

- Four competencies (14 percent) are placed in the area of _organization_.

- Three competency statements (10 percent) are placed in each of the areas of _education_, and _facility and equipment layout_.

- Two competencies (seven percent) are placed in each of the areas of _communications_ and _purchasing_.

- One competency is placed in the area of _sanitation and safety_.

The area of food preparation and delivery emphasizes such tasks as food sales and merchandising, food production systems, and standards of food preparation. The area of records includes inventory control, monthly reports on food cost, labor cost and supply cost, and operational data.

Organization involves management systems, and adaptation and implementation of policies. In-service education, and the principles of education are stressed in the area of education and changes in foodservice systems, and improvements for facility and equipment layout.

Communications emphasize employee grievance and delegation of duties. The area of purchasing includes orders for food, supplies and equipment, and a preventive maintenance program is included in the area of sanitation and safety.

One major finding is found in the subject matter area. All of the 29 competencies ranked as second priority by 75 percent of the participants are placed in the broad category of foodservice management.

Analysis of Statistical Data

The z-test for the difference between two proportions is selected for this descriptive study involving four null hypotheses. The sufficiency of such a nonparametric test is evident when one considers the dichotomous variable involved and the population sizes ranging from 20 to 29 in number depending on the hypothesis. This test for significance can be carried out given the actual proportions and sample sizes of the groups to be evaluated.

The statistical data used in the analysis is in relation to DELPHI Form No. III. The analysis of the data from the z-test of proportions,

indicates no significant difference is found at the .05 level of significance in the rating of competencies by respondents according to educational background, region of employment, number of years experience in para-professional programs and type of program in which the participant is employed. The analysis of the data is now presented.

Hypothesis 1

In testing H_1: there is no significant difference in the educational background and competencies assigned, 20 DELPHI No. III Forms have been returned representing programs employed in nutrition care and foodservice programs with educational backgrounds of Bachelor's degree, Master's degree, and Doctor's degree. The number of responses and the average proportion of "yes" responses for both the top and second competency priorities are listed for the three educational degrees in Table I. For frequency distributions of educational background see Appendix J, Table XIV.

TABLE I

PROPORTION OF "YES" RESPONSES FOR EDUCATIONAL BACKGROUND

Highest Academic Degree	Number of Participants with Degree	Proportion of "Yes" Responses	
		Top Priority	Second Priority
B.S.	3	1.00	.93
M.S.	14	.95	.87
Ph.D.	3	.94	.82

The average proportion of "yes" responses for the top priority competencies ranges from .94 to 1.00 and for second priority competencies ranges from .82 to .93. These average proportions are analyzed by the use of a z-test for proportions and the absolute values of the z-test value are listed below in Table II.

TABLE II

TABLE OF z-VALUES FOR EDUCATIONAL BACKGROUND

Degree	Top Priority z-Test Value Degree		Second Priority z-Test Value Degree	
	B.S.	M.S.	B.S.	M.S.
M.S.	.900		.590	
Ph.D.	.622	.197	.579	.391

The computed z-test values are compared to a z-value of 1.96, using a level of significance of .05 for a two-tailed test. The computed values are less than this z-value and hence there is no significant difference between the average proportion for both the top priority and second priority competencies. This result supports H_1: that there is no significant difference in the educational backgrounds with respect to the priority ratings of the top and second priority competencies.

Hypothesis 2

In testing H_2: there is no significant difference in the region of the United States where the respondents are employed and the priority

ratings of competencies, 20 DELPHI No. III forms have been accumulated

from all six educational regions of the American Dietetic Association.

The number of responses and the average proportion of "yes" responses

for both the top and second competency priorities are listed for all six

educational regions in Table III. Appendix K, Table XV, contains the

frequency distributions.

TABLE III

PROPORTION OF "YES" RESPONSES FOR THE SIX
ADA EDUCATIONAL REGIONS

Educational Region	Number of Participants Per Region	Proportion of "Yes" Responses	
		Top Priority	Second Priority
A	2	1.00	.92
B	6	.97	.92
C	2	.95	.72
D	3	.94	.89
E	3	.88	.79
F	4	1.00	.91

The average proportion of "yes" responses for the top priority com-

petencies ranges from .88 to 1.00 and for the second priority compe-

tencies ranges from .72 to .92. These average proportions are analyzed

using a z-test for proportions and the absolute values of the z-test

value are listed below in Table IV.

TABLE IV

TABLE OF z-VALUES FOR THE SIX ADA
EDUCATIONAL REGIONS

Region	Top Priority z-Test Value					Second Priority z-Test Value				
	A	B	C	D	E	A	B	C	D	E
B	.500					.000				
C	.436	.159				.795	1.124			
D	.568	.309	.107			.173	.232	.721		
E	.830	.740	.438	.367		.634	.851	.254	.510	
F	.000	.559	.535	.672	.983	.089	.115	.888	.109	.658

The computed z-test values are compared to a z-value of 1.96, using a level of significance of .05 for a two-tailed test. The computed values are less than this t-value and hence there is no significant difference between the average proportions for both the top priority and second priority competencies. The result supports H_2: that there is no significant difference among the regions of the United States where the respondents are employed with respect to the priority ratings of the top and second competencies.

Hypothesis 3

In testing H_3: there is no significant difference in the years of experience of the respondents in para-professional programs and the priority ratings of competencies, 20 DELPHI No. III Forms have been obtained representing the two para-professional programs--Dietetic

Assistant (DA) and Dietetic Technician (DT) Programs. Nine of the 20

responding directors of dietetic technician programs report affiliation

with dietetic assistant programs as well, giving a total of 29 "yes"

or "no" responses for each competency statement. The respondents in

each program have been divided into three groups by years of experience

(zero to two years experience, three to five years experience, and five

to eight years experience). The number of responses and the average

proportion of "yes" responses for both the top and second competency

priorities are listed for the three groups of each program in Table V.

Appendix L, Table XVI, contains the frequency distributions.

TABLE V

PROPORTION OF "YES" RESPONSES FOR PARA-PROFESSIONAL PROGRAMS

Type of Para-Professional Program	Number of Participants in Program	Number of Years in Program	Proportion of "Yes" Responses	
			Top Priority	Second Priority
Dietetic Assistant	3	0-2	.94	.88
Dietetic Assistant	3	3-5	.94	.70
Dietetic Assistant	3	5-8	.97	.87
Dietetic Technician	5	0-2	.90	.88
Dietetic Technician	11	3-5	.96	.88
Dietetic Technician	4	5-8	.95	.86

The average proportion of "yes" responses for the top priority competencies ranges from .90 to .97 and the second priority competencies ranging from .70 to .88. These average proportions have been analyzed using a z-test for proportions and the absolute values of the z-test value are listed in Table VI, page 53.

The computed z-test values are compared to a z-value of 1.96, using a level of significance of .05 for a two-tailed test. The computed values are less than this z-value, and therefore there is no significant difference between the average proportions for both the top priority and second priority competencies. This result supports H_3: that there is no significant difference in the years of experience of the respondents in the two para-professional programs with respect to the priority ratings of the top and second competencies.

Hypothesis 4

In testing H_4: there is no significant difference in the ratings given by respondents employed in nutrition care programs and the ratings given by respondents employed in the foodservice management programs, 20 DELPHI No. III Forms have been obtained from employees in the nutrition care programs and the foodservice management programs. Six of the 20 respondents report work with options of both nutrition care and foodservice management giving a total of 26 "yes" or "no" responses for each competency statement. The number of responses and the average proportion of "yes" responses for both the top and second competency priorities is listed for the programs in Table VII. Appendix M, Table XVII, contains the frequency distributions.

TABLE VI

TABLE OF z-VALUES FOR PARA-PROFESSIONAL PROGRAMS

Type of Program	Years in Program	Top Priority z-Test Value					Second Priority z-Test Value				
		DA	DA	DA	DT	DT	DA	DA	DA	DT	DT
		0-2	3-5	5-8	0-2	3-5	0-2	3-5	5-8	0-2	3-5
DA	3-5	.000					.770				
DA	5-8	.253	.253				.033	.737			
DT	0-2	.271	.271	.551			.016	.905	.054		
DT	3-5	.232	.232	.157	.124		.019	1.158	.032	.042	
DT	5-8	.127	.127	.149	.427	.056	.139	.693	.103	.174	.184

DA = Dietetic Assistant

DT = Dietetic Technician

TABLE VII

PROPORTION OF "YES" RESPONSES FOR NUTRITION CARE
AND FOODSERVICE MANAGEMENT PROGRAMS

Kind of Program	Number of Participants in Program	Proportion of "Yes" Responses	
		Top Priority	Second Priority
Nutrition Care	14	.96	.84
Foodservice Management	12	.95	.90

The average proportions are analyzed using a z-test for proportions.
The computed z-test value for the top priority competencies is .242 and
for the second priority competencies is .262. The computed values are
less than the theoretical z-value of 1.96 for a two-tailed test and hence
there is no significant difference between the average proportions for
both the top priority and second priority competencies. This supports
H_4: that there is no significant difference by respondents employed in
the nutritional care program and foodservice management program with
respect to the priority rating of the top and second competencies.

Summary

The researcher by the use of three sequential DELPHI Forms validates
a list of separate independent competencies. The results of DELPHI Form
No. I is a list of 220 competencies. DELPHI Form No. II provides 64
competencies as top priority and second priority competencies, 11 top
and 53 second priority. DELPHI Form No. III lists the reasons for the

participants disagreeing with the consensus responses on the 64 competencies.

Next the competencies are classified according to subject matter areas and in the three domain levels of learning. Only those top and second priority competencies that are ranked by 75 percent of the participants are considered in this analysis.

The results of DELPHI Form No. III is also used to provide the statistical data needed to compute the z-test for proportions in testing the null hypotheses of this research. The statistical analysis is in the area of acceptance and the four null hypotheses are accepted. The study is summarized in the final chapter, recommendations are stated for curriculum development, evaluation, and for in-service training programs.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter summarizes the findings of the study undertaken to

identify competencies for entry-level dietetic technicians in food-

service management. A review of the literature reveals factors which

are most relevant to the work of dietitians particularly dietetic

educators in the continuum of dietetic practice. These factors serve

as a basis for identifying the entry-level competencies needed by

dietetic technicians in foodservice management. These dietetic concerns

which are identified relate to the objectives of this research. These

objectives involve the identification of a prioritized list of compe-

tencies for entry-level dietetic technicians in foodservice management,

an analysis of these entry-level competencies, and recommendations for

curriculum development, evaluation, and in-service training. These

three objectives provide the organization for developing the DELPHI

Forms and analysis of data. Findings obtained from the study are also

summarized.

Summary of Findings

In this study the respondents have identified 64 competencies for

entry-level dietetic technicians in foodservice management. For pur-

poses of identification three objectives are stated at the outset.

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Objective one is to identify a list of priority entry-level competencies for dietetic technicians in foodservice management. Such identification has been given much emphasis recently by the dietetic profession. A review of the studies conducted for the ADA confirms the need for stating a more precise description of the para-professional in dietetics in order to provide better quality education for dietetic technicians and other dietetic practitioners. Competency based education has been found to be effective in meeting this goal in a number of health related professions.

Through the use of three sequential DELPHI Forms, the researcher has secured a list of competencies needed by dietetic technicians on entry into the field of foodservice management. Twenty directors of ADA certified dietetic technician programs responded to all three instruments. The final list of 39 competencies is divided into 10 top priority and 29 second priority competency statements.

Objective two is to analyze the entry-level competencies identified by the respondents for the dietetic technician in foodservice management in the study. The literature shows that educational programs to prepare dietetic technicians vary in quality. It further shows that the quality of these and similar programs can be improved by a precise statement of the competencies needed by the graduate. The final competency statements submitted by the respondents are therefore analyzed for subject matter concepts and behavioral changes desired. An analysis is also made of the respondents' priority rating of competency statements as to educational background, region of employment, experience in dietetic para-professional programs and rating by respondents employed in nutrition care programs and in foodservice management programs. The competencies

are classified according to the Taxonomy of Educational Objectives
(Bloom, 1961) for the specific behavioral domain and level of learning.

The researcher and two experts in the field of curriculum and
education have analyzed each competency statement for their educational
domain and level of learning according to Bloom's (1961) Taxonomy of
Educational Objectives. All of the competencies are found to have both
a cognitive and affective aspect. Of the 10 top priority competencies
in the cognitive domain four are placed in C.3, application; four in C.5,
synthesis; and two in C.6, evaluation. In the affective domain two of
the competencies are classified as A.3, valuing; one as A.5, character-
ization, and the remainder in A.2, responding. In the psychomotor domain
one is classified as P.3, guided responses, and one as P.4, mechanism.

