AN ABSTRACT OF THE THESIS OF

Suzanne Render Curtis for the degree of Doctor of Philosophy in Nutrition and Food

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Title: Mentor Training: Feasibility of a Web-Based Program to Train Mentors of

   Distance Dietetic Management Graduate Students

Abstract approved: _____

Ann M. Messersmith

The purpose of this research was to evaluate a web-based training program for mentors

of distance graduate students enrolled in a distance Master of Science Dietetic

Management Program. The online training program was designed to consist of four

modules focusing on mentoring skills, communication, research methods and university

mandated guidelines for graduate students. Six mentors with advanced degrees,

representing three regions of the country participated in this case study. Data collection

was accomplished from answers, received by e-mail, to consistent questions identified

in each module, a post-training program semi-structured telephone interview and a

scenario, pairing mentors to practice mentoring skills in a realistic setting, received by

email. Data were analyzed qualitatively, using *QSR. NUD*IST* as a tool to facilitate data

organization. Emergent themes from the data included issues relating to the level of

experience of the participants, technological issues, and outcomes and benefits of the

training program to the mentors. The module perceived as most informative focused on

research methods. The participants agreed the web-based training program was a viable

method to train a mentor living in close proximity to a distance graduate student to assist the student with the research project required for the degree.

Mentor Training: Feasibility of a Web-Based Program to Train
Mentors of Distance Dietetic Management Graduate Students

By

Suzanne Render Curtis

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APPROVED:

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Major Professor, representing Nutrition and Food Management Department

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Head of Department of Nutrition and Food Management

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Dean of Graduate School

I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

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Suzanne Render Curtis, Author

ACKNOWLEDGEMENT

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DEDICATION

To my wonderful family, thank you for believing in me.

MENTOR TRAINING: FEASIBILITY OF A WEB-BASED PROGRAM TO TRAIN MENTORS OF DISTANCE DIETETIC MANANGEMENT GRADUATE STUDENTS

CHAPTER 1

INTRODUCTION

In the realm of education, change has centered on the growing presence of Web-based technology, a change affecting both the educator and the learner. From the perspective of the educator, identification of a technological shift in the classroom from teaching to learning has allowed educators not only to implement new technologies but to alter teaching strategies to correspond with distance delivery methods (1,2). The literature, replete with benefits of education to the learner, identifies positive classroom performance, increased participation and students readily embracing this new technological trend and enjoying the resulting learning experience (3,4,5). Technological change has affected all facets of education, including nutrition and dietetics education.

Throughout the past three decades, the use of computer technology as a viable means of educating nutrition and dietetic practitioners, educators as well as students has progressed from simple tutorials to computer-based multimedia programs and Internet delivered graduate courses (4,5,8-22). The use of computer-assisted programs to teach reasoning skills to undergraduate dietetics students has proved to be a beneficial method of providing experiential learning prior to placement in a clinical setting (4). Video-

based instruction, both live and taped, to hotel and restaurant graduate students produced positive evaluations on course effectiveness and delivery techniques (20). Designing a virtual classroom using Web-technology to improve communication to students, allow for greater access to course materials and provide on-line testing as well as video tutorials has allowed food management educators to provide students with the most current and pertinent subject-related information (19). Dietetic practitioners and educators have been advised to work with, as well as learn from, this technology to advance the profession as well as increase the impact on students and the public (4,20-26). A unique interpretation of this advice was in the form of a technology workshop employing reverse mentoring techniques allowing "technology savvy" nutrition students to teach and improve computer skills to dietetic professionals (19).

Mentoring has traditionally been defined as a relatively long-term relationship between colleagues or peers that provides advice, support and guidance for personal and/or professional development (27-30). A broader definition of mentoring includes attributes such as nurturing, being a role model, teacher, sponsor, encourager and counselor (31). In the field of dietetics, mentoring has been occurring but under the auspices of the term preceptor rather than mentor. The term preceptor encompasses active behaviors such as assisting, supervising and managing as well as teaching, counseling and inspiring the educational experiences of students (32,33). The term mentor also includes similar active behaviors (34, 35), therefore the two terms can be taken in tandem rather than viewed as separate entities. A preceptor can be considered a mentor to a dietetic student and needs to have mentoring skills developed to foster growth within the student (36). Barbrow suggested it is imperative for instructors and

mentors or preceptors in dietetics distance education programs to develop multiple strategies for teaching as dietetics becomes more technology based (24). However, many dietetic professionals were educated prior to these technological advances and many are "hesitant about taking the plunge into technology" (19).

Distance education is not a new concept but one that has been evolving through the advancement of technology (6). Since the mid nineteenth century, distance education has met the needs of students by using distance learning in the form of correspondence courses (37). By 1930, thirty-nine universities in this country offered correspondence teaching (38). However, this form of distance learning as well as radio, television (39), and video and audio lecture tapes are falling by the wayside as a result of web-based technology (40). Currently, web-based instruction is affording students distance learning opportunities to participate in an educational environment that would otherwise be denied (41). Technology involving telecommunications is allowing learning opportunities to be available to the student in the home and at the worksite (21, 42,43). The realization that distance learning provides a viable means for delivering advanced coursework has necessitated the development of new teaching strategies (6). The linking of computers by telecommunication technology currently provides the interaction necessary for distance education to connect the student with the instructor and represents a technology that is "here to stay" (44). For learning to occur, it is important to incorporate unique ideas into new educational materials using distance education as a delivery method (45).

Instructional systems design (ISD) is a process for the systematic analyses of conditions leading to the development of instruction (46). A basic model, foundational

to most ISD approaches, is ADDIE, the acronym derived from the first letter of each of the steps involved. The five steps include: 1) analysis, defining what is to be learned; 2) design, specifying how learning is to occur; 3) development, producing the materials; 4) implementation, installing the materials in a real world context and 5) evaluation, determining the adequacy of instruction and learning (46,47). The ADDIE model has been used as a framework for the design of web-based programs (48). Web-based training has been described as an approach to training by incorporating distance learning involving fusing computer-based training and the technologies of the World Wide Web and the Internet (49-51). The diverse use of Web-based technology in training ranges from the corporate trainer providing company wide training via intranet connections (49), to Web-based multimedia involving text, graphics, animation and sound teaching nutrition education (50), to interactive CD-ROM used to train a highly technical sales force (51).

The lack of evaluation of the effectiveness of distance education programs has been described as a weakness facing educators (6,45). The aspects of a distance education program requiring evaluation include: 1) course content; 2) assignments; 3) technology and 4) quality and quantity of interaction with other students and the instructor (52). Use of an evaluation plan involving various qualitative methods of data collection, such as questionnaires and open-ended participant reactions can provide for a robust program evaluation benefiting the program, the educator and the learner (53).

In 1990, the technology trend extended to Oregon when ED-NET, a satellite-based telecommunications infrastructure for distance education course delivery, was established by the state legislature (2,54). Realizing the opportunity to fill the void due

to the lack of distance dietetic management opportunities, after three years of planning and deliberation the Nutrition and Food Management Department at Oregon State University implemented the Distance Dietetic Management Master of Science Program in the fall of 1997. This unique program, the first of its kind in this country, enabled practitioners in the field of dietetics to engage in a dietetics management graduate program not dependent on proximity to a university-based program. Since the distance graduate student is not afforded face-to-face access to a major professor for guidance of graduate research as is the traditional on-campus student a professional must be identified and teamed with the distance graduate student to provide the student the supervision, guidance and support necessary to produce the required graduate research in partnership with the on-campus major professor.

The objective of this case study was to design, develop, implement and evaluate a model to train dietetic or other research professionals with advanced degrees to mentor distance dietetic management graduate students at Oregon State University. The research study was designed as a case study employing qualitative data collection methods to provide direct evidence from participants regarding their opinions, perceptions, and feelings (55). Selected by the distance dietetic management graduate students, the mentors, agreeing to be study participants, committed to mentor the students through the process of creating the program-required research project or thesis.