Of the 10 top priority competencies three are classified in the
subject matter area of food preparation and delivery; three are placed
in professional standards; and two in communications. One competency
each is placed in the subject matter area of education and records.

The second priority competency statements in the cognitive domain
include 13 classified as C.5, synthesis; 11 as C.3, application; one as
C.4, analysis; two as C.2, comprehension; one as C.6, evaluation; and
only one as C.1, knowledge. In the affective domain two are classified
as A.1, receiving; and all others at A.2, responding. In the psychomotor
domain one is classified as P.3, guided responses, and one as P.4,
mechanism.

The second priority competencies in the subject matter areas in-
clude eight in food preparation and delivery; six in records; three in
the areas of education, and facility and equipment layout; and one in

sanitation and safety. Two competencies are placed in both areas of
purchasing and communications, and four in the area of organization.

Objective three is to make recommendations for curriculum develop-
ment, evaluation and in-service training programs for entry-level
dietetic technician programs based on the findings and conclusions for
entry-level dietetic technicians. The final list of 39 prioritized
competencies has been obtained; these are the result of at least 75
percent of the participants agreeing with the competencies either being
in top or in second priority rank. There are 10 top priority compe-
tencies, page 36, and 29 second priority competencies, page 41. Since
competencies are found to be a major basis for program accountability
and most dieteticians are trained in the science of nutrition rather
than education, in-service training and program evaluation can readily
be based on a well-defined set of competencies.

Conclusions

The following conclusions are based on the data produced by the
directors of dietetic technician programs through the DELPHI Technique:

1. The statistical analysis of the data indicates no significant
    difference is found at the .05 level of significance in the
    rating of competencies by respondents according to educational
    background, region of employment, number of years experience
    in para-professional programs, and type of program in which the
    participant is employed, Therefore, the researcher is able to
    accept all four of the null hypotheses made in this study.

    H_1: There is no significant difference in the educational
    background and the competencies assigned.

H_2: There is no significant difference in the region of the United States where the respondents are employed and the priority rating of competencies.

H_3: There is no significant difference in the years of experience of the respondents in para-professional programs and the priority rating of competencies.

H_4: There is no significant difference in the rating of competencies by the respondents employed in nutrition care programs and the rating by respondents employed in foodservice management programs.

2. The educational domains and levels of learning for all of the top priority competencies can be classified at the third or higher levels in the cognitive domain and the second or higher levels of the affective domain. Ninety-four percent of the second priority competencies can be classified at the third or higher levels in the cognitive domain and 93 percent at the second level of the affective domain. Two competencies in the psychomotor domain can be placed in both the top and second priority ranking.

3. The subject matter areas for all of the competencies identified by 75 percent of the respondents as being of top priority and second priority can be placed in the area of foodservice management.

4. The DELPHI Technique is effective as a means of identifying a prioritized list of entry-level competencies for dietetic technicians in foodservice management.

5. The competencies identified by the respondents provide a basis on which recommendations can be drawn for emphasis in program development, evaluation and in-service training.

Recommendations for Dietetic Technician

Program Development

The researcher, by use of three sequential DELPHI Forms, has validated a list of 10 top and 29 second priority entry-level competencies. These identified competencies are the basis for the following recommendations:

1. That workshops be conducted for dietitians employed in or preparing to become dietetic technician program directors. These workshops should include methods and techniques of teaching, and principles of learning in order for students to achieve predetermined entry-level competencies.

2. That in-service training programs be held for the development of evaluation techniques so dietetic educators can more effectively determine if students are to achieve identified competencies. The evaluation techniques should include assessment of students' capabilities at the beginning of the program, at designated check points during the program, at the completion of the two-year associate degree program, and after students have been employed for a specified period of time.

3. That in-service training programs be developed to assist dietetic technician educators in implementing the identified competencies for entry-level dietetic technicians, and to assist

them in planning creative learning experiences in order for the students to achieve the competencies which have been identified.

4. Competencies for dietetic technicians be developed, based on a realistic appraisal of the type of employment in which individuals will be engaged. For example: competencies needed by a technician in a large hospital will differ from those needed by a technician in a nursing home or school foodservice program. (Comments from respondents in the form of letters and phone calls are the basis for this recommendation.)

Recommendations for Future Study

The results of this research suggest the following recommendations for further study. It is recommended that:

1. Evaluation procedures be established to test the attainment of entry-level competencies for dietetic technicians in foodservice management.

2. That the ADA and/or dietetic educators utilize research in education, and food, nutrition and institution administration in establishing and implementing dietetic technician programs.

3. Further study be conducted with employers, administrators of agencies and organizations who also work with meeting the nutritional needs of people, to determine the competencies they expect of a dietetic technician in foodservice management.

4. Studies be undertaken to determine if there is a need for a third option, generalist, to the dietetic technician programs. (The two current options include nutrition care and foodservice management.)

The respondents of this study have identified a prioritized list of entry-level competencies for dietetic technicians in foodservice management. The directors of dietetic technician foodservice management programs should be able to use these competencies in developing curricula for their programs. With in-service education they should be in a position to give leadership to other dietetic educators who seek assistance in making their programs accountable to the student, the community, and the profession.

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APPENDIX A

DELPHI I MATERIALS
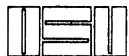
Oklahoma State University

Department of Food, Nutrition and Institution Administration

I am a doctoral student in the Division of Home Economics at Oklahoma State University and I need your help. Your program is one of the 24 approved dietetic technician programs throughout the United States, and my dissertation is concerned with the dietetic technician program.

As you are aware, since 1971 the dietetic technician has emerged as an aide to dietitians. Questions of their responsibilities in dietetic practice have been raised. This study is taking an in-depth look at the dietetic technician in foodservice management. The objectives are: (1) develop a prioritized list of entry-level competencies for dietetic technicians in foodservice management, and (2) make recommendations for curriculum, program development, and in-service training.

As director of an approved program, you have the most expertise in stating entry-level competencies for dietetic technicians in foodservice management. You can also make valuable contributions to establishing guidelines for curriculum development to improve and/or maintain quality dietetic technician programs.

Your participation would involve responding to three devices. The first device is enclosed in this letter and the other two will be mailed at different times. It will require approximately one hour of your time to respond to each form as follows:

DELPHI FORM No. I----Request you list competencies you think the dietetic
(enclosed with   technician in foodservice management should possess.
this letter)

DELPHI FORM No. II---A list of competencies will be compiled from your
                     responses to DELPHI No. I and mailed back to you. We
                     will then request you to rank the importance of each
                     competency using a priority rating scale.

DELPHI FORM No. III--The ranking of each competency will be compiled from
                     the responses to DELPHI Form No. II. You will then
                     be asked to agree with the order as listed or revise
                     your opinion of order and list the reasons for making
                     any changes.

From the data obtained in DELPHI Form No. III, a summary of the entry-level competencies in order of priority will be finalized and made available to you and ADA membership for their use.
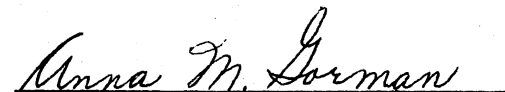
We hope you will agree to participate in this effort. If you are willing to assist, please complete the attached information sheet and DELPHI Form No. I and return by June 3, 1977, in the enclosed self-addressed stamped envelope.

Thank you for your willingness to participate.

Sincerely,

Jean Holland, R.D.

Anna M. Gorman, Ed.D.
Faculty Adviser

Esther Winterfeldt, Ph.D., R.D.
Faculty Adviser

PROFESSIONAL INFORMATION SHEET

Directions: Please fill in the following data sheet by checking (√) the response(s) that are correct for you and return in the enclosed stamped, self-addressed envelope. Thank you.

1. How many years have you been a member of the American Dietetic Association?

    _____ 0-4 years
    _____ 5-9 years
    _____ 10-14 years
    _____ 15-19 years
    _____ 20-24 years
    _____ 24 or more years

2. What is your academic education and training?

Degree	Year Completed Degree	Major Degree Area
A.S.	_____	_____
B.S.	_____	_____
M.S.	_____	_____
Ph.D. or Ed.D.	_____	_____
Other _____	_____	_____

3. From the following listings indicate the way in which you completed the ADA requirements for membership.

    _____ Dietetic internship
    _____ Work experience
    _____ Master's degree plus work experience
    _____ Doctor's degree plus registration exam
    _____ Doctor's degree
    _____ Coordinated undergraduate program
    _____ Traineeship

    If you completed an internship or coordinated undergraduate program, what was the program emphasis? _____

4. At any time, but not now, have you been associated with a dietetic internship?

    ____Yes
    ____No

If you answered yes to number 4, identify whether it was as:

    ____A faculty member
    ____A member of the training staff

5. At any time, but not now, have you been associated with a coordinated undergraduate program?

    ____Yes
    ____No

If you answered yes to number 5, identify whether it was as:

    ____A faculty member
    ____A member of the training staff

6. At any time, but not now, have you been associated with a dietetic assistant program?

    ____Yes
    ____No

If you answered yes to number 6, identify whether it was as:

    ____A faculty member
    ____A member of the training staff

7. How many year(s) have you been associated with a dietetic technician program?

    ____0-2
    ____3-5
    ____5-8

8. Which area of emphasis was the program?

    ____Nutrition care
    ____Foodservice management

9. If you are now a member of a dietetic technician program staff,
    identify your role(s) by checking the following: (You may check
    more than one.)

    ____Associated with classroom experiences (teaching faculty)
    ____Associated with field experience
    ____Associated with classroom and field experience
    ____Director (of education, program or such)
    ____Adviser, consultant in this education program
    ____Other (please specify) _____

    _____
                        (Name)

    _____
        (Area Code)   (Business Phone Number)   (Extension)

    _____
    (Your home address)

    _____
        (City)   (State)   (Zip Code)

    _____
        (Area Code)   (Home Phone Number)

DELPHI FORM NO. I

(To be returned in stamped self-addressed envelope)

Purpose of the Study:

This study is designed to identify entry-level competencies needed for the dietetic technician in foodservice management. Such identification could be utilized in program and curriculum development, in-service training for dietetic technicians and to alleviate overlapping of duties of the dietitian and dietetic technician.

Definitions:

Competency--Knowledge, skills, attitudes, understanding, and judgment which a student demonstrates at a predetermined proficiency level.

Entry-level--The lowest level or beginning stage of responsibility.

Examples of Possible Competencies:

1. Communicates effectively in talking with clientele and/or employee.

2. Conducts employee in-service training programs.

DIRECTIONS: Please list competencies you think best describe what the dietetic technician in foodservice management should be capable of demonstrating.

List the competencies in the space provided. No particular order of importance is required of your statements.

Statement of Competencies for Dietetic Technicians in Foodservice Management:

1.

APPENDIX B

DELPHI II MATERIALS
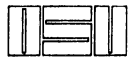
Oklahoma State University

Department of Food, Nutrition and Institution Administration

STILLWATER, OKLAHOMA 74074
(405) 624-5039

July 26, 1977

Thank you for agreeing to participate in this study and for your overwhelming responses to DELPHI FORM NO. I. They were just great. A total of 220 competencies was compiled from your 23 responses.

In an effort to organize your responses for use in DELPHI FORM NO. II, an ad hoc committee of dietitians and dietetic educators, who were not involved in the study, looked for competencies that were the same to prevent overlap. They recommended that a limit be placed on the maximum number of competencies to be ranked as top priority and as second priority.

Your task for DELPHI FORM NO. II is to actually rank in order of priority each ENTRY-LEVEL competency statement for dietetic technicians in foodservice management. These ENTRY-LEVEL competencies have been arranged alphabetically so that no inference of priority is shown by the researcher.

First---You are to read each statement and decide whether an ENTRY-LEVEL dietetic technician in foodservice management should possess that competency by checking yes or no.

Second--If you checked "yes", then rank each competency in order of priority by using a six-point scale ranging from 1, which is the most important, to 6, which is the least important.

(a) Using the ad hoc committee's recommendations, we ask that you only give top priority (circle number 1) ranking to a maximum of 30 competencies, and

(b) A maximum of no more than 20 competencies for a second (circle number 2) ranking.

Third---The remaining competencies may be ranked by circling three (3), four (4), five (5), or six (6).

In order to make sure you receive the second correspondence, the DELPHI FORM NO. II, is being sent to your office and home address. Please complete only one set of the DELPHI FORM NO. II and return by August 15, 1977 in the enclosed self-addressed stamped envelope.

I have been asked to present this study at the ADA Convention on October 12. It is important that I receive these back as soon as possible so that I can get DELPHI FORM NO. III to you by the last of August.
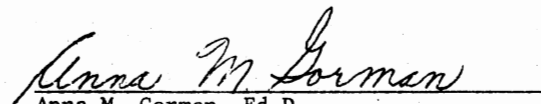
I am in the process of moving back to Louisiana, so I will call you in a few days to answer any questions, if you should have any. My new address is: Department of Home Economics, P. O. Box 2014, Nicholls State University, Thibodaux, Louisiana 70301. If you should have further questions, please call me. During the day place a person-to-person call to (504) 447-8111, extension 414 and I will ask the secretary to get the necessary information from the operator. I will return your call and pay the charges. If you call at night, just call me collect at (504) 446-8962.

Thank you for your support and cooperation. I will never be able to express to you how grateful I am for your willingness to assist me in this effort.
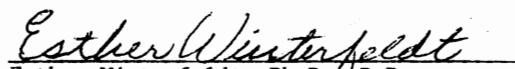
Sincerely,

Jean Holland

Jean Holland, R.D.

Anna M. Gorman

Anna M. Gorman, Ed.D.
Faculty Adviser

Esther Winterfeldt

Esther Winterfeldt, Ph.D., R.D.
Faculty Adviser

_____

DELPHI FORM NO. II

Below is the list of ENTRY-LEVEL competencies for dietetic technicians in foodservice management which resulted from your responses to DELPHI FORM NO. I.

DIRECTIONS: In order to establish a priority on the most important ENTRY-LEVEL competency statement, we ask that on each statement you first note whether or not the dietetic technician in foodservice management should possess this ENTRY-LEVEL competency by checking (X) either yes or no. Then, rank each statement on a six-point scale ranging from 1, which is the most important, to 6, which is the least important. Circle the point of importance to you. REMEMBER: We ask that you only give top priority (number 1) rating to a maximum of 30 competency statements and second priority (number 2) rating to no more than 20 competency statements.

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance	
	Yes	No	Most Important	Least Important
Example: Conducts employee in-service training programs	(X)	( )	1 (2) 3	4 5 6
1. Adheres to professional standards of behavior and attitude.			1 2 3	4 5 6
2. Aids in the selection of equipment			1 2 3	4 5 6
3. Analyzes foodservice system in order to recommend equipment or layout changes.			1 2 3	4 5 6
4. Answers telephone correctly and relays message correctly.			1 2 3	4 5 6
5. Applies knowledge of safety and sanitation fire codes.			1 2 3	4 5 6
6. Applies management principles and theory.			1 2 3	4 5 6

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance					
	Yes ( )	No ( )	Most Important 1	2	3	4	5	Least Important 6
7. Applies the technique of work simplification to improving tasks of various jobs.			1	2	3	4	5	6
8. Appreciates sanitation.			1	2	3	4	5	6
9. Approaches clients in care of the health care program with professional tact at all times but especially when working with clients who must follow modified diet plans.			1	2	3	4	5	6
10. Assists dietitians with employee in-service classes which may include developing instructional materials, demonstrating use of standardized recipes, convenience food preparation.			1	2	3	4	5	6
11. Assists employees in the development of their potential.			1	2	3	4	5	6
12. Assists in developing plans for operation under emergency conditions.			1	2	3	4	5	6
13. Assists in development of specifications for food, small equipment and supplies to assure quality and cost control.			1	2	3	4	5	6
14. Assists in development of written policies and procedures.			1	2	3	4	5	6

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance	
	Yes ( )	No ( )	Most Important 1 2 3	Least Important 4 5 6
15. Assists in evaluation and/or amending departmental procedures.			1 2 3	4 5 6
16. Assists in family meal planning.			1 2 3	4 5 6
17. Assists in maintaining a budget.			1 2 3	4 5 6
18. Assists in referrals for continuity of patient care.			1 2 3	4 5 6
19. Assists in the development of an efficient and effective organization which integrates the long- and short-range goals of the department.			1 2 3	4 5 6
20. Assists in the planning and service of special functions such as teas, dinners, luncheons and banquets.			1 2 3	4 5 6
21. Assists in up-dating job descriptions and specifications for dietary department personnel.			1 2 3	4 5 6
22. Assists the dietitian/ nutritionist in research by compiling information sources needed to conduct and/or complete the research project.			1 2 3	4 5 6

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance	
	Yes ( )	No ( )	Most Important 1 2 3	Least Important 4 5 6
23. Assists the dietitian/ nutritionist with the adoptation and implementation of policies relating to employees of the division.			1 2 3	4 5 6
24. Assists with cost control by compiling an accurate meal census, determining recipe and portion costs and preparing schedules.			1 2 3	4 5 6
25. Attends staff meetings and prepares appropriate records and reports such as cost control reports, productivity, etc.			1 2 3	4 5 6
26. Attends workshops and conferences and other continuing education programs as they are available.			1 2 3	4 5 6
27. Calculates man hours for work schedules.			1 2 3	4 5 6
28. Calculates nutrient intakes and dietary patterns.			1 2 3	4 5 6
29. Charts information on diet in patient chart.			1 2 3	4 5 6
30. Checks food deliveries against specifications and purchase orders.			1 2 3	4 5 6
31. Checks sanitation and safety of dietetics departments.			1 2 3	4 5 6

ENTRY-LEVEL Competency	Should dietetic technicians in <u>foodservice</u> man-<u>agement</u> possess this competency		If yes, circle level of importance					
	Yes ( )	No ( )	Most Important 1	2	3	4	Least Important 5	6
32. Checks trays for quality, portion sizes and accuracy of all regular, modified diets and nourishments.			1	2	3	4	5	6
33. Communicates effectively in talking with clientele and/or employee.			1	2	3	4	5	6
34. Communicates with employees regarding motivation and grievances, studies reasons for absenteeism and turnover.			1	2	3	4	5	6
35. Compiles data according to prescribed methods for use in evaluating food service systems.			1	2	3	4	5	6
36. Compiles information for monthly reports on food cost, labor cost and supply cost.			1	2	3	4	5	6
37. Compiles inventories and other operational data.			1	2	3	4	5	6
38. Conducts employee evaluation interviews for non-supervisory positions.			1	2	3	4	5	6
39. Conducts in-service education classes for employees. Document attendance.			1	2	3	4	5	6
40. Conducts orientation and on-job-training programs for personnel.			1	2	3	4	5	6
41. Conducts product evaluation.			1	2	3	4	5	6

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance	
	Yes ( )	No ( )	Most Important 1 2 3	Least Important 4 5 6
42. Conducts staff meetings as well as training sessions.			1 2 3	4 5 6
43. Converts food recipes correctly.			1 2 3	4 5 6
44. Coordinates departmental concerns with food service director or consultant dietitian and/or the administrator.			1 2 3	4 5 6
45. Coordinates food production with food service.			1 2 3	4 5 6
46. Counsels employees routinely and document.			1 2 3	4 5 6
47. Counsels patients on routine therapeutic diets.			1 2 3	4 5 6
48. Defines objectives clearly in planning work for others and self.			1 2 3	4 5 6
49. Delegates duties to competent individuals.			1 2 3	4 5 6
50. Demonstrates a comprehensive knowledge of nutrition as a vital science related to the human condition, the basic for vibrant health, wholesome dental condition, and sound mental health.			1 2 3	4 5 6

ENTRY-LEVEL Competency	Should dietetic technicians in <u>foodservice</u> man-agement possess this competency		If yes, circle level of importance					
	Yes ( )	No ( )	Most Important 1	2	3	4	5	Least Important 6
51. Demonstrates a knowledge of business principles--marketing, public relations, production, sales and cost control.			1	2	3	4	5	6
52. Demonstrates ability in making on-the-job adjustments when unexpected situations arise.			1	2	3	4	5	6
53. Demonstrates ability in problem solving through the identification of the problem, researching the necessary background and evidence, and then to make decisions about the solution.			1	2	3	4	5	6
54. Demonstrates awareness of those peoples and agencies with specialized services to help those with a problem or special needs.			1	2	3	4	5	6
55. Demonstrates fairness and impartiality in work assignments, employee corrections, and grievance settlements in all instances.			1	2	3	4	5	6
56. Demonstrates knowledge of quality characteristics of food by following only standard cooking procedures of high quality food preparation.			1	2	3	4	5	6

	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance					
			Most Important					Least Important
ENTRY-LEVEL Competency	Yes ( )	No ( )	1	2	3	4	5	6
57. Demonstrates loyalty and cooperation in all activities that involve co-workers, employees, and other members of the management team.			1	2	3	4	5	6
58. Demonstrates personal characteristics which mark leadership ability among co-workers and gain the confidence of co-workers, subordinates and superiors.			1	2	3	4	5	6
59. Demonstrates the importance of human relations both with employees and the public served.			1	2	3	4	5	6
60. Describes the primary functions of body systems in relation to need and utilization of food.			1	2	3	4	5	6
61. Determines quality of products.			1	2	3	4	5	6
62. Determines staffing needs.			1	2	3	4	5	6
63. Determines yield of products.			1	2	3	4	5	6
64. Develops a score sheet for new food products.			1	2	3	4	5	6
65. Develops a system for food storage and inventory.			1	2	3	4	5	6

	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance					
ENTRY-LEVEL Competency	Yes ( )	No ( )	Most Important 1	2	3	Least Important 4	5	6
66. Develops check list for sanitation, temperature and security.			1	2	3	4	5	6
67. Develops communications on all levels in the department.			1	2	3	4	5	6
68. Develops food specifications for menu items.			1	2	3	4	5	6
69. Develops job descriptions, job specification and work schedules for non-supervisory food service employees.			1	2	3	4	5	6
70. Develops programs for maintaining acceptable standards of safety, sanitation, maintenance and security.			1	2	3	4	5	6
71. Develops standardized recipes.			1	2	3	4	5	6
72. Develops visual aids for training programs.			1	2	3	4	5	6
73. Develops work schedules of labor times for production of food items, assigns work equally.			1	2	3	4	5	6
74. Develops written policies and procedures.			1	2	3	4	5	6
75. Devises new forms as needed--order sheet, inventory, cycle menu.			1	2	3	4	5	6
76. Directs food service for special activities.			1	2	3	4	5	6

ENTRY-LEVEL COMPETENCY	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance	
	Yes ( )	No ( )	Most Important 1 2 3	Least Important 4 5 6
77. Directs the preparation of quantity food within an established production system following standardized recipes, preparation and service methods and food handling techniques to insure acceptable standards.			1 2 3	4 5 6
78. Directs the service and delivery of food to patients, students, staff to promote client satisfaction.			1 2 3	4 5 6
79. Does time and motion studies and restructures jobs for greater efficiency.			1 2 3	4 5 6
80. Establishes a system to check, inspect and store all incoming food and supplies.			1 2 3	4 5 6
81. Establishes acceptable standards of sanitation, safety and security among personnel, in food preparation, food service and department maintenance.			1 2 3	4 5 6
82. Estimates labor budget for man hours schedule.			1 2 3	4 5 6
83. Estimates quantity of food for one day for specific number of servings.			1 2 3	4 5 6

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice man-agement possess this competency		If yes, circle level of importance					
	Yes ( )	No ( )	Most Important 1	2	3	Least Important 4	5	6
84. Establishes standard procedures to carry out activities of the de-partment in order to implement previously established policies or new procedures.			1	2	3	4	5	6
85. Evaluates dietary history information for planning nutritional care.			1	2	3	4	5	6
86. Evaluates employees in order to achieve a pre-determined goal provid-ing job satisfaction both to self and to employees.			1	2	3	4	5	6
87. Evaluates food service system seeking improve-ments.			1	2	3	4	5	6
88. Evaluates in-service education classes for employees.			1	2	3	4	5	6
89. Evaluates menus for nutritional adequacy, equipment usage and cost.			1	2	3	4	5	6
90. Evaluates success of dietary instruction as planned.			1	2	3	4	5	6
91. Exhibits a belief that the nutritional status of the consumer, well or ill, can be improved through good food and education.			1	2	3	4	5	6