The research study consisted of two parts: (1) design, development and implementation of the web-based training program; and (2) evaluation of the web-based training program by the participants. The web-based training program was developed to include topics deemed important by the Distance Dietetic Management Master of

Science program developer and director, with topics verified through a pilot study conducted with education-based dietetics and research professionals (56). The web-based training program, consisting of modules on mentoring, communication, research methods and guidelines for graduate students at Oregon State University was placed on-line and evaluated by the participants during a four-week time frame.

The expected outcomes of the study included: 1) the development of an appropriate model to train mentors using web-based technology; 2) the perceptions of the participants would be the basis of providing qualitative data to conduct a formative evaluation of the web-based training program and 3) to contribute to the existing knowledge base of the disciplines comprising the study, namely nutrition and dietetics education and distance learning.

Implementation of research results will accomplish the following: 1) allow for mentors to fully understand their role through the completion of the mentor training program; 2) provide for the refinement of the web-based training program to continue training of mentors to work with distance dietetic management graduate students at Oregon State University. Since the Dietetic Management Distance Delivery Program was a pioneer program, there has not been a research study to evaluate the feasibility of using a web-based training program to train mentors to work with distance dietetic management graduate students.

The following definition of terms will help clarify words used throughout this text.

Adobe Acrobat Reader - software allowing for the display of files the Web browser cannot perform on its own (97).

Asynchronous – not occurring at the same time. Example: email, bulletin boards.

Browser – a computer application for accessing the World Wide Web; also called Web browser

Bulletin board – a software tool that allows individuals to post and read messages posted by others; also called electronic news group.

Chat – allows people connected on the Internet, using appropriate software, to participate in a live, real-time discussion not limited to two people.

Computer-assisted instruction (CAI) – the use of the computer in the delivery of instruction.

Course authoring software – software that is specifically designed to assemble and electronically publish educational and training courses without the need of a programmer; the courses may or may not be interactive in nature (6).

Cyberspace – a term coined in a science fiction novel in which cyberspace is a universal computer network looking and feeling like a physical place; also refers to networks involving the linking of computers (80).

Discussion board – allows for online, asynchronous discussion to provide for interactive responses

Distance education – planned learning occurring in a different place from teaching and as a result requires special techniques of course design, instructional techniques,

methods of communication by electronic and other technology; used synonymously

with the term distance learning (45).

Formative evaluation – assessment providing information for program improvement;

appropriate for program in the developmental stage.

Home page – the initial or main Web page of a Website.

Internet – a global computer network interconnecting other networks worldwide, using

telecommunications.

Multimedia – a system using various media such as text, graphics, video and audio

integrated in a single delivery system under computer control (97).

Plug-in – software program that works with a Web browser allowing for the display of

files the Web browser cannot perform (97).

Server – a computer on a network that provides the role of handling transmissions

among other computers on the network.

Software – programs or instructions that tell the computer what to do (97).

Summative evaluation – assessment occurring after instruction measuring what

students have learned.

Synchronous – the interaction between the receiver and sender allowing

communication to occur at the same time. Example: a chat room.

URL – Uniform Resource Locator; the unique global Internet address of every

document or site on the World Wide Web (example: http://www.orst.edu/).

Web-based – refers to interaction with the Internet. The term often is used to describe

software through which courses might be delivered.

World Wide Web – WWW; a system that stores and retrieves text, images, audio, and video on the Internet

CHAPTER 2

LITERATURE REVIEW

This research study was conducted to determine the feasibility of training

mentors to work with distance dietetic management graduate students, to ultimately

guide their efforts in producing the research project or thesis by required by Nutrition

and Food Management Department at Oregon State University. To accomplish this

research project, an integration of disciplines was necessary, the incorporation of

distance education, the application of distance delivery systems in instructional design,

training, adult education, dietetics, traditional mentoring models as well as mentoring

via distance as well as the evaluation of training were taken into account.

Technology and Learning

> Education is an interconnected system, so changes in
> any one segment have the potential to initiate changes
> in all other segments (57).

A paradigm shift from a classroom focused, faculty-centered modality to one

involving a "learning-centered process" has been seen as a necessity if higher

education is to continue and survive in the twenty-first century (58,59). Information

and telecommunication technologies are powerful and compelling forces shown to

support the transformation to a learning-centered educational paradigm (60). Advances

in technology have provided the ability to deliver content and grant access to

information and services and increase benefits to learners (61,62). Emerging

technologies have increased the potential benefit to adult learners, especially those who

are place-bound or time-bound while the power of technology has allowed for active

learning to occur, allowing the learner to interact with knowledge as well as learner to

learner and learner to instructor (63-65).

Technology, as manifested in the Internet, has been transforming education

profoundly allowing the breakdown of time and distance barriers (65-70). Web

technologies have increasingly integrated into the college campus (66, 72). Through

technology, business educators have realized the need to become adept at "distanced

interaction" to better prepare students for competition in the world marketplace (71) and

to accomplish business and corporate training through distance technology (65). The

U.S. Army has prepared to bring the military into the Internet age by spending six

hundred million dollars on technology to provide online education, allowing soldiers to

earn college degrees and technical certificates (70). With the availability of computers

and online technologies students can move from passive observers to active participants

in the process of acquiring knowledge (6,72).

Computer technology has been used in educating professionals in the field of

nutrition and dietetics as well as undergraduate and graduate students through a wide

variety of applications (4,5,7-20). Technology in the form of electronic communication

has transformed dietetics with dietetic professionals being called on not only to interpret

nutrition information from the Web, but also those with computer skills are being

sought by Web-based companies "to write and edit content" (73). Technology being

used in the field of nutrition and dietetics was identified in the early 1970's with

computer-assisted instruction utilized in a college nutrition course (7). In the mid 1970's, computer assisted instruction (CAI) was incorporated into a clinical dietetics course using case studies to teach subject matter (8). Computer assisted instruction was used in mid 1980's and early 1990's to enhance introductory college nutrition course showed students using the CAI received higher test scores than students not using the computer method (14,74). Video simulations were used to enhance the teaching skills of dietetic students when practicing patient nutrition counseling and reasoning skills of dietetic students was shown to improve using a CAI tutorial program (75,4). Dietetic educators have been encouraged to use computer-based multi-media to present complex materials to students to develop problem-solving skills (5). Teaching technology to dietetics students has been defined as a necessity to allow for future professional survival and obtaining a competitive edge in the foodservice industry (76).

Distance Education

Distance education or distance learning, the terms often used interchangeably by authors and researchers, has been defined as a strategy to identify educational outcomes through planned instruction in which a learner is separated from an instructor by time or place through the use of technologies including video and audiotapes, cable or satellite television, computer and modem, or video conferencing (57,77). Education via distance, although not a new concept, has been evolutionary in nature while continuing to expand at a extremely rapid rate (6,65,78). Correspondence, distance education, distance learning, distance training or web-based training are a few of the many names by which it is known (1,2). Much has been written about distance education in the

United States over the last 100 years. Moving in the direction of distance education, colleges were using correspondence courses, allowing communication between instructor and learner through the mail in the nineteenth century (38,45). In 1883, New York state authorized the awarding of degrees for coursework completed by correspondence at the Chautauqua Institute (10). Electronic technology came into play when radio brought "a mass quality to learning" during the early 1930's (39) Between World War I and the beginning of World War II, thirteen colleges and universities were offering college credit for courses presented over the radio (39). Many colleges and universities offered credit for radio classes during the first two decades that radio was on the air (45). After World War II, television began to be used by higher education as a source for credit instruction (39,45). However, educators were not unified in their perceptions of the education benefits of television. Difficulties noted with radio and television included the lack of two-way communication between the teacher and the student (78).