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance					
	Yes ( )	No ( )	Most Important 1	2	3	4	5	Least Important 6
92. Exhibit a broad understanding of food, its composition, basic preparation principles, quantity production, availability, processing, fabrication and marketing.			1	2	3	4	5	6
93. Exhibits an awareness of one's own limitation and the willingness to seek assistance.			1	2	3	4	5	6
94. Follows acceptable procedures for development of recipes and food products for utilization in patient food service.			1	2	3	4	5	6
95. Follows acceptable procedures for testing of recipes and food products for utilization in patient food service.			1	2	3	4	5	6
96. Forecasts food needs through daily and periodic inventory control.			1	2	3	4	5	6
97. Functions as a department head with other department heads in regularly scheduled conferences.			1	2	3	4	5	6
98. Gathers data according to prescribed methods for use in evaluation of food service systems.			1	2	3	4	5	6
99. Gathers data for revision of kitchen layout.			1	2	3	4	5	6

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance					
	Yes ( )	No ( )	Most Important 1	2	3	4	Least Important 5	6
100. Gathers information regarding food use and wastage.			1	2	3	4	5	6
101. Implements cost control procedures for the effective utilization of food, equipment and man hours.			1	2	3	4	5	6
102. Implements educational and training programs for department personnel as assigned, and follow-up supervision to assure the success of employee training.			1	2	3	4	5	6
103. Implements new programs, procedures or systems.			1	2	3	4	5	6
104. Improves sanitation, safety, and security standards.			1	2	3	4	5	6
105. Improves standards of food preparation.			1	2	3	4	5	6
106. Identifies legal aspects of the industry.			1	2	3	4	5	6
107. Identifies needs of consumers for nutritional care in menu selection to assure balanced diet, menu acceptance, food preferences, and food consumption patterns.			1	2	3	4	5	6
108. Identifies sources of nutrients and their function.			1	2	3	4	5	6

	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance					
ENTRY-LEVEL Competency	Yes ( )	No ( )	Most Important 1	2	3	Least Important 4	5	6
109. Identifies the major food system concepts of this institution (where employed).			1	2	3	4	5	6
110. Identifies the responsibilities and objectives of the food service department.			1	2	3	4	5	6
111. Incorporates Ready-Service Foods into menu.			1	2	3	4	5	6
112. Instructs proper use and care of equipment, utensils and supplies.			1	2	3	4	5	6
113. Interprets recipes correctly.			1	2	3	4	5	6
114. Interviews patients to obtain diet information, nutritional history, food preference and food intake.			1	2	3	4	5	6
115. Keeps up-to-date job descriptions, job specifications and work schedules for non-supervisory food service employees.			1	2	3	4	5	6
116. Maintains a good relationship between themselves, the profession, and the people they serve.			1	2	3	4	5	6
117. Maintains a preventive maintenance program for all equipment.			1	2	3	4	5	6

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance
	Yes ( )	No ( )	Most Important 1 2 3 Least Important 4 5 6
118. Maintains a routine personnel evaluation program.			1 2 3 4 5 6
119. Maintains accurate and appropriate records for personnel management, fiscal control and report purposes, as assigned.			1 2 3 4 5 6
120. Maintains an established system of food sales and merchandising.			1 2 3 4 5 6
121. Maintains an up-to-date knowledge of subject matter through reading, classes, and interaction with technical and professional personnel.			1 2 3 4 5 6
122. Maintains and/or supplies continuous meal service.			1 2 3 4 5 6
123. Maintains effective communications.			1 2 3 4 5 6
124. Maintains food production systems by supervision of specific units of production.			1 2 3 4 5 6
125. Maintains high standards of sanitation, safety, maintenance and security in the exercise of food and nutrition services.			1 2 3 4 5 6
126. Maintains policies and procedures manual for the department through supervisory activities in the program.			1 2 3 4 5 6

| ENTRY-LEVEL Competency | Should dietetic technicians in foodservice management possess this competency | | If yes, circle level of importance | | | | | |
	Yes ( )	No ( )	Most Important 1	2	3	4	Least 5	Important 6
127. Maintains quality control in food production, service and storage.			1	2	3	4	5	6
128. Maintains quality control standards of food preparation, food storage and food service.			1	2	3	4	5	6
129. Maintains routine discipline of non-supervisory dietetic personnel.			1	2	3	4	5	6
130. Maintains the use of standardized recipes as an effective means of cost and inventory control.			1	2	3	4	5	6
131. Makes production orders through written work sheets.			1	2	3	4	5	6
132. Makes recommendations for new purchases or replacement of equipment.			1	2	3	4	5	6
133. Makes recommendations which may be incorporated into policies and develops written procedures			1	2	3	4	5	6
134. Manages a group of people in the specific tasks of food production and/or service in an attempt to accomplish a given goal.			1	2	3	4	5	6
135. Monitors food service and food production for conformance with quality standards.			1	2	3	4	5	6

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance					
	Yes ( )	No ( )	Most Important 1	2	3	4	Least Important 5	6
136. Motivates employees to follow policies and procedures for nutritional care services.			1	2	3	4	5	6
137. Observes maintenance procedures.			1	2	3	4	5	6
138. Observes patient, resident or client's acceptance of food.			1	2	3	4	5	6
139. Participates in a review of the food service facility and equipment planning requirements.			1	2	3	4	5	6
140. Participates in budget development and implementation of a system of cost accounting.			1	2	3	4	5	6
141. Participates in community activities.			1	2	3	4	5	6
142. Participates in development of procedures for settling grievances and labor relations.			1	2	3	4	5	6
143. Participates in nutritional assessment of patient.			1	2	3	4	5	6
144. Participates in research studies in Foodservice Management.			1	2	3	4	5	6
145. Participates in staff meetings and special functions preparing appropriate records.			1	2	3	4	5	6

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance					
	Yes ( )	No ( )	Most Important 1	2	3	4	5	Least Important 6
146. Participates in the evaluation of subordinates fairly and impartially, utilizing the performance appraisal methods accepted by the particular institution.			1	2	3	4	5	6
147. Plans acceptable menu patterns in accordance with objectives of the institution.			1	2	3	4	5	6
148. Plans employee schedules effectively.			1	2	3	4	5	6
149. Plans food service for special activities.			1	2	3	4	5	6
150. Plans for continuing education for supervisors and employees to attend meeting and workshop.			1	2	3	4	5	6
151. Plans general cycle menus considering the factors involved in menu planning such as equipment, available personnel, clientele, color, appearance, texture, consistency, budget, storage, availability, adequate nutrition, etc.			1	2	3	4	5	6
152. Plans in-service education classes for employees.			1	2	3	4	5	6
153. Plans master schedule for personnel.			1	2	3	4	5	6

	Should dietetic technicians in foodservice man-agement possess this competency		If yes, circle level of importance					
ENTRY-LEVEL Competency	Yes ( )	No ( )	Most Important 1	2	3	4	Least Important 5	6
154. Plans menus with variation to meet the ordinary and routine therapeutic needs of the people served--for any occasion, to be pro-duced by employees of varying skills and abil-ities, and within any given cost range.			1	2	3	4	5	6
155. Plans orientation and on-job training programs for personnel.			1	2	3	4	5	6
156. Prepares a monthly state-ment.			1	2	3	4	5	6
157. Prepares and/or plans orders for food, supplies and equipment.			1	2	3	4	5	6
158. Prepares plan for diet instruction, which out-lines teaching methods, teaching aids and evalua-tion strategy.			1	2	3	4	5	6
159. Prepares requisitions for paper goods, supplies, staples, bakery products, dairy products, meat, poultry, fish, and fresh produce.			1	2	3	4	5	6
160. Presents information on nutrition care to various audiences.			1	2	3	4	5	6
161. Processes written orders related to the service of diets.			1	2	3	4	5	6

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance	
	Yes ( )	No ( )	Most Important 1 2 3	Least Important 4 5 6
162. Promotes effective communications with members of the food service and health care service staffs.			1 2 3	4 5 6
163. Provides for the production of good quality food utilizing any type of food production system, prepared fast foods, or on-site production, through the purchasing, receiving, storage and preparation of such foods.			1 2 3	4 5 6
164. Provides the service of food to the consumer by a variety of methods, cafeteria, buffet, tray, table, catered, etc., for any age group, for any given purpose and under ordinary circumstances.			1 2 3	4 5 6
165. Purchases food, equipment and supplies according to specification by means of written orders or through contact with purveyors.			1 2 3	4 5 6
166. Reassigns non-supervisory employees in case of personnel shortage.			1 2 3	4 5 6
167. Recommends changes in food service or production systems.			1 2 3	4 5 6
168. Recommends improvements for facility and equipment layout.			1 2 3	4 5 6

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice man-agement possess this competency		If yes, circle level of importance					
	Yes ( )	No ( )	Most Important 1	2	3	4	Least Important 5	6
169. Recommends personnel salary and wage incentives, based on performance records and evaluation.			1	2	3	4	5	6
170. Recommends staffing changes, promotions and periodic raises as appropriate.			1	2	3	4	5	6
171. Reports departmental status and problems to dietitian.			1	2	3	4	5	6
172. Reports patient, resident or client's acceptance of food.			1	2	3	4	5	6
173. Reports patient's nutritional problems and progress to the dietitian.			1	2	3	4	5	6
174. Requisitions food, supplies, and small equipment according to established specifications and to meet menu and census need.			1	2	3	4	5	6
175. Reviews cost control records, payroll records, personnel records and other pertinent reports and recommendations necessary for action.			1	2	3	4	5	6
176. Schedules continuing education for supervisors and employees to attend meetings and workshops.			1	2	3	4	5	6

	Should dietetic technicians in foodservice man-agement possess this competency		If yes, circle level of importance					
			Most Important					Least Important
ENTRY-LEVEL Competency	Yes ( )	No ( )	1	2	3	4	5	6
177. Schedules in-service education classes for employees.			1	2	3	4	5	6
178. Selects employees in order to achieve a predetermined goal providing job satis-faction both to self and to employees.			1	2	3	4	5	6
179. Serves food in correct portion, displays properly for attractive food service.			1	2	3	4	5	6
180. Serves on department and/or institutional committees.			1	2	3	4	5	6
181. Shares updated profes-sional information with staff.			1	2	3	4	5	6
182. Shows a respect for people who are different as individuals and with other cultural life styles and food habits.			1	2	3	4	5	6
183. States requirements of effective merchandising and advertising tech-niques.			1	2	3	4	5	6
184. Stores leftover foods.			1	2	3	4	5	6
185. Structures a test panel.			1	2	3	4	5	6
186. Studies food service practices and facilities.			1	2	3	4	5	6

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice man-agement possess this competency		If yes, circle level of importance	
	Yes ( )	No ( )	Most Important 1 2 3	Least Important 4 5 6
187. Submits recommendations and information for use in budget planning and improvements for the facility and/or equipment, and for projected food and labor costs.			1 2 3	4 5 6
188. Suggests areas where innovation(s) may be needed.			1 2 3	4 5 6
189. Summarizes cost reports information in the prescribed manner.			1 2 3	4 5 6
190. Supervises between-meal and supplementary feeding preparation and their delivery to the client.			1 2 3	4 5 6
191. Supervises food produc-tion employees using proper communication techniques.			1 2 3	4 5 6
192. Supervises portion con-trol of all food items.			1 2 3	4 5 6
193. Supervises processes for menu selection for menu changes and for dietary record keeping.			1 2 3	4 5 6
194. Supervises subordinate food service employees in the exercise of nutrition care services to clients/customers as delegated by the dietitian/nutritionist and/or administrator.			1 2 3	4 5 6

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance					
	Yes ( )	No ( )	Most Important 1	2	3	4	Least Important 5	6
195. Supervises the mealtime delivery of food to clients to assess accuracy of the food delivered with any special need or request, or for the benefit of providing optimal nutrition at mealtime.			1	2	3	4	5	6
196. Supervises the receiving and storage of food and supplies.			1	2	3	4	5	6
197. Supervises the use and care of all large and small equipment, utensils and supplies.			1	2	3	4	5	6
198. Supports personnel policies and union contracts.			1	2	3	4	5	6
199. Takes a physical inventory in a food service facility.			1	2	3	4	5	6
200. Tests new food products.			1	2	3	4	5	6
201. Trains employees in order to achieve a predetermined goal providing job satisfaction both to self and to employees.			1	2	3	4	5	6
202. Understands how people learn and the principles of education as well as educational techniques and the ability to motivate.			1	2	3	4	5	6

	Should dietetic technicians in foodservice man-agement possess this competency		If yes, circle level of importance					
	Yes ( )	No ( )	Most Important 1	2	3	Least Important 4	5	6
ENTRY-LEVEL Competency								
203. Understands management system and suitability for a particular operation.			1	2	3	4	5	6
204. Understands people, their cultural backgrounds, social and psychological needs. An emphasis upon each person as an individual with complex food habits and varying needs throughout the life cycle.			1	2	3	4	5	6
205. Understands personnel policies and union contracts.			1	2	3	4	5	6
206. Understands the acceptable standards for safety, sanitation, maintenance and security.			1	2	3	4	5	6
207. Understands the importance of portion control.			1	2	3	4	5	6
208. Understands the importance of visual aids in training programs.			1	2	3	4	5	6
209. Understands the need for a collaborative team effort in the feeding of people viewing their job and its responsibilities as an integral part of a whole.			1	2	3	4	5	6
210. Uses basic factors in the selection and evaluation of food preparation.			1	2	3	4	5	6
211. Uses correct nutrition care terminology.			1	2	3	4	5	6

	Should dietetic technicians in foodservice management possess this competency		If yes, circle level of importance					
	Yes ( )	No ( )	Most Important 1	2	3	4	5	Least Important 6
ENTRY-LEVEL Competency								
212. Uses inventories and other operational data.			1	2	3	4	5	6
213. Uses leftover foods.			1	2	3	4	5	6
214. Uses of basic accepted accounting procedures and practices.			1	2	3	4	5	6
215. Utilizes appropriate verbal and written communications and public relations inter- and intra-departmentally.			1	2	3	4	5	6
216. Utilizes dietary history information for planning nutritional care.			1	2	3	4	5	6
217. Utilizes food and equipment specifications as a tool of standardization of quality in accepting foodstuffs from vendors.			1	2	3	4	5	6
218. Utilizes resources and materials available for in-service education.			1	2	3	4	5	6
219. Utilizes the principles of menu planning and knowledge of the Basic 4 Food Groups in the preparation of general, cyclic and modified menus that meet the nutritional needs of clients.			1	2	3	4	5	6

ENTRY-LEVEL Competency	Should dietetic technicians in foodservice man-agement possess this competency		If yes, circle level of importance	
	Yes ( )	No ( )	Most Important	Least Important
			1 2 3	4 5 6
220. Writes accurate and adequate menus for clients on modified menus, using the principles of menu planning according to the procedures set down in the diet manual.			1 2 3 4 5 6	

Please return by August 15, 1977. Thank you.

APPENDIX C

DELPHI III MATERIALS

NICHOLLS STATE UNIVERSITY
COLLEGE OF LIFE SCIENCES AND TECHNOLOGY
THIBODAUX, LOUISIANA 70301

DEPARTMENT OF HOME ECONOMICS   September 2, 1977   **BOX 2014**
UNIVERSITY STATION

Thank you for your promptness in returning DELPHI NO. II. I appreciate the long and earnest hours you spent in rating each of the competency statements.

I appreciate the written suggestions you gave me on the DELPHI II form, and I also realize that some of the competencies appear to be repetitious. The competencies you specified in DELPHI I form were of a hierarchial nature. Therefore, some competencies -specified a dietetic technician in food service management needed only a knowledge level (just knowing something), while other competencies you wrote specified they had to apply knowledge in a laboratory or work situation. I included all levels of behaviors for your ranking.

Enclosed is the final form, DELPHI NO. III, you will receive for this study.

DELPHI NO. III contains all of the top priority and second priority entry-level food service management competency statements (column a). The criteria used in determining the priority ratings were:

Top Priority------where less than 15 percent of the group of 21 partic-
ipants checked "no" to the question, "Should entry-level
dietetic technicians in food service management possess
this competency?"
                        AND
75 percent or more of the group ranked the competency
statements as #1 or #2.

Second Priority--where less than 15 percent of the group of 21 partic-
ipants checked "no" to the question, "Should entry-level
dietetic technicians in food service management possess
this competency?"
                        AND
75 percent or more of the group ranked the competency
statements as #1 or #2.

Accompanying the top priority and second priority competency statements is the consensus response of all the participants (column b).
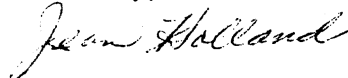
Your task for DELPHI III is to conform the prioritized list of entry-level competencies for dietetic technicians in food service management. We ask that if you differ with the consensus response (column b) that you write "no" (column c) then write the reason why you differ from the consensus. If you agree with the consensus response write "yes" (column c) then proceed to the next competency statement.

In order to make sure you receive the third correspondence, the DELPHI FORM NO. III is being sent to your office and home address. Please complete only one set of the DELPHI FORM NO. III and return by September 21, 1977 in the enclosed stamped self-addressed envelope.
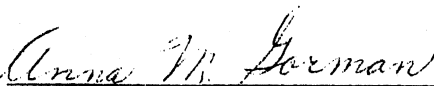
If you have questions, please call me. During the day, place a person-to-person call to (504) 446, 8111, Ext. 414, and I will ask my secretary to get the necessary information from the operator. I will return your call and pay the charges. If you call at night, call me collect at (504) 446-8962.

Thank you again for your suggestions and participation. Without you I would never have been able to complete this study. As a thank you I am sending you a copy of my dissertation upon its completion.
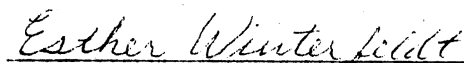
Sincerely,

Jean Holland, R.D.

Anna M. Gorman, Ed.D.
Faculty Adviser

Esther Winterfeldt, Ph.D., R.D.
Faculty Adviser

DELPHI FORM NO. III

Listed below are the competency statements that received top priority ratings and second priority ratings (column a), and the consensus response of all participants (column b). In (column c) write "yes" if you agree with the consensus response than proceed to the next competency statement. If you differ with the consensus response write "no" then write the reason(s) why you differ from the consensus (column d).

Entry-Level Competency (a)	Consensus Response (b)	Do You Agree With Consensus Response (c)		Reason(s) Why You Differ [between c and d] (d)
		Yes	No	
1. Adheres to professional standards of behavior and attitude.	TOP			
10. Assists dietitian with employee in-service classes which may include developing instructional materials, demonstrating use of standardized recipes, convenience food preparation.	TOP			
24. Assists with cost control by compiling an accurate meal census, determining recipe and portion costs and preparing schedules.	TOP			

Entry-Level Competency (a)	Consensus Response (b)	Do You Agree With Consensus Response (c)		Reason(s) Why You Differ [between b and c] (d)
		Yes	No	
32. Checks trays for quality, portion sizes and accuracy of all regular, modified diets and nourishments.	TOP			
33. Communicates effectively in talking with clientele and/or employee.	TOP			
52. Demonstrates ability in making on-the-job adjust- ments when unexpected situations arise.	TOP			
58. Demonstrates personal char- acteristics which mark leadership ability among co-workers and gains the confidence of co-workers, subordinates and superiors.	TOP			
77. Directs the preparation of quantity food within an established production system following standard- ized recipes, preparation and service methods and food handling techniques to in- sure acceptable standards.	TOP			

Entry-Level Competency (a)	Consensus Response (b)	Do You Agree With Consensus Response (c)		Reason(s) Why You Differ [between b and c] (d)
		Yes	No	
78. Directs the service and delivery of food to patients, students, staff to promote client satisfaction.	TOP			
92. Exhibit a broad understanding of food, its composition, basis preparation principles, quantity production, availability, processing, fabrication and marketing.	TOP			
171. Reports departmental status and problems to dietitian.	TOP			
7. Applies the technique of work simplification to improving tasks of various jobs.	SECOND			
8. Appreciates sanitation.	SECOND			
9. Approaches clients in care of the health care program with professional tact at all times but especially when working with clients who must follow modified diet plans.	SECOND			

Entry-Level Competency (a)	Consensus Response (b)	Do You Agree With Consensus Response (c)		Reason(s) Why You Differ [between b and c] (d)
		Yes	No	
13. Assists in development of specifications for food, small equipment and supplies to assure quality and cost control.	SECOND			
17. Assists in maintaining a budget.	SECOND			
20. Assists in the planning and service of special functions such as teas, dinners, luncheons and banquets.	SECOND			
21. Assists in up-dating job descriptions and specifications for dietary department personnel.	SECOND			
23. Assists the dietitian/nutritionist with the adaptation and implementation of policies relating to employees of the division.	SECOND			

Entry-Level Competency (a)	Consensus Response (b)	Do You Agree With Consensus Response (c)		Reason(s) Why You Differ [between b and c] (d)
		Yes	No	
25. Attends staff meetings and prepares appropriate records and reports such as cost control reports, productivity, etc.	SECOND			
30. Checks food deliveries against specifications and purchase orders.	SECOND			
31. Checks sanitation and safety of dietetics departments.	SECOND			
34. Communicates with employees regarding motivation and grievances, studies reasons for absenteeism and turn-over.	SECOND			
36. Compiles information for monthly reports on food cost, labor cost and supply cost.	SECOND			
37. Compiles inventories and other operational data.	SECOND			

Entry-Level Competency (a)	Consensus Response (b)	Do You Agree With Consensus Response (c)		Reason(s) Why You Differ [between b and c] (d)
		Yes	No	
39. Conducts in-service training classes for employees. Document attendance.	SECOND			
48. Defines objectives clearly in planning work for others and self.	SECOND			
49. Delegates duties to competent individuals.	SECOND			
50. Demonstrates a comprehensive knowledge of nutrition as a vital science related to the human condition, the basic for vibrant health, wholesome dental condition, and sound mental health.	SECOND			
56. Demonstrates knowledge of quality characteristics of food by following only standard cooking procedures of high quality food preparation.	SECOND			

Entry-Level Competency (a)	Consensus Response (b)	Do You Agree With Consensus Response (c)		Reason(s) Why You Differ [between b and c] (d)
		Yes	No	
59. Demonstrates the importance of human relations both with employees and the public served.	SECOND			
63. Determines yield of products.	SECOND			
73. Develops work schedules of labor times for production of food items, assign work equally.	SECOND			
76. Directs food service for special activities.	SECOND			
83. Estimates quantity of food for one day for specific number of servings.	SECOND			
98. Gathers data according to prescribed methods for use in evaluation of food service systems.	SECOND			
100. Gathers information regarding food use and wastage.	SECOND			

Entry-Level Competency (a)	Consensus Response (b)	Do You Agree With Consensus Response (c)		Reason(s) Why You Differ [between b and c] (d)
		Yes	No	
104. Improves sanitation, safety, and security standards.	SECOND			
105. Improves standards of food preparation.	SECOND			
110. Identifies the responsibilities and objectives of the food service department.	SECOND			
112. Instructs proper use and care of equipment, utensils and supplies.	SECOND			
117. Maintains a preventive maintenance program for all equipment.	SECOND			
120. Maintains an established system of food sales and merchandising.	SECOND			
124. Maintains food production systems by supervision of specific units of production.	SECOND			

Entry-Level Competency (a)	Consensus Response (b)	Do You Agree With Consensus Response (c)		Reason(s) Why You Differ [between b and c] (d)
		Yes	No	
130. Maintains the use of standardized recipes as an effective means of cost and inventory control.	SECOND			
131. Makes production orders through written work sheets.	SECOND			
136. Motivates employees to follow policies and procedures for nutritional care services.	SECOND			
148. Plans employee schedules effectively.	SECOND			
149. Plans food service for special activities.	SECOND			
152. Plans in-service education classes for employees.	SECOND			
155. Plans orientation and on-job training programs for personnel.	SECOND			
157. Prepares and/or plans orders for food, supplies and equipment.	SECOND			

Entry-Level Competency (a)	Consensus Response (b)	Do You Agree With Consensus Response (c)		Reason(s) Why You Differ [between b and c] (d)
		Yes	No	
161. Processes written orders related to the service of diets.	SECOND			
162. Promotes effective communications with members of the food service and health care service staffs.	SECOND			
166. Reassigns non-supervisory employees in case of personnel shortage.	SECOND			
167. Recommends changes in food service or production systems.	SECOND			
168. Recommends improvements for facility and equipment layout.	SECOND			
172. Reports patient, resident or client's acceptance of food.	SECOND			
181. Shares updated professional information with staff.	SECOND			

Entry-Level Competency (a)	Consensus Response (b)	Do You Agree With Consensus Response (c)		Reason(s) Why You Differ [between b and c] (d)
		Yes	No	
201. Trains employees in order to achieve a predetermined goal providing job satisfaction both to self and to employees.	SECOND			
202. Understands how people learn and the principles of education as well as educational techniques and the ability to motivate.	SECOND			
203. Understands management system and suitability for a particular operation.	SECOND			
207. Understands the importance of portion control.	SECOND			
214. Uses of basic accepted accounting procedures and practices.	SECOND			

Thank you. Please return by September 21, 1977.