The British Open University (BOU) began in1969 as the first university system teaching a non-resident student population as a large-scale public correspondence institution (37). The BOU paved the way for other parts of the world, from Africa and Asia to Europe and North America, to extend educational opportunities through the use of technology (37). These early modes of connecting to the learner have been referred to as first and second-generation distance learning (79). The third generation of distance leaning began with the invention of the microprocessor in 1971 ushering in the use of the personal computer in education (79,80). By 1971, correspondence education at BOU had transformed into distance education (37). More than two million people have since

utilized this institution to gain access to higher education from homes and worksites (81). Options have increased, for now students have a choice regarding distance learning opportunities, with tremendous variety of over 6000 courses offered by a multitude of schools, consortiums and training organizations allow the student to shop for courses or better prices (65). The consortium has been described as a composition of individual member colleges and universities, to offer courses through a variety of distance education formats (81). Colorado Consortium and California Virtual University, are examples of a consortium (82,83). California Virtual University provides one hundred twenty degree programs, listing the participation of approximately one hundred accredited California institutions (83). Entire texts, consisting of hundreds of pages devoted to providing information regarding undergraduate, graduate and Master of Business Administration distance learning opportunities throughout the nation, have been published to give the inquiring distance student access to information necessary to make an informed choice regarding distance courses and programs (77,84).

The Distance Learner

A variety of characteristics identifying the distance learner have been identified. Serious, disciplined, conscientious, mastering technology as well as the learning process itself are terms that have been used to describe this non-traditional student (65). Characterized as a motivated learner, educational level has been found to be related to course completion rate of distance learners (43, 85). The mature adult with a broad range of life and educational experiences, desirous to be an active participant in

constructing meaning from instructional activities for career or lifelong learning have been included as additional characterizations of the distance learner (86, 87). Distance education has been shown to offer significant opportunities to build on learners' experiences and motivations for independent learning (88). Often, called "noisy", the distance learner desires communication with the instructor and other learners (6,79). The distance learner has neither time-bound (limited due to work and travel schedules) or place-bound (due to geographic location or family) constraints (43). Because of competing priorities of work, home and school, adult learners seek flexibility with distance education providing an excellent method of reaching the adult learner, allowing for the greatest possible control over time, place and pace of education (43, 89). Galusha has identified control over time as a "critical success factor" for the distance learner (43).

Distance education should not be considered a panacea. Loss of student motivation due to lack of face-to face contact and a sense of alienation and isolation have been identified as a disadvantage of distance education but can be mitigated through technology by email, news groups or even the telephone (41,43, 90). The lack of support and services, such as tutors, academic planners, technical assistance has also been perceived as a disadvantage, therefore, support should not be overlooked when planning distance programs (43). The distance learner needs a support system to provide direction thus to enable the distance learner to be successful in their self-directed environment when stress becomes a problem (43, 78).

The lack of technical training with computers and the Internet has been shown to hinder the distance learner. The fundamentals of operating within the distance education

system should be taught, allowing the distance learner to have sufficient computer and Internet knowledge; technical barriers must be a non-issue (43,90).

The Distance Instructor/Facilitator

Well designed learning goals and objectives enabling thought provoking learning materials to be created for the learner's response have been described to be of utmost importance (91). Since distance learning involves active learning, distance learners need a sense of ownership of learning goals (78). The instructor or facilitator should provide a high degree of structure within the distance education course or program for it to be successfully organized and able to deliver learning events and activities (92). The syllabus has been identified as the most important instrument of structure, dictating the organization and structure of the course (92). Study guides, course delivery format, time scheduling, interactivity, and assessment are also elements of structure necessary in a distance course (91-93).

Considering the diversity of learning styles among adult learners, it has not been considered as plausible for a single teaching method to serve all students; therefore incorporating a variety of methods has been shown to be necessary (42, 94). Canter suggested the format of a distance course be designed to provide student-instructor interaction on a "regular basis" (95). Sankaran concludes the necessity of matching the distance course format with the attitudes and learning strategies of the learners (96). Reiterating these thoughts, O'Leary described how through technology, the instructor can develop a distance learning experience using interactive features allowing communication with faculty through email, bulletin boards and multimedia lectures

(65). Learner to learner interaction can occur through these same methods as well as with the use of chat rooms (97). Superior presentation of materials through graphics, audio and video and immediate access to course-related content, lecture notes, readings and hyper-links to relevant external site are all advantages allowed through technology to provide excellent instruction to the distance learner (65, 95).

Pacing the material presented to distance learners has been identified to positively affect course completion rates, with suggestions to pace course material rather than allowing completion to be left open-ended (43). Allowing the learner to self pace within distance course guidelines has been shown to accommodate different learning styles (98).

Interactivity by the instructor has been shown to increase the completion rate for distance education courses (78). Interactivity, allowing contact from learner to instructor and learner to learner has been shown to provide a vital opportunity to share observations and information in distance learning (78). Two-way communication has been perceived as a means to provide quality and integrity in a distance program (99). The linking of computers by telecommunication technology currently has allowed interaction necessary for distance education to connect the learner with the instructor whether it be in synchronous or asynchronous form (100).

Issues have been identified addressing realities the distance educator should face (42,78,95). The amount of work necessary to re-engineer a course for distance delivery has been described as overwhelming (95). Since teaching a distance course requires a teaching style varying from the style used in the traditional classroom, the educator must be trained to learn and incorporate the new pedagogies involved (101). Learning a

new teaching style poses difficulties especially if exposure to technology has been minimal (42, 78, 95). Distance learning replacing the familiar, traditional face-to-face classroom based teaching has been identified as leading to ambivalence on the part of the educator toward distance education (65, 102).

Formal and informal methods have been identified to determine how much and how well distance students learn. Revision of distance education programs or courses based on feedback should be ongoing to keep subject matter relevant, current and updated (52,53,103). Distance educators should address the challenge that teaching at a distance differs from teaching in a traditional classroom with instructors no longer having a traditional, familiar classroom providing face-to face-feedback (52). For these reasons, distance educators must evaluate students by determining student comfort with the distant instruction, appropriateness of assignments, clarity of course content, how course can be improved rather than through traditional testing and homework (52). Formative evaluation has been described as a process of identifying difficulties in a course or program thus allowing for intervention prior to full implementation (104). Formative evaluation data can be collected by email and telephone (52). Separate evaluation questions for instructional methods and delivery methods should be proposed to identify participant reactions and the achievement of program objectives (53). A summative evaluation has been defined as the evaluation occurring at the end of a course or program to determine program effectiveness to provide a data base for course revision and future planning (105,103). Research has indicated learning by students using distance education is as effective as on-campus student learning (106).

When comparing distance and traditional instruction, educating by distance appears to be as effective as on-site, face to face instruction with distance students appearing not to learn any more or any less (65,86,107,108).

Distance Education in Dietetics

Dietetics has been involved with distance education for three decades. Tele-lectures, using a telephone network, were utilized to deliver continuing education information to consulting dietitians in 1970 (109). Satellite broadcast utilizing one- way video and two-way audio was used to deliver continuing education in a national broadcast for continuing education to members of the American Dietetic Association in. 1979 (110). In 1994, 19 of 591 accredited or approved dietetics programs incorporated distance education in their dietetics curriculum mostly at the undergraduate level, with some graduate courses offered (111). The delivery methods used were correspondence courses, audio conferencing, video teleconferencing and televised classes. Spangler concluded her article stating an increase in the application of distance technology was anticipated in dietetics education (111).

Traditional nutrition, nutrition education, food science, and food management courses have been re-engineered to a distance format (17,18, 112,113). Degree and certificate programs in foods and nutrition are identified in eight universities spanning the nation in *Peterson's Guide to Distance Learning Programs* (77). The American Dietetic Association maintains a website with a non-inclusive listing of 25 colleges and universities providing distance education programs in nutrition, dietetics and related areas across the nation (114).

Instructional Systems Design

Instructional design is the framework for guiding the
design of distance education courses. (115).

Instructional systems design (ISD) has been defined as an instructional problem

solving process for the systematic analyses of "conditions for learning"(46).

Expanding on this definition, Kemp considered ISD instruction from the prospective of

the learner (47). Briggs added to the definition by defining ISD as the process of

analysis of learning needs and goals, as well as the development of a delivery system to

meet the needs of the learner (116). Having evolved through practice and research, ISD

is based on learning and instructional theory as well as theory related to technology and

communications (116). Many experts in the field have developed ISD models. (117-

120). However, a single model, the ADDIE model, identifies the common characteristic

processes of ISD (46). As stated by Seels and Glasgow, the ADDIE model consists of:

Analysis, defining what is to be learned; Design, specifying how learning will occur;

Development, authoring and producing the materials; Implementation, installing the

instruction in the real world; Evaluation, determining the impact of the instruction (46).

From his view of ISD, instructional design pioneer, M. David Merrill has concluded:

> …information is not instruction. Just having information isn't sufficient.
> If you don't provide adequate practice, if you don't have an adequate
> knowledge structure, if you don't provide adequate guidance, people
> don't learn and certainly don't learn the right things (121).

Design considerations for distance learning have been suggested to include

interactivity, active learning, visual imagery and effective communication within the

framework of understanding your users (78). Specifying goals, accepting a diversity of outcomes, requesting production of knowledge through the use of open-ended questions, evaluating at the task level, and building learning teams and encouraging global communities have been identified as necessary in creating a model for the transformation of a current mode of teaching into one appropriate for Web-teaching (65). Duschastel, optimistic regarding the acceptance of this model by distance learners, stated students would likely prefer the model due to the autonomy of learning involved (65). The desired outcome for distance courses and programs involves the design of the course or program to benefit the distance learner. When information presented is inappropriate for the learner, being either too abstract or simplistic, boredom and frustration occurs (122). When properly designed, distance education can provide high-quality learning experiences (123). Effective instructional design and techniques are the crucial elements in student achievement, whether instruction is delivered by technology or in traditional manner (63).

Since most instructors have not had formal instructional design training, but utilize aspects of the process when preparing courses, additional training would be beneficial to improve design and teaching of distance education courses (115). When properly designed and implemented, distance education offers an excellent means to respond to learning needs of a diverse adult student population that might otherwise be excluded from higher education (43).

Mentoring

> It is a rare privilege to help another learn, to have the relevant
> wisdom useful to another, and have someone who can benefit
> from that wisdom (34).

Because of the dramatic growth of mentoring programs in recent years,

benefactors of these successful programs have been extolling the positive influences of

a mentor helping accomplish academic, career, social and/or personal goals (34).

Since the 1980's, mentoring has been a popular subject with the trend continuing

(124,125). With this proliferation of information, the concept of mentoring has

remained relatively the same through the years even though an exact, common

definition does not exist (126, 127). Many books and articles have included the original

reference to the concept and definition of mentoring by traveling back in history to

Homer's *Odyssey* and the story of *Telemachus,* son of *Odysseus* and his trusted friend,

Mentor (34,35,125,128, 129). *Mentor* was entrusted with the nurturing, tutoring and

training of young *Telemachus* while *Odysseus* was off fighting the Trojan War. Thus

the term mentor evokes the relationship of one older and wiser, guiding a younger

person. Various authors have described the definition of mentoring diversely, yet the

basic meaning has held true with the definition ranging from few words to many. A

simplistic yet succinct definition describes mentoring as the sharing of power,

competence and self (130). Bell described mentoring as more art than science, a true

partnership based on being *"real"* as well as being a catalyst (34).

Kram stated mentoring is a one-on-one relationship among individuals, one being older

and/or experienced with the other younger and/or less experienced (131). Cohen

defined mentoring as a one on one relationship between the mentor and "adult learner" to develop personal, educational or career potential (132). Murray defined mentoring as: "…a deliberate pairing of a more skilled or experienced person with a lesser skilled or experienced one, with the agreed-upon goal of having the lesser skilled person grow and develop specific competencies" (35).

The definition of mentor varies, but has a commonality among meanings in the metaphors used in the definition. Kram defined a mentor as an older, influential friend-counselor-nurturer willing to commit time and energy to the mentoring process (131). Bell aptly defined mentor as "someone who helps someone else learn something the learner would otherwise have learned less well, more slowly, or not at all" (34). Other metaphors used to describe a mentor include teacher, advisor, sponsor (126, 127), guide and motivator (132), tutor and confidant (130), role model (130,133) and a leader as well as a learner (34). Schweitzer defined a mentor as one who will go out of their way to successfully help the mentee/protégé succeed (130). Mentoring has been described as a win-win situation for all concerned, "…contributing to employee development… enhancing communication and boosting morale, productivity and loyalty" (134).

The person on the receiving end of the mentoring relationship, has been defined as the mentee or protégé, both terms, as well as a score of others, being used in the literature (35). Bell referred to a protégé as the "primary beneficiary" of the mentoring process, but states that "labels" can be altered to fit specific situations and individual preferences (34). Murray believed that mentees or protégés must minimally possess willingness to assume responsibility for their own growth and development; give

evidence of seeking new and challenging responsibilities; be receptive to feedback and coaching (35).

Characteristics of Mentors, Benefits, Risks of Mentoring

A successful mentor has been described to possess specific abilities, which occur naturally or can be developed (35,135). Characteristics of mentors have been grouped into three categories, those dealing with the mentor as a professional, as a person and a combination of both professional/personal characteristics (127). Professional characteristics include experience (127,137), commitment (129,136); open-mindedness and a willingness to grow and learn (127,128). Personal skills include: 1) conferencing skills, such as communication and active listening; 2) adept problem solving skills, defining problems, gathering data and formulating an action plan, and 3) implementing and evaluating the plan (127,129,134,138). The combination of professional and personal skills desired for a good mentor include: patience, enthusiasm, willingness to commit to time involvement, appropriate use of power and a good sense of humor (127,129,131,134,139). As with any relationship, success or failure is not based on solo efforts. Bell (34) maintained both mentor and protégé should have "humility, an insatiable curiosity, the courage to trust, and the ability to listen" while Alpert (128) proposed both mentor and protégé be open-minded, interested in learning and open to growth.

Benefits to the mentor have been described as personal growth, joy and professional fulfillment and increased job satisfaction (134,140-144). The learning and growth occurring during the mentoring process, allows the mentor to be even more

effective (130). Monetary or other forms of compensation has been viewed as necessary in mentoring; compensation makes the mentor feel their contribution has been worthwhile (144,145).

Benefits to the mentee or protégé include the development of self assured, competent practitioners who interact positively with other team members (141), the confidence and dedication for a foundation of long-term professional commitment and the opening of career and/or social opportunities (130,144,146). A successful mentoring process does not only attract employees but has been shown to aid in retention of employees as well as improving job satisfaction (125,143). Employee retention is given as a major outcome of a mentoring program (147,148,149). Benefits of any mentoring process can be destroyed when the mentor is overbearing, judgmental, insensitive or evaluative (150).

The associated risks of mentoring include: 1) risk of commitment, confrontation and independence (151); 2) conscious and unconscious bias that can have an "evil" effect "...limiting the success of mentoring across racial as well as gender lines" (152). In this age of honoring diversity, care must be taken when mentoring cross gender, culturally or racially. Discrimination issues, such as equal employment opportunity issues, also have been identified as risks to the mentoring process (35,152,153). Other expressed risks include oppressive control, over-dependence, exploitation, cloning the mentor, smothering, envy as well as egocentricity and dependence (141,34).