APPENDIX D

ANALYSIS OF RESPONDENT'S PROFESSIONAL

INFORMATION

TABLE VIII

ANALYSIS OF RESPONDENT'S PROFESSIONAL INFORMATION

Respondent No.	Years an ADA Member	Highest Degree Held	Requirements for ADA Membership Were Met by			Experience in Dietetic Training Programs Other Than Dietetic Technician			Experience in Dietetic Technician Programs					
			Dietetic Intern-ship	Work Exp.	Master's Plus Work Exp.	Dietetic Intern-ship	CUP*	Dietetic Asst.	Yrs. Exp.	Emphasis		Role		Adviser
										N.C.	FSM	Class Exp.	Field Exp.	
2	5-9	M.S.	X			X		X	3-5	X	X	X		
3	10-14	M.S.	X						3-5	X		X	X	
4	10-14	Ph.D.	X						0-2		X	X	X	
6	20-24	B.S.	X					X	5-8	X	X	X	X	
7	5-9	M.S.	X			X		X	3-5		X	X	X	
9	10-14	M.S.	X			X	X		3-5	X		X	X	
10	24/more	M.S.	X			X		X	3-5	X				
11	5-9	B.S.	X						3-5		X	X	X	
12	10-14	M.S.	X				X		0-2	X	X	X	X	
13	15-19	M.S.	X			X			5-8		X	X	X	
14	5-9	M.S.	X						3-5		X	X	X	
15	20-24	M.S.		X					3-5	X		X	X	
16	10-14	M.S.			X			X	0-2	X		X	X	
17	24/more	M.A.	X						3-5	X		X	X	
18	10-14	Ph.D.	X			X		X	5-8	X	X	X	X	
19	5-9	M.A.			X			X	3-5	X		X	X	
20	10-14	M.S.			X				3-5	X	X	X	X	
21	24/more	Ph.D.	X			X		X	5-8		X	X	X	X
22	0-4	M.S.			X		X		0-2	X		X	X	
23	24/more	B.S.	X			X			0-2	X	X	X	X	

*CUP = Coordinated Undergraduate Program.

APPENDIX E

REASONS FOR DISAGREEING WITH TOP

PRIORITY COMPETENCIES

TABLE IX

REASONS FOR DISAGREEING WITH TOP PRIORITY COMPETENCIES

Competency Number and Statement	Reason(s) for Disagreeing	Number of Respondents Disagreeing with Each
32. Checks trays for quality, portion sizes and accuracy of all regular, modified diets and nourishments.	This (actual checking) can be done by a well trained tray-line employee.	1
	More appropriate for nutritional care dietetic technician.	1
	Would rate this lower, although it may depend on the size of the operation. I am not sure this is a prestigious task, although many practitioners believe it is.	1
	Tray checking is not a management function. It should be delegated to another supervisor.	1
33. Communicates effectively in talking with clientele and/or employee.	Second-talking is too limited. #162 better.	1
52. Demonstrates ability in making on-the-job adjustments when unexpected situations arise.	This is a long-term goal. The level of competence for the entry-level DT/FSM in a situation, coming into a job, should not expect this. I feel there is not enough continued experiences in the DT/FSM educational program to accomplish this.	1

TABLE IX (Continued)

Competency Number and Statement	Reason(s) for Disagreeing	Number of Respondents Disagreeing with Each
78. Directs the service and delivery of food to patients, students, staff to promote client satisfaction.	This is <u>supervisor</u>, not management function.	1
92. Exhibit a broad understanding of food, its composition, basis preparation principles, quantity production, availability, processing, fabrication and marketing.	Too much expected of only an A.S. degree person. I know B.S. and experienced people with less than a broad understanding of all the following. Do you?	1
	A "broad understanding" would not, in my opinion, enable a D.T. to "direct the preparation of quantity foods." A D.T. should be able to analyze products and correct preparation errors which, I think, requires more than a "broad understanding."	1

APPENDIX F

CATEGORIZING TOP PRIORITY COMPETENCIES INTO

THE DOMAINS OF LEARNING AND SUBJECT

MATTER AREAS

125

TABLE X

CATEGORIZING TOP PRIORITY COMPETENCIES INTO THE DOMAINS
OF LEARNING AND SUBJECT MATTER AREAS

Competency Number	Competency	Domain of Learning	Subject Matter Area
1	Adheres to professional standards of behavior and attitude.	Affective Domain 5.1, Generalized Set; Cognitive Domain, level 3, Application.	Professional Standards
10	Assists dietitian with employee in-service classes which may include developing instructional materials, demonstrating use of standardized recipes, convenience food preparation.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis; Psychomotor Domain, level 3, Guided Responses.	Education
24	Assists with cost control by compiling an accurate meal census, determining recipe and portion costs and preparing schedules.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Records
32	Checks trays for quality, portion sizes and accuracy of all regular, modified diets and nourishments.	Affective Domain 2, Responding; Cognitive Domain, level 6, Evaluation.	Food Preparation and Delivery
33	Communicates effectively in talking with clientele and/or employees.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Communication

TABLE X (Continued)

Competency Number	Competency	Domain of Learning	Subject Matter Area
52	Demonstrates ability in making on-the-job adjustments when unexpected situations arise.	Affective Domain 3, Valuing; Cognitive Domain, level 3, Application; Psychomotor Domain, level 4, Mechanism.	Professional Standards
58	Demonstrates personal characteristics which mark leadership ability among co-workers and gains the confidence of co-workers, subordinates and superiors.	Affective Domain 3, Valuing; Cognitive Domain, level 3, Application.	Professional Standards
77	Directs the preparation of quantity food within an established production system following standardized recipes, preparation and service methods and food handling techniques to insure acceptable standards.	Affective Domain 2, Responding; Cognitive Domain, level 6, Evaluation.	Food Preparation and Delivery
78	Directs the service and delivery of food to patients, students, staff to promote client satisfaction.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Food Preparation and Delivery
92	Exhibit a broad understanding of food, its composition, basic preparation principles, quantity production, availability, processing, fabrication and marketing.	Affective Domain 2, Responding; Cognitive Domain, level 3, Application.	Food Preparation and Delivery

TABLE X (Continued)

Competency Number	Competency	Domain of Learning	Subject Matter Area
171	Reports departmental status and problems to dietitian.	Affective Domain 2, Responding; Cognitive Domain, level 6, Evaluation.	Communications

APPENDIX G

COMPETENCY STATEMENTS RANKED BY LESS THAN

75 PERCENT OF THE PARTICIPANTS AS

BEING OF SECOND PRIORITY

TABLE XI

COMPETENCY STATEMENTS RANKED BY LESS THAN 75 PERCENT OF
THE PARTICIPANTS AS BEING OF SECOND PRIORITY

Competence Statement Number	Competency Statement
8	Appreciates sanitation.
9	Approaches clients in care of the health care program with professional tact at all times but especially when working with clients who must follow modified diet plans.
31	Checks sanitation and safety of dietetics departments.
39	Conducts in-service education classes for employees. Document attendance.
48	Defines objectives clearly in planning work for others and self.
50	Demonstrates a comprehensive knowledge of nutrition as a vital science related to the human condition, the basic for vibrant health, wholesome dental condition, and sound mental health.
56	Demonstrates knowledge of quality characteristics of food by following only standard cooking procedures of high quality food preparation.
59	Demonstrates the importance of human relations both with employees and the public served.
73	Develops work schedules of labor times for production of food items, assigns work equally.
76	Directs food service for special activities.
98	Gathers data according to prescribed methods for use in evaluation of food service systems.
104	Improves sanitation, safety, and security standards.
110	Identifies the responsibilities and objectives of the food service department.
148	Plans employee schedules effectively.

TABLE XI (Continued)

Competence Statement Number	Competency Statement
149	Plans food service for special activities.
152	Plans in-service education classes for employees.
155	Plans orientation and on-the-job training programs for personnel.
157	Prepares and/or plans orders for food, supplies and equipment.
161	Processes written orders related to the service of diets.
162	Promotes effective communications with members of the food service and health care service staff.
166	Reassigns non-supervisory employees in case of personnel shortage.
172	Reports patient, resident or client's acceptance of food.
181	Shares updated professional information with staff.
207	Understands the importance of portion control.

APPENDIX H

REASONS FOR DISAGREEING WITH SECOND

PRIORITY COMPETENCIES

TABLE XII

REASONS FOR DISAGREEING WITH SECOND PRIORITY COMPETENCIES

Competency Number and Statement	Reason(s) for Disagreement	Number of Respondents Disagreeing with Each
8. Appreciates sanitation.	Should be top priority (for the welfare of patients, should be a "top priority"; she should do more than appreciate it--she should make sure things are sanitary and this should be top; I believe this deserves "top" ranking--sanitation is fundamental to any foodservice facility, but especially in a health care institution; proper sanitation should be top priority for anyone in foodservice; should be "top" there is too much carelessness and/or ignorance regarding sanitation and food handline).	6
	How do we teach appreciation?	1
	She or he "better well" do more than appreciate sanitation.	1
	While I agree in theory with these competency statements, the use of vague terms such as "communicates", "effectively", "importance", "appreciates", and "understands", would seem to oppose the objective of identifying competence areas. The expression of competencies in behavioral terms would seem preferable. (This reason will be referred to as "See #4" for continued use in this table.)	1

TABLE XII (Continued)

Competency Number and Statement	Reason(s) for Disagreement	Number of Respondents Disagreeing with Each
9. Approaches clients in care of the health care program with professional tact at all times but especially when working with clients who must follow modified diet plans.	Should be top (consider the damage which can be done if professional tact is not used at all times). I believe this should receive top priority.	2
	This depends on the amount of client contact.	1
	Would be more appropriate for nutritional care.	1
	A D.T. should be tactful at all times--with all clients/customers/employees, regardless of the clients/customers/employees problems. (Are the diabetic's problems worse than a man's who is trying to live on a regular diet on $80 a month?)	1
	If this person performs many management functions I question the possibility of her/him having time to work with clients on modified diets, or possessing indepth knowledge for this function.	1
13. Assists in development of specifications for food, small equipment and supplies to assure quality and cost control.	Should be 1st--the students are taught heavily in this area.	1
17. Assists in maintaining a budget.	Included in #36.	1

TABLE XII (Continued)

Competency Number and Statement	Reason(s) for Disagreement	Number of Respondents Disagreeing with Each
21. Assists in up-dating job descriptions and specifications for dietary department personnel.	As a supervisor she should be doing this--I would rank it TOP. (Should be first--students have heavy background here and very much practical.)	2
25. Attends staff meetings and prepares appropriate records and reports such as cost control reports, productivity, etc.	On TOP (would think this would be of top priority.	2
30. Checks food deliveries against specifications and purchase orders.	Delegate to supervisor or store room manager.	1
	Assign duty to a food purchasing personnel.	1
31. Checks sanitation and safety of dietetics departments.	See #104.	1
	Same reason as #8.	1
	I believe that sanitation should be top priority. It will not be of any benefit if the patients are fed, the budget is met and the clientele die from food poisoning.	1
34. Communicates with employees regarding motivation and grievances, studies reasons for absenteeism and turnover.	See #59.	1
	See #33.	1

TABLE XII (Continued)

Competency Number and Statement	Reason(s) for Disagreement	Number of Respondents Disagreeing with Each
36. Compiles information for monthly reports on food cost, labor cost and supply cost.	Could be combined with #24--top priority.	1
37. Compiles inventories and other operational data.	Included in #36.	1
	Could be combined with #24--top priority.	1
39. Conducts in-service education classes for employees. Document attendance.	Included in #10.	1
	Think #10 identifies the entry-level competency better.	1
	Do more than document attendance, "evaluate in-service."	1
	I feel that this should be considered as a TOP priority competency. The entry-level D.T. should be able to conduct certain, simple in-service education classes. This should be one area where a D.T. could relieve the dietitian of some simple tasks.	1

TABLE XII (Continued)

Competency Number and Statement	Reason(s) for Disagreement	Number of Respondents Disagreeing with Each
48. Defines objectives clearly in planning work for others and self.	Too vague.	1
	TOP-Management. (In order to function effectively objectives must be clearly defined and ranked according to importance--Top Priority.)	2
49. Delegates duties to competent individuals.	It would seem to me that one should delegate duties commensurate with abilities of employees. (Is this semantics?)	1
50. Demonstrates a comprehensive knowledge of nutrition as a vital science related to the human condition, the basic for vibrant health, wholesome dental conditions, and sound mental health.	A top priority for any person in the health field. (This one should have "Top" priority in my opinion, for the individual's own health and to set a good example for others; this should provide a sound basis of knowledge on which future learning will be built priority.)	3
	Some D.T. programs don't even require a basic "science" course. To demonstrate a comprehensive knowledge would be impossible.	1
	This technician would have only a basic knowledge of nutrition.	1

TABLE XII (Continued)

Competency Number and Statement	Reason(s) for Disagreement	Number of Respondents Disagreeing with Each
56. Demonstrates knowledge of quality characteristics of food by following only standard cooking procedures of high quality food prepar preparation.	Included in #77.	1
	Top priority.	2
59. Demonstrates the importance of human relations both with employees and the public service.	I believe this should be "top" (should be a top priority for any employee in any food service establishment; since top priority was given to communicating effectively, I believe this competency is as important).	3
63. Determines yield of products.	Included in #77.	1
	Similar to #33.	1
73. Develops work schedules of labor times for production of food items, assign work equally.	Technicians learn this on the job. "Labor hours to prepare food" a R.D. job.	1
	Helps to develop work schedules.	1
	Certainly a higher rating.	1
76. Directs food service for special activities.	Included in #20. (See note #20; I consider this a repetition of #20.)	3
	This, also, should be another top priority for a D.T. competency.	1

TABLE XII (Continued)

Competency Number and Statement	Reason(s) for Disagreement	Number of Respondents Disagreeing with Each
83. Estimates quantity of food for one day for specific number of servings.	Included in #157.	1
	Part of a larger function.	1
98. Gathers data according to prescribed methods for use in evaluation of food service systems.	Top priority (I think this should accompany #24 top priority).	2
	Higher level management function.	1
100. Gathers information regarding food use and wastage.	See #172.	1
	Compiles information.	1
104. Improves sanitation, safety, and security standards.	Top priority.	2
	Same as #8.	1
	Recommends improvements.	1
105. Improves standards of food preparation.	Included in #77.	1
	Only if necessary.	1
110. Identifies the responsibilities and objectives of the food service department.	Top (think this should be of higher priority as "they" say, "If you don't know where you are going, you will wind up some place else.").	2
	I think this is too high level for D.T.	1

TABLE XII (Continued)

Competency Number and Statement	Reason(s) for Disagreement	Number of Respondents Disagreeing with Each
112. Instructs proper use and care of equipment, utensils and supplies.	Top priority.	1
124. Maintains food production systems by supervision of specific units of production.	Included in #77, #78, #166 (think this is covered in #77, which is a top priority competency).	2
130. Maintains the use of standardized recipes as an effective means of cost and inventory control.	Included in #77. This should be a top priority because if #77 is classified as top, this should be.	1 1
136. Motivates employees to follow.	See #202. Not the management technician's responsibility.	1 1
148. Plans employee schedules effectively.	This is rated top on #24. This is repetitious. Top.	1 1 1

TABLE XII (Continued)

Competency Number and Statement	Reason(s) for Disagreement	Number of Respondents Disagreeing with Each
149. Plans food service for special activities.	Included in #20 (see note #20).	2
	This is repetitious.	1
	Helps to plan food service, etc.	1
152. Plans in-service education classes for employees.	Included in #10.	1
	Might better read "plans and conducts in-service education classes".	1
	Higher than second--vital, especially to nursing homes.	1
155. Plans orientation and on-job training programs for personnel.	Carries out plans of consultant or R.D.	1
	Implements the plans, etc.	1
	Delegate to supervisor.	1
157. Prepares and/or plans orders for food, supplies and equipment.	Top priority (this should be top).	2
	This may assume evaluation for need and may be too high level.	1

TABLE XII (Continued)

Competency Number and Statement	Reason(s) for Disagreement	Number of Respondents Disagreeing with Each
161. Processes written orders related to the service of diets.	More appropriate for nutritional care.	1
	An office person could do this.	1
	I checked "no" because I am not sure of what this function would involve.	1
	Assign to a clerk.	1
162. Promotes effecitve communications with members of the food service and health care service staffs.	Top priority (see #33 would be top, if better stated; almost identical to competency #33 and should be ranked top priority).	3
166. Reassigns non-supervisory employees in case of personnel shortage.	Top—similar to #52. (This appears to be closely related to #52. This should have a top priority rating.)	2
	Included in #52.	1
	Repetition.	1
	Too specific—see #148 or combine with #148.	1
167. Recommends changes in food service or production system.	Not as important as other functions.	1
	Only as needed.	1

TABLE XII (Continued)

Competency Number and Statement	Reason(s) for Disagreement	Number of Respondents Disagreeing with Each
168. Recommends improvements for facility and equipment lay-out.	See #167 (#167 is better).	2
172. Reports patient, resident or client's acceptance of food.	Top priority.	1
	This is a function of D.T. in nutrition care. (Registered Dietitian or Nutrition Technician.)	2
181. Shares updated professional information with staff.	R.D. responsibility.	1
	This should require the achievement of #121.	1
	No reason to put this in second place, as D.T.'s better represent themselves or they will not be heard.	1
201. Trains employees in order to achieve a predetermined goal providing job satisfaction both to self and to employees.	See #10.	1
202. Understands how people learn and the principles of education as well as educational techniques and the ability to motivate.	In order to communicate effectively and teach for behavior modification, this competency should receive top priority.	1

TABLE XII (Continued)

Competency Number and Statement	Reason(s) for Disagreement	Number of Respondents Disagreeing with Each
203. Understands management system and suitability for a particular operation.	Too vague.	1
	Top.	1
207. Understands the importance of portion control.	Top priority (this should be "Top"; top).	3
	Incorporated in #77.	1
	See note #33. Do think it is included in other competency statements, although not directly stated.	1
	If the individual is preforming this function of portion control (included elsewhere) he must understand its importance.	1
	She or he "better well" do more than "understand".	1
214. Uses of basic accepted accounting procedures and practices.	Fuzzy competence.	1

APPENDIX I

CATEGORIZING 29 SECOND PRIORITY COMPETENCIES

INTO THE DOMAINS OF LEARNING AND SUBJECT

MATTER AREAS

TABLE XIII

CATEGORIZING 29 SECOND PRIORITY COMPETENCIES INTO THE DOMAINS
OF LEARNING AND SUBJECT MATTER AREAS

Competency Number	Competency	Domain of Learning	Subject Matter Area
7	Applies the technique of work simplification to improving tasks of various jobs.	Affective Domain 2, Responding; Cognitive Domain, level 3, Application.	Facility and Equipment Layout
13	Assists in the development of specifications for food, small equipment and supplies to assure quality and cost control.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Purchasing
17	Assists in maintaining a budget.	Affective Domain 2, Responding; Cognitive Domain, level 3, Application.	Records
20	Assists in the planning and service of special functions such as teas, dinners, luncheons and banquets.	Affective Domain 2, Responding; Cognitive Domain, level 3, Application; Psychomotor Domain, level 3, Guided Responses.	Food Preparation and Delivery
21	Assists in up-dating job descriptions and specifications for dietary department personnel.	Affective Domain 2, Responding; Cognitive Domain, level 3, Application.	Organization

TABLE XIII (Continued)

Competency Number	Competency	Domain of Learning	Subject Matter Area
23	Assists the dietitian/nutritionist with the adaptation and implementation of policies relating to employees of the division.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Organization
25	Attends staff meetings and prepares appropriate records and reports such as cost control reports, productivity, etc.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Records
30	Checks food deliveries against specifications and purchase orders.	Affective Domain 2, Responding; Cognitive Domain, level 6, Evaluation.	Purchasing
34	Communicates with employees regarding motivation and grievances, studies reasons for absenteeism and turnover.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Communications
36	Compiles information for monthly reports on food cost, labor cost and supply cost.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Records
37	Compiles information and other operational data.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Records

TABLE XIII (Continued)

Competency Number	Competency	Domain of Learning	Subject Matter Area
49	Delegates duties to competent individuals.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Communications
63	Determines yield of products.	Affective Domain 2, Responding; Cognitive Domain, level 4, Analysis.	Food Preparation and Delivery
83	Estimates quantity of food for one day for specific number of servings.	Affective Domain 2, Responding; Cognitive Domain, level 3, Application.	Food Preparation and Delivery
100	Gathers information regarding food use and wastage.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Food Preparation and Delivery
105	Improves standards of food preparation.	Affective Domain 2, Responding; Cognitive Domain, level 3, Application.	Food Preparation and Delivery
112	Instructs proper use and care of equipment, utensils and supplies.	Affective Domain 2, Responding; Cognitive Domain, level 3, Application; Psychomotor Domain, level 4, Mechanism.	Education
117	Maintains a preventive maintenance program for all equipment.	Affective Domain 2, Responding; Cognitive Domain, level 3, Application.	Sanitation and Safety

TABLE XIII (Continued)

Competency Number	Competency	Domain of Learning	Subject Matter Area
120	Maintains an established system of food sales and merchandising.	Affective Domain 2, Responding; Cognitive Domain, level 3, Application.	Food Preparation and Delivery
124	Maintains food production systems by supervision of specific units of production.	Affective Domain 2, Responding; Cognitive Domain, level 3, Application.	Food Preparation and Delivery
130	Maintains the use of standardized recipes as an effective means of cost and inventory control.	Affective Domain 2, Responding; Cognitive Domain, level 3, Application.	Records
131	Makes production orders through written work sheets.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Food Preparation and Delivery
136	Motivates employees to follow policies and procedures for nutritional care services.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Organization
167	Recommends changes in food service or production systems.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Facility and Equipment Layout
168	Recommends improvements for facility and equipment layout.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Facility and Equipment Layout

TABLE XIII (Continued)

Competency Number	Competency	Domain of Learning	Subject Matter Area
201	Trains employees in order to achieve a predetermined goal providing job satisfaction both to self and to employees.	Affective Domain 2, Responding; Cognitive Domain, level 5, Synthesis.	Education
202	Understands how people learn and the principles of education as well as educational techniques and the ability to motivate.	Affective Domain 2, Responding; Cognitive Domain, level 2, Comprehension.	Education
203	Understands management system and suitability for a particular operation.	Affective Domain 2, Responding; Cognitive Domain, level 2, Comprehension.	Organization
214	Use of basic accepted accounting procedures and principles.	Affective Domain 2, Responding; Cognitive Domain, level 3, Application.	Records

APPENDIX J

FREQUENCY DISTRIBUTION FOR

EDUCATIONAL BACKGROUND

TABLE XIV

FREQUENCY DISTRIBUTION FOR
EDUCATIONAL BACKGROUND

| Competency Priority | Educational Background | | | | | |
| | B.S. | | M.S. | | Ph.D. | |
	Yes	No	Yes	No	Yes	No
1	3	0	14	0	3	0
10	3	0	14	0	3	0
24	3	0	14	0	3	0
32	3	0	11	3	2	1
33	3	0	13	1	3	0
52	3	0	13	1	3	0
58	3	0	14	0	3	0
77	3	0	14	0	3	0
78	3	0	14	0	2	1
92	3	0	12	2	3	0
171	3	0	14	0	3	0
7	3	0	14	0	3	0
8	2	1	8	6	1	2
9	3	0	10	4	1	2
13	3	0	13	1	3	0
17	3	0	13	1	1	3
20	3	0	13	1	2	1
21	3	0	12	2	3	0
23	3	0	14	0	3	0
25	3	0	13	1	2	1
30	3	0	13	1	2	1
31	3	0	11	3	3	0
34	3	0	12	2	3	0
36	3	0	13	1	3	0
37	3	0	12	2	3	0
39	2	1	11	3	3	0
48	3	0	13	1	1	2
49	3	0	13	1	3	0
50	3	0	11	3	1	2
56	3	0	12	2	2	1
59	3	0	12	2	2	1
63	3	0	12	2	2	0
73	3	0	11	3	3	0
76	2	1	12	2	2	1
83	3	0	12	2	3	0
98	3	0	11	3	3	0
100	3	0	12	2	3	0
104	2	1	11	3	3	0
105	3	0	12	2	3	0
110	3	0	12	2	2	1
112	2	1	14	0	3	0
117	3	0	14	0	3	0

TABLE XIV (Continued)