Mentoring in the Dietetics/Foodservice Industry

An investment made in the mentoring process will give future, inexperienced as well as current practitioners the opportunity to grow and thus be prepared for challenges that lie ahead in the field of dietetics (148). Relatively few articles have chronicled the mentoring process in either dietetics or the foodservice industry. In 1985, Kapustiak discussed networking, negotiation as well as mentoring, suggesting that a mentoring relationship could aid the dietetic professional in "getting where you want to be" (154). Bunjes 1988 article defined and discussed the role of mentoring in career development as well as the phases of mentoring, a proposed model of the mentoring process in the field of dietetics was included in the article (146). In 1991, Darling conducted a pilot study involving the pairing of dietetic practitioners as mentors and mentees in order to gain insight into "mentoring patterns and needs"(155). A self-managed mentoring model was proposed that would provide the connection needed for dietetic professionals to "develop their fullest professional potential". Hager in 1993 discussed the expanding need to mentor Dietetic Programs in Dietetics (DPD) students with the resulting benefit of contributing "to the professional growth of others" (156). In a 1992 article, Wenberg reported on a survey of program directors of all dietetic programs listed in the 1990-1991 program directory to ascertain if mentoring programs were being used in dietetic education programs. Nearly half of the respondents indicated that they "had never considered a mentor program" (148). However, the dietetic educators did "view the mentoring process as contributing to professional competence". In a 1997 article, Puckett alluded to the necessity of mentoring by stating the need for dietetic professionals to be competent in their endeavors and to share their education "with

others to benefit ourselves, our customers and the community" (157). Reverse

mentoring, the latest form of training involving a trade-off of technical skills by the

young for business wisdom from the seasoned professional, was the subject in an article

published in 1998 to pair students in nutrition education with dietetic practitioners

(158,19). In a workshop setting, the practitioners who were "self-proclaimed Internet

novices" were taught the use of on-line nutrition education materials as well as

mentoring concepts by students in a nutrition education class (19). The authors

suggested that the beneficial outcome of this project could be replicated by using

students to mentor others who desire to update their technological knowledge.

Several articles were identified that stressed the importance of mentoring young

managers or employees in the foodservice industry. Cain (159) encouraged restaurant

owners and operators to mentor the young people of today, personally introducing them

to the "numerous career opportunities" not to just fill jobs. Stanton suggested using

retired company executives to share knowledge and business techniques as the objective

for mentoring young managers in food companies (160). In this article, the major

suggestion involved the issue of time. Since time is a key issue in mentoring, "no one

has time to be anyone's sage", the suggestion of using readily available retirees as a

source for mentors would help facilitate the mentoring process. Coppess stated

mentoring young foodservice professionals through their early years as "simply the

right thing to do", however among culinary professionals, there is no formalized system

for the seeking of a mentor (161). Both informal and formal mentoring has been

identified as providing the potential for producing "image-enhancing" benefits to

restaurant operations by providing employment opportunities for youth as a long-term investment (145).

Technology and Mentoring in Dietetics

Technology in the form of electronic communication has transformed dietetics with dietetic professionals being called on not only to interpret nutrition information from the Web, but also those with computer skills are being sought by Web-based companies "to write and edit content" (73). Since distance learning is now readily accessible, it is only reasonable that mentoring from a distance also be within the realm of possibility. Whether mentors and mentees reside in the same building, in different office buildings within the same block or city or live across the nation, telementoring is an viable option available to facilitate this relationship. Telementoring has been defined as a mentoring process by which the "primary form of contact between mentor and mentee" is via telecommunication methods such as listservers or e-mail. Education is taking advantage of telementoring trend by helping mentor new teachers in their first year on the job as well as business and industry getting involved with "e-mentoring" school children to foster adult/child communication (162-164).

Companies are in business to provide mentoring services, advertising on the Internet as well as providing services on-line. Many of these sites provide much beneficial information within the website, such as giving tips for mentors, mentor training as well as mentees (165,166,167). Governmental agencies have web-based mentoring materials promoting mentoring programs within their respective organizations (168,169). Universities are also plausible sources for information

regarding mentoring. From a multi-paged site providing detailed definitions and information on how to set up a mentoring program to simple outlines for mentoring new faculty members information on mentoring is readily available and accessible from the computer (170-171). McDonald detailed to dietetic professionals tips on how to market websites (172). Her mention of "affiliate marketing" identified how a mentoring group could make contextual links thus promoting a mentoring project.

CHAPTER 3

METHODOLOGY

The research process is not learned from a book or a course in research
methods. Research is only learned by doing research. Good research is
only learned under the tutelage of a good researcher who supervises the
entire process from beginning to end (173).

To enable dietitians to prepare for advanced administrative responsibilities in the

21stcentury, the Nutrition/Food Management Department at Oregon State

University instituted a Master of Science degree in Dietetic Management in the fall of

1997. The uniqueness of this program focused on the method of delivery; it was the

only program of its kind utilizing Web-based distance delivery methods to train

graduate students located across the country in the field of dietetic management.

Since strengthening the research skills of the distance graduate student was a

major objective of the program, this objective was to be realized through the completion

of the required research project or thesis. The question was posed of how to provide

research support to distance graduate students living in various geographical areas

across the country. Traditionally, guidance and support have been provided to the

graduate student throughout the research process by the on-campus major professor and

the graduate committee. While the distance graduate student was assigned an on-

campus major professor, the face-to-face guidance and support for the research process

was not possible. For the distance graduate student to successfully complete the

Dietetic Management program, a researcher must be identified within the distance

graduate student's locale and teamed with the student to allow for the supervision, guidance and support necessary to produce the required graduate research project.

Purpose, Research Question

The purpose of this research project was to develop and evaluate a model to train professionals with advanced, research based degrees to function as mentors to provide guidance and support in the research process to graduate students enrolled in the distance delivered Dietetic Management Master of Science program at Oregon State University. The two-phase research project included: 1) design, development and implementation of a web-based mentor training program and 2) evaluation of the training program content and technical design from the perspective of the mentor. The research questions explored in this project were: 1) can a model be developed and implemented for the web-based training of professionals with research based degrees who have agreed to mentor the research project of distance graduate students and 2) can the perceptions, reactions and responses of research mentors being trained using web-based technology to ultimately guide the research of graduate students enrolled in a distance delivered Master of Science program be identified?

Participants

The Dietetic Management Distance Delivery Program requirement to fulfill the research component was for each graduate student to recruit a mentor to facilitate the

research process resulting in a publishable manuscript. This requirement established the foundation for the development of a web-based mentor training program model. Under the Research heading in the Dietetic Management Distance Delivery Program brochure (Appendix 1), it was identified that a professional with OSU courtesy faculty status would mentor the distance graduate student through the research process. Program developers had identified four criteria for each mentor: 1) possess a master's or doctorate degree, 2) demonstrated technical writing skills, having accomplished a research project with published or publishable outcome, 3) willingness to commit to a time frame including completing a research mentor training program and bringing the distance dietetic master's student to research completion, 4) willingness to be involved in academic pursuit and to keep in close communication with the student and the major professor.

Guidelines for Identifying a Mentor (Appendix 2) including the selection criteria for the mentor, a Mentor Intent Form (Appendix 3) and Mentor Information Form (Appendix 4) were given to the dietetic management distance graduate students attending an Oregon State University Distance Dietetics Program Seminar at the 1998 annual meeting of the American Dietetic Association in Kansas City, Missouri. This seminar initiated the research study time line (Table I).

In November of 1998, the information was mailed to the students who were unable to attend the seminar. Included in the guidelines were anticipated benefits for the mentor: 1) increased knowledge and experience from working with current concepts related to dietetics management, mentoring and research methods; 2) courtesy faculty

Table 1
Time Line for Mentor Training Program

October 1998	Mentor Guidelines to students at American Dietetic Association meeting in Kansas City, Missouri
October-November, 1998	Conduct pilot study
November 1998	Mail Guidelines to students not in attendance at American Dietetic Association Meeting
August 1999	Obtain names of mentors
September 15, 1999	Mail welcome letter to mentors
October 20, 1999	Mentor training program online
October 25, 1999	Mentor training program officially begins
October 27, 1999	First conference call
November 8, 1999	Email scenario/discussion board instructions
November 11, 1999	Second conference call
November 21, 1999	End of training program
November 21-December 9, 1999	Conduct telephone interviews
December 15, 1999	Send thank you letter and library resources to mentors

status at Oregon State University, including stipend; 3) authorship status (listed as

contributing author on publishable student research); 4) continuing education units and

5) additions to the mentor's personal library including research resources (Appendix 2).

The Mentor Intent Form and Mentor Information Form (Appendices 3, 4) included

information necessary for Oregon State University to grant the mentor courtesy faculty

status. After agreeing to participate in the mentoring relationship, the Mentor Intent

Form and Mentor Information Form were completed by the mentor. The return of the

completed forms signified that each mentor was willing to commit to the mentor

training program, working with the student to allow for completion of the required

research project. The Mentor Information Form provided necessary information

allowing the mentors to gain courtesy faculty status. The forms were then filed in the

Dietetic Management Distance Delivery Program records.

The researcher obtained approval for human subject protection using the exempt

procedure from the Internal Review Board (IRB) of Oregon State University. When

interacting with each other during the study, participants were identified by a

pseudonym. Any information obtained from participants was kept confidential. Only the

primary researchers had access to the data and research results.

By the fall of 1999, six distance graduate students were approaching readiness to

begin the required research project. Each had selected a mentor with an advanced

degree living and working within reasonable proximity to the distance graduate

student's locale in the states of Alabama, Illinois and Oregon. All the mentors selected

were in compliance with the selection criteria. Pseudonyms provided protection for

anonymity of study participants according to Institutional Review Board requirements

for human subjects at Oregon State University.

Alabama

Eve was from Alabama where she was employed by a hospital. Her master's

degree in nursing and PhD in education had given her the foundation to progress into

several aspects of hospital administration. Her position at the time of the web-based training program evaluation was in hospital management, working in this capacity for eleven years. She had a professional relationship with her mentee who was also employed at the same hospital.

Illinois

Lauren possessed a PhD in nutrition with an extensive background in dietetics that had prepared her to be the director of food and nutrition services at a medical center in Illinois. She had been working in this position for twelve years. Her mentee was from a rural community. Lauren agreed to mentor her student without having a previous working or personal relationship with the student.

Oregon 1

Lou was located in Oregon where she worked at a hospital. Her master's degree in nursing afforded her the administrative position. She had been employed in this capacity for twelve years. She had a professional relationship with her mentee who also worked at the same hospital.

Oregon 2

Cheryl, located in Oregon, was an on-call dietitian at a hospital where she had previously been the foodservice director for 14 years. Cheryl, having a master's degree in nutrition and food management, had also taught in a dietetics program at a major university. Cheryl agreed to mentor her student, from without having a previous working or personal relationship with the student.

Oregon 3

Loretta possessed a master's degree in foods and nutrition and was a teacher

before becoming a dietitian. During the web-based training program, she was the

nutrition supervisor for health services at a government agency. She had a professional

relationship with her mentee who also worked at the same agency.

Oregon 4

Nita had a PhD in nursing and had held the position of vice president of an allied

hospital service for ten years. Her mentee was also employed at the same hospital

where they had a professional relationship.

The six mentors selected by the distance graduate students received a letter from

the researcher during the week of September 15, 1999 welcoming them as participants

to the mentor web-based training program and stating that involvement with their

student would expedite the student's progress toward completion of the master's

degree program (Appendix 5). The letter also briefly explained the format of the

program, identified the time frame of the training program, the upcoming conference

calls, that participation would include a group assignment and a follow-up telephone

evaluation, and the electronic requirements. The confidentiality statement required by

Oregon State University Internal Review Board for the protection of anonymity of

participants in the publishing of results was also included sent to obtain signatures

signifying acceptance of the research program terms (Appendix 6).

The study participants, the dietetic management program director at Oregon

State University and the researcher participated in two conference calls. During the

first week of the web-based training program, on October 27, 1999, the first conference call was arranged to welcome the mentor's participation in the program, personally introduce the researcher and dietetic management program director to the mentors, discuss the innovative aspects of the distance dietetics management program, inform the mentors that they were providing a major contribution to the research project and answer any questions regarding the web-based training program. The second conference call was made on November 11, 1999, to provide the opportunity for the researcher to be available to answer questions, asking if any part of the training program needed additional clarification and to describe the scenario. The conference calls were designed into the program to provide an interactive format to provide the opportunity for the participants to ask questions regarding the training program and to provide personal voice contact often lacking in web-delivered training (1,93).

Development of the Web-Based Mentor Training Program

The development of the web-based mentor training program was initiated utilizing two of the program objectives identified by the Dietetic Management Distance Delivery Program, that of enhancing communication skills through technology and strengthening research skills. *Microsoft Publisher 98* (174) was the course authoring software chosen to develop the web-based training program because of its economy and simplicity of operation while enabling the researcher to create materials of professional quality for the web site. When designing the layout of the training program, *Microsoft*

Publisher 98 web site template "Arcs" was customized utilizing Oregon State University colors and photographs and by importing clip art to enhance desired themes. Oregon State University guidelines for web-based materials were followed (Appendix 7). The construction of a creative, effective, colorful document presents an interesting and stimulating environment for the learning process to occur (6,45).

It was recommended that all web pages developed by Oregon State University researchers and students incorporate the following items to provide continuity in the web sites by supplying: 1) the words "Oregon State University" to appear near the top of all the web pages and in the title of the page, 2) a link to the Oregon State University home page be provided in the site, 3) hyper-linked e-mail addresses be provided to allow the reader to have reliable sources of information, and 4) provide the official Oregon State University disclaimer statement on the home page (Appendix 7).

The major subject headings for the informational portion of the web-based mentor training program were first suggested by the program director of the Dietetic Management, Distance Delivery Program and were evaluated for efficacy in the fall of 1998 by a pilot study composed of three dietetic professionals and a PhD researcher. Each pilot study participant had an advanced degree and background of accomplishing research. Three pilot study participants were employed in an educational setting and one in a military setting. Face-to-face semi-structured interviews utilizing open-ended questions were conducted with two of the pilot study participants and two interviews were conducted via telephone utilizing the same methods. All four interviews were audio-tape recorded with prior permission of the participants. The participants were asked open-ended questions and were given proposed training topics to rank in the

order of perceived importance (Appendix 9,10). The top four ranked subject headings identified were: 1) defining the role of a mentor; 2) benefits/concerns of the mentor; 3) feedback and coaching skills, and 4) university regulations with which the graduate student must comply.

Information deemed important by the pilot study participants identified in the open-ended questions included: 1) the research process, 2) designing the web-based training program to include meaningful assignments and 3) assessing the mentor's perception of what they learned from the training program. The feedback from the pilot study dovetailed with suggestions from the program director regarding major subject headings. The final subject headings were incorporated into the following modules for the web-based training program:

- Module 1 – Mentoring
- Module 2 – Communication
- Module 3 – Research Methods,
- Module 4 – Guidelines for Graduate Students at Oregon State University.

Web-Based Mentor Training Program Contents

The basic format of the web-based training program was designed to include: 1) informational aspects regarding the framework of the program, such as course introduction, purpose, syllabus, calendar; 2) four modules identifying the educational components of the web-based training program; 3) a scenario to allow the mentors to collaborate and practice mentoring skills and 4) evaluation of contents and technical

aspects of each module. The mentors had the option of completing the training program in a self-paced mode or completing one topic lesson per week for four weeks.