Competency Priority	B.S.		M.S.		Ph.D.	
	Yes	No	Yes	No	Yes	No
120	3	0	14	0	3	0
124	3	0	12	2	3	0
130	2	1	13	1	3	0
131	3	0	14	0	3	0
136	3	0	13	1	2	1
148	3	0	12	2	2	1
149	3	0	11	3	2	1
152	3	0	12	2	2	1
155	3	0	12	2	2	1
157	3	0	11	3	3	0
161	3	0	11	3	2	1
162	3	0	12	2	2	1
166	2	1	11	3	2	1
167	2	1	13	1	3	0
168	2	1	13	1	3	0
172	2	1	13	1	2	1
181	3	0	11	3	3	0
201	3	0	13	1	3	0
202	3	0	14	0	2	1
203	3	0	13	1	2	1
207	2	1	9	5	2	1
214	3	0	13	1	3	0

APPENDIX K

FREQUENCY DISTRIBUTION FOR ADA

EDUCATIONAL REGIONS

TABLE XV

FREQUENCY DISTRIBUTION FOR ADA
EDUCATIONAL REGIONS

| Competency Priority | ADA Educational Regions | | | | | | | | | | | |
| | A | | B | | C | | D | | E | | F | |
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
1	2	0	6	0	2	0	3	0	3	0	4	0
10	2	0	6	0	2	0	3	0	3	0	4	0
24	2	0	6	0	2	0	3	0	3	0	4	0
32	2	0	5	1	2	0	2	1	1	2	4	0
33	2	0	6	0	1	1	3	0	3	0	4	0
52	2	0	5	1	2	0	3	0	3	0	4	0
58	2	0	6	0	2	0	3	0	3	0	4	0
77	2	0	6	0	2	0	3	0	3	0	4	0
78	2	0	6	0	2	0	3	0	2	1	4	0
92	2	0	6	0	2	0	2	1	2	1	4	0
171	2	0	6	0	2	0	3	0	3	0	4	0
7	2	0	6	0	2	0	3	0	3	0	4	0
8	0	2	3	3	1	1	2	1	1	2	4	0
9	2	0	5	1	2	0	1	2	1	2	3	1
13	2	0	5	1	2	0	3	0	3	0	4	0
17	2	0	6	0	1	1	3	0	3	0	4	0
20	2	0	6	0	2	0	3	0	3	0	4	0
21	2	0	4	2	2	0	3	0	3	0	4	0
23	2	0	6	0	2	0	3	0	3	0	4	0
25	2	0	6	0	2	0	3	0	1	2	4	0
30	2	0	6	0	2	0	3	0	2	1	3	1
31	2	0	5	1	1	1	2	1	3	0	4	0
34	2	0	6	0	1	1	3	0	2	1	4	0
36	2	0	6	0	2	0	3	0	2	1	4	0
37	2	0	6	0	1	1	3	0	2	1	4	0
39	2	0	5	1	1	1	3	0	2	1	3	1
48	2	0	6	0	1	1	2	1	2	1	4	0
49	2	0	6	0	2	0	3	0	2	1	4	0
50	2	0	5	1	2	0	1	2	2	1	3	1
56	2	0	5	1	1	1	2	1	3	0	4	0
59	2	0	5	1	2	0	2	1	3	0	3	1
63	2	0	5	1	1	1	3	0	3	0	4	0
73	2	0	5	1	1	1	2	1	3	0	4	0
76	2	0	6	0	1	1	3	0	1	2	3	1
83	2	0	6	0	1	1	3	0	3	0	3	1
98	2	0	5	1	2	0	3	0	2	1	3	1
100	2	0	6	0	1	1	3	0	3	0	3	1
104	1	1	5	1	1	1	3	0	3	0	3	1
105	2	0	6	0	1	1	3	0	3	0	3	1
110	2	0	6	0	2	0	2	1	1	2	4	0
112	1	1	6	0	2	0	3	0	3	0	4	0
117	2	0	6	0	2	0	3	0	3	0	4	0

TABLE XV (Continued)

Competency Priority	ADA Educational Regions											
	A		B		C		D		E		F	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
120	2	0	6	0	2	0	3	0	3	0	4	0
124	2	0	6	0	1	1	3	0	2	1	4	0
130	2	0	6	0	1	1	3	0	3	0	3	1
131	2	0	6	0	2	0	3	0	3	0	4	0
136	2	0	6	0	1	1	3	0	2	1	4	0
148	2	0	5	1	2	0	3	0	2	1	3	1
149	2	0	6	0	1	1	2	1	1	2	4	0
152	2	0	5	1	1	1	3	0	2	1	4	0
155	2	0	6	0	1	1	2	1	2	1	4	0
157	2	0	5	1	1	1	2	1	3	0	4	0
161	2	0	5	1	2	0	2	1	2	1	3	1
162	2	0	6	0	1	1	2	1	2	1	4	0
166	2	0	4	2	1	1	3	0	2	1	3	1
167	1	1	6	0	2	0	3	0	3	0	3	1
168	1	1	6	0	1	1	3	0	3	0	4	0
172	1	1	6	0	2	0	3	0	2	1	3	1
181	2	0	5	1	1	1	3	0	2	1	4	0
201	2	0	6	0	1	1	3	0	3	0	4	0
202	2	0	6	0	2	0	2	1	3	0	4	0
203	2	0	6	0	1	1	3	0	2	1	4	0
207	1	1	5	1	1	1	3	0	1	2	2	2
214	2	0	6	0	1	1	3	0	3	0	4	0

APPENDIX L

FREQUENCY DISTRIBUTION FOR EXPERIENCE

IN PARA-PROFESSIONAL PROGRAMS

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TABLE XVI

FREQUENCY DISTRIBUTION FOR EXPERIENCE
IN PARA-PROFESSIONAL PROGRAMS

Competency Priority	Experience in Para-Professional Programs											
	Dietetic Assistant						Dietetic Technician					
	0-2		3-5		5-8		0-2		3-5		5-8	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
1	3	0	3	0	3	0	5	0	11	0	4	0
10	3	0	3	0	2	0	5	0	11	0	4	0
24	3	0	3	0	3	0	5	0	11	0	4	0
32	2	1	3	0	2	1	4	1	9	2	3	1
33	3	0	2	1	3	0	5	0	10	1	4	0
52	3	0	3	0	3	0	5	0	10	1	4	0
58	3	0	3	0	3	0	5	0	11	0	4	0
77	3	0	3	0	3	0	5	0	11	0	4	0
78	3	0	2	1	3	0	5	0	11	0	3	1
92	2	1	3	0	3	0	4	1	10	1	4	0
171	3	0	3	0	3	0	5	0	11	0	4	0
7	3	0	3	0	3	0	5	0	11	0	4	0
8	2	1	2	1	1	2	3	2	6	5	2	2
9	2	1	2	1	2	1	2	3	9	2	3	1
13	3	0	3	0	3	0	5	0	11	0	3	1
17	3	0	2	1	3	0	5	0	10	1	4	0
20	3	0	3	0	3	0	5	0	11	0	4	0
21	3	0	3	0	3	0	5	0	10	1	3	1
23	3	0	3	0	3	0	5	0	11	0	4	0
25	2	1	2	1	3	0	5	0	10	1	3	1
30	3	0	1	2	3	0	4	1	11	0	3	1
31	3	0	2	1	3	0	5	0	8	3	4	0
34	2	1	2	1	3	0	5	0	9	2	4	0
36	2	1	3	0	3	0	5	0	10	1	4	0
37	2	1	2	1	3	0	5	0	9	2	4	0
39	2	1	2	1	3	0	4	1	8	3	4	0
48	3	0	1	2	3	0	4	1	10	1	3	1
49	2	1	3	0	3	0	5	0	10	1	4	0
50	3	0	3	0	1	2	2	3	10	1	3	1
56	3	0	2	1	3	0	4	1	9	2	4	0
59	2	1	3	0	3	0	3	2	10	1	4	0
63	3	0	2	1	3	0	5	0	9	2	4	0
73	3	0	2	1	3	0	4	1	10	1	3	1
76	2	1	2	1	2	1	4	1	9	2	3	1
83	3	0	1	2	3	0	4	1	10	1	4	0
98	2	1	2	1	3	0	4	1	9	2	4	0
100	3	0	1	2	3	0	4	1	10	1	4	0
104	3	0	1	2	2	1	4	1	9	2	3	1
105	3	0	1	2	3	0	4	1	10	1	4	0
110	2	1	2	1	3	0	4	1	10	1	3	1
112	3	0	3	0	2	1	5	0	11	0	3	1
117	3	0	3	0	3	0	5	0	11	0	4	0

TABLE XVI (Continued)

Competency Priority	Experience in Para-Professional Programs											
	Dietetic Assistant						Dietetic Technician					
	0-2		3-5		5-8		0-2		3-5		5-8	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
120	3	0	3	0	3	0	5	0	11	0	4	0
124	2	1	2	1	3	0	5	0	9	2	4	0
130	3	0	2	1	3	0	4	1	10	1	4	0
131	3	0	3	0	3	0	5	0	11	0	4	0
136	3	0	1	2	3	0	5	0	10	1	3	1
148	2	1	3	0	2	1	5	0	9	2	3	1
149	2	1	2	1	2	1	4	1	9	2	3	1
152	3	0	2	1	2	1	5	0	10	1	1	2
155	3	0	1	2	3	0	4	1	10	1	3	1
157	3	0	2	1	3	0	4	1	9	2	4	0
161	3	0	2	1	2	1	4	1	9	2	3	1
162	2	1	2	1	3	0	4	1	9	2	4	0
166	3	0	2	1	2	1	4	1	8	3	3	1
167	3	0	2	1	2	1	4	1	11	0	3	1
168	3	0	2	1	2	1	5	0	10	1	3	1
172	3	0	2	1	1	2	5	0	10	1	2	2
181	2	1	2	1	3	0	5	0	9	2	3	1
201	3	0	2	1	3	0	5	0	10	1	4	0
202	3	0	3	0	3	0	4	1	11	0	4	0
203	3	0	1	2	3	0	5	0	10	1	3	1
207	1	2	2	1	0	3	5	0	6	5	2	2
214	3	0	2	1	3	0	5	0	10	1	4	0

APPENDIX M

FREQUENCY DISTRIBUTION FOR TYPES OF

DIETETIC TECHNICIAN PROGRAMS

TABLE XVII

FREQUENCY DISTRIBUTION FOR TYPES OF
DIETETIC TECHNICIAN PROGRAMS

| Competency Priority | Types of Dietetic Technician Programs | | | |
| | Nutrition Care | | Foodservice Management | |
	Yes	No	Yes	No
1	14	0	12	0
10	14	0	12	0
24	14	0	12	0
32	12	2	8	4
33	13	1	12	0
52	13	1	12	0
58	14	0	12	0
77	14	0	12	0
78	13	1	11	1
92	13	1	10	2
171	14	0	12	0
7	14	0	12	0
8	8	6	8	4
9	10	4	8	4
13	14	0	11	1
17	13	1	12	0
20	14	0	12	0
21	13	1	11	1
23	14	0	12	0
25	13	1	10	2
30	12	2	11	1
31	12	2	11	1
34	13	1	11	1
36	14	0	11	1
37	13	1	11	1
39	11	3	10	2
48	12	2	10	2
49	14	0	11	1
50	11	3	9	3
56	12	2	11	1
59	12	2	11	1
63	12	2	12	0
73	12	2	13	1
76	12	2	9	3
83	12	2	12	0
98	12	2	11	1
100	12	2	12	0
104	10	4	11	1
105	12	2	12	0
110	12	2	9	3
112	13	1	11	1
117	14	0	12	0

TABLE XVII (Continued)

| Competency Priority | Types of Dietetic Technician Programs | | | |
| | Nutrition Care | | Foodservice Management | |
	Yes	No	Yes	No
120	14	0	12	0
124	13	1	11	1
130	12	2	11	1
131	14	0	12	0
136	12	2	11	1
148	12	2	11	1
149	12	2	9	3
152	13	1	10	2
155	11	3	10	2
157	11	3	11	1
161	10	4	10	2
162	13	1	10	2
166	10	4	10	2
167	12	2	11	1
168	12	2	11	1
172	11	3	10	2
181	13	1	10	2
201	13	1	12	0
202	14	0	11	1
203	12	2	11	1
207	9	5	9	3
214	13	1	12	0

VITA λ

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Candidate for the Degree of

Doctor of Education

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Minor Field: Food, Nutrition and Institution Administration

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