The *Microsoft Publisher 98* (174)"Arcs" web site template, used as the basis for the construction of the training program, provided the capability of supporting navigation between the various web pages of the training program by the use of navigation buttons without the necessity of splitting the window into different parts and inserting frames, both of which are capabilities of more sophisticated and expensive course authoring software (48). The web-based training program was designed to include navigation buttons to materials traditionally used in a university site based course (course introduction, syllabus, and calendar) as well as items used in a web-based application (home page, discussion board, and faculty profile).

Home Page

The Home Page, the initial or main Web page of a Website, was designed to introduce the navigation buttons for the entire web-based training program, provide basic information regarding the mentor training program as well as benefits of the program and provide contact information to allow the viewer to obtain additional information regarding the program (Appendix 11). The required OSU disclaimer was affixed to the bottom of the home page (Appendix 8).

Introduction

The Introduction identified the purpose of the web-based mentor training program and introduced the names, phone numbers and hyper-linked email addresses of

the researcher, program director and department secretary as resources for answering questions (Appendix 12).

Syllabus

It is necessary that details of a distance program initially be clearly defined (92). In a distance delivered program, the syllabus has been considered the most important instrument of structure, with structure being defined as organization as well as delivery of learning events (92). The Syllabus introduced the researchers as the instructors/facilitators and included hyper-links to their email addresses (Appendix 13). The web-based training program was described, identifying program outcomes, assignments, required reading assignments, time frame and evaluation. The outcomes included an opportunity to: 1) develop a collegial relationship; 2) share experience and knowledge and 3) guide student to an outcome of publishable research for the master's program. The assignments were identified: 1) to be accomplished electronically; 2) two conference calls, one during week one and a final conference call during week four; 3) a group assignment in which two mentors will electronically discuss a mentor/student scenario. Required reading involved reading the text of each module including the hyper-links to additional information. The time frame for the web-based training program ran from October 25 through November 21, 1999. Brief descriptions of the evaluation techniques were also included: 1) evaluation for each module, including the scenario, would be submitted electronically; 2) an interview would be conducted via telephone.

Calendar

A defined schedule identifying completion dates is another instrument of structure (92). The course calendar identified a week-by-week listing of specific occurrences during each week throughout the duration of the web-based training program (Appendix 14). Due dates for assignments for the four modules, reading assignments, announcement of the date for the upcoming conference call as well as the timeframe for the final evaluation telephone interviews were given. This information provided the participant with a sense time, allowing the participant the choice to set the pace to complete the assigned work within the time allotted (43).

Discussion Board

A discussion board, allows for online, asynchronous discussion to provide for interactive responses. A Discussion Board Web-page provided an active link to indicate the steps for accessing the discussion board that was to be used to as a communication tool between participants (Appendix 15). The discussion board used was set up through an existing course, NFM 405, in the Nutrition and Food Management Department at Oregon State University. The mentors were sent an email identifying the user name and password needed to access the discussion board and directions for accessing the discussion board (Appendix 16).

Faculty Profile

The Faculty Profile incorporated the identical format used in distance delivered courses in the Dietetic Management Distance Delivery Program (Appendix 17). The Faculty Profile allowed the mentors to view a picture of the instructors/facilitators and

to learn of their teaching responsibilities and research interests. Also identified in the profile were additional faculty, resource and support staff composing the distance dietetic management program.

Modules

The course authoring software, *Microsoft Publisher* (174), and the computer were the vehicles by which educational materials comprising the four modules were created. Each module included the unique purpose and objectives with text-based materials for each module obtained from current texts, journal articles and web-sites. Hyper-links were interspersed throughout each module, taking the participant to additional web sites, providing a greater depth of topical information. Organizing the material into modules not only provided structure to the training program content but also imparted the structure necessary in distance delivered instruction to enhance the learning process (92). At the end of each module, identical questions regarding mentor perceptions of the contents of the training program and technological aspects such as accessibility of modules and navigability between pages were included.

Module 1

Module 1 presented information on mentoring, identifying the historic perspective of mentoring, definitions to clarify mentoring and types as well as functions of mentoring (Appendix 18). The background of mentoring including the historical perspective (34,125,132), definitions of mentoring an related concepts (35, 138,143), description of the mentoring relationship and other work relationships (159, 175), characteristics, role and responsibilities of a mentor (127,161) and benefits and

challenges to mentoring were included (34,35,141). Hyper-links were added to each

topic, allowing the participant to read additional information, gaining depth on the

subject at hand (180-183).

Module 2

Module 2 provided communication techniques necessary for the success of the

mentoring process (Appendix 19). The importance of listening skills (34,35), defining

responsive listening (34,132,184), the non-verbal aspects of listening (34,35) and a

section on teaching, advising and providing feedback were identified in this module

(34,35,127,132). Hyper-links were added to provide additional depth (185,186).

Module 3

Module 3 was an overview of research methods that could be used by the

distance graduate student (Appendix 20). Various characteristics of research were

identified as were the types of research, experimental and non-experimental (187-191).

Hyper-links were added to provide additional information to topics regarding qualitative

statistics and conducting focus groups (192-197). Ethical issues in research (198) and a

listing of web resources on technical writing were also included in this module (199-

203). The hyper-linked material to technical writing was provided to the mentor as

resources to have available to assist their student with the required research project or

thesis.

Module 4

Module 4 presented basic information regarding Oregon State University to

familiarize the mentor with the University and graduate student policies (Appendix 21).

The information was obtained from Oregon State University Web-sites. Information regarding the mission and graduate school (204-205), OSU history (206), Graduate faculty and Department of Nutrition/Food Management graduate faculty (207,208), distance education at Oregon State University (209), Valley Library (210), distance education opportunities in Nutrition and Food Management (211) and university expectations of a graduate student as identified by the on-line Survivor's Guide (212) was included in the module. The information presented in hyper-links provided a great depth of information, allowing the participant to delve into the information as desired (207-212).

Scenario

The scenario was created with input from three dietetic practitioners with both clinical and management experience to develop a fictitious situation that mirrored real-world circumstances (Appendix 22). The two-fold purpose of the scenario was to allow two mentors to interact through the discussion board, as well as put into practice inherent skills as well as information obtained from the web-based training program, working through issues and situations presented in the scenario that could possible arise when mentoring the dietetic management graduate student (6) Allowing two participants to work together on the scenario allowed for active learning to occur providing an interactive nature to the exercise (45). Interactivity among distance learners must occur if learning is to be successful (6,45). The scenario provided one of the four criteria identified in the pilot study as important for inclusion in the web-based training program, that of meaningful assignments. The scenario was emailed to each

mentor as an attachment, with the inclusion of a reminder for the mentor to use the pseudonym when posting messages to the discussion board to maintain anonymity.

On October 20, 1999 the web-based training program was posted to the Internet. October 25, 1999 officially marked the beginning of the web-based mentor training program which ran consecutively for the following four weeks, through November 21,1999. At the end of the four-week period, the participants were contacted via email to set up an appointment for the telephone interview data collection. All telephone interviews were completed by December 9, 1999. After the telephone interviews were concluded, the mentors were sent a letter thanking them for their participation in the program and as a thank you, were sent two mentor related reference books for their personal library (Appendix 23).

Data Collection and Analysis

A qualitative case study involving the web-based training program to train mentors for distance graduate students in the Master of Science Dietetic Management Distance Delivery Program was undertaken using six participants, one selected by each of the distance dietetic management graduate students. A case study design for this formative evaluation was chosen because the parameters of this research project were known to lack sufficiency of sample size to allow results to be quantitatively meaningful thus prohibiting any attempt in confident generalizations. A methodology used extensively in practice-oriented fields such as social science, management science and education (55), case study has been defined as a detailed, in-depth investigation of a single unit of analysis which can be a community, an organization, a time period, a

program, event or person (214). This methodology has been characterized as a technique for gathering information regarding phenomena within the unit of analysis, enabling the researcher to better understand the depth of the phenomena in question (55,213,215).

In this research study, the unique, one-of-a-kind web-based training program to train mentors to work with distance dietetic management graduate students represented the single unit. The study was not undertaken to test abstract theory or to develop new theoretical explanations, but to evaluate the intrinsic aspects of the web-based training program as identified through the perceptions of the participants to provide program administrators relevant data to fine-tune the program (55). An anticipated outcome of conducting this case study was not only to develop a model by which mentors could be trained using web-based technology, but also to make a contribution to the interdisciplinary knowledge base involving instructional design, distance learning, computer technology, mentoring and dietetics, all involved in the creation of the unique web-based training program to train mentors for the distance dietetics management graduate students.

Qualitative research has been characterized as processes involving methods of conceptualizing, collecting, analyzing and interpreting data used to make sense of data that are represented by personal written or spoken words, not numbers (216). Three qualitative strategies for data gathering in qualitative studies include: 1) direct observations, detailed descriptions of behaviors, human interactions or program activities; 2) open-ended interviews, direct quotes regarding experiences, opinions, feelings and knowledge; or 3) written documents, open-ended questionnaires, program

records or personal diaries (55). Data triangulation, the employment of more than a single qualitative strategy to collect data, has been shown to provide the advantage of increasing the strength of the study design and encouraging the incorporation of multiple data collection strategies in order to gain a clearer image of perceptions within the data (213). Data triangulation also has been shown to lessen the chance of undermining the validity and credibility of findings from relying too heavily on a single data source (55,213,214).

Open-ended interviews conducted via telephone and written documents in the form of responses to open-ended questions were the qualitative data collection strategies used in this research study. In this study, data were obtained from three sources: open-ended questions regarding content and technological aspects posed at the end of each module (Table 2), written, open-ended questions presented at the end of the scenario (Appendix 22) and a telephone interview utilizing open-ended questions conducted at the conclusion of the web-based training program (Appendix 24). Open-ended interview questions have been suggested as an effective method of obtaining perceptions from study participant allowing the researcher to determine themes, images, or words used by study participants to describe their thoughts (213,214).

There were three major sources of data. The first source of data, responses of the participants to questions posed at the end of each module regarding the content as well as technological aspects, were emailed to the researcher by participants at the completion of each module. The second source of data involved the scenario. The mentors were randomly paired and emailed the scenario representing a realistic though fictitious situation. The paired mentor teams were to interact using the discussion board

Table 2
Open-ended Questions From Modules

1.	Describe new information as a result of Module
2.	Describe the most informative aspect of Module
3.	Describe the least informative aspect of Module
4.	Describe the accessibility and activity of links within Module
5.	Describe the clarity, navigability and readability of the format of Module

and put into practice their inherent skills as well as information gleaned from the web-based training program to answer questions regarding situations that could likely face the dietetic management graduate student. Answers to the open-ended questions at the end of the scenario were emailed to the researcher. The third source of data was a telephone interview utilizing open-ended questions. A semi-structured, standardized interview guide (Appendix 24) allowed for consistent questions to be asked of each mentor in a consistent order, giving the researcher the liberty to probe beyond the answers to the prepared questions (214,217). The six participants were contacted via email to arrange a specific time for the telephone interview. The interviews were conducted after the completion of the web-based training program from November 21 to December 9, 1999. Responses to each question were audio-taped with the permission of the mentor. Complete confidentiality was assured. Audio-taping allowed the interviewer to be more attentive during the interview, being able to easily respond to the needs and cues of the interviewee (55). The telephone interviews provided the advantage of allowing the participants to provide their personal perceptions of the web-based training program in its entirety, having completed all four modules plus the scenario. The audio-taped interviews were carefully transcribed verbatim by the

researcher to guarantee the quality of the data critical to the validity of qualitative data (214). The raw data from interviews presented by a fully transcribed text format has been considered a time consuming task, but one that yields desirable results and regarded as beneficial for data analysis (55).

Data sources were the emailed answers to questions posed at the end of each module and scenario and the transcribed text from the telephone interviews. Themes, represented by words, phrases and sentences obtained from the participant's written and verbal perceptions were the unit of analysis. Content analysis, a systematic, objective coding scheme, was employed to identify emerging patterns through organizing and simplifying the data (213,214). The following stages of content analysis were accomplished: 1) all data were read by the researcher; data were coded, using the questions at the end of each module, scenario and from the telephone interview, as broad topical categories for initial sorting; 2) elaborating on the initial broad categories, data were subdivided into sub-categories to account for additional topics and themes emerging from the data; 3) additional subdivisions occurred when substantiated by detailed comments. Verbatim sections of participant comments were used to illustrate categories and all sub-categories (Appendix 25).

Software for analyzing qualitative data, *QSR.NUD.IST*, assisted the researcher with the clerical tasks in data analyses regarding the organization and storage of data. After the data in text form was divided into codes, words, phrases or sentences, the exact verbiage from participants were placed in main categories that were further subdivided into sub-categories by hand. The data were then entered into the

QSR.NUD.IST program that indexed, labeled and identified the main categories as a

root and the sub-categories as a node.

CHAPTER 4

RESULTS AND DISCUSSION

(The) principal task of the researcher is to communicate a setting with
its complex interrelationships and multiple realities to the intended audience
in a way that enables and requires that audiences interact cognitively and
emotionally with the setting (218).

A case study presents the ability to portray a rich description of the context in
which the phenomena under study occurred as well as interrelationships within the
phenomena (55,213,215). The setting of this unique case study was dual in nature; one
facet consisting of the actual training program designed to train participants to mentor
distance graduate students; the other consisting of the "cyber" delivery of the program.
Each facet contributed to the uniqueness as well as to the diversity of information
gleaned from the participants.

The following case study depicts the perceptions of each of the participants
involved in the evaluation of the Web-based training program for mentoring distance
graduate students in the Dietetic Management program at Oregon State University.
Participants possessed advanced degrees and were career professionals with an average
of twenty years experience in their respective field of dietetics or nursing
administration. The participants were from the same geographic locations as the
distance graduate students, Alabama, Illinois and Oregon. Evaluative comments from
the participants ranged in length from brief, concise comments to lengthy narratives,
typical of responses to qualitative methods of data collection (213). To allow the reader
of a qualitative study to see, through the eyes of the researcher, the rich detail of the

phenomena under study, comments have been organized within three emerging themes to present a descriptive account of individual perceptions (219). Three emergent themes included: 1) perceptions of quality of new information presented in web-based training modules; 2) perceptions of technological issues used to deliver training; 3) mentor and mentee benefits of the training program.

<div align="center">

Theme 1
Perceptions of Quality of New Information Presented in
Web-based Training Modules

</div>

Participants conveyed a rich anthology of words, phrases and sentences to describe the value of the new information presented in the modules comprising the web-based mentor training program. Information gleaned from questions posed at the end of the four modules in the training program as well as from telephone interviews conducted with all participants substantiated their perception that educational materials included in the modules were valued by the participants as informative and beneficial to their new role of mentor.

Mentoring Module

Various characteristics of the mentoring process comprised the broad category of data identified as new or informative by five of the six participants. Lou specified five topics she considered as informative - the various roles of the mentor, coaching, the mentee's responsibilities in a mentoring relationship, benefits of mentoring to the mentor, and stages in developing a mentoring relationship. Eve also acknowledged the importance of "the roles of the mentor and mentee" as new information. Cheryl's

perceptions regarding mentoring included "the fact that mentoring could be taught", that the relationship could be "set up formally" and the mentoring relationship "had both personal as well as professional sides". She acknowledged the most informative aspect of mentoring was that the process should be planned, identifying goals and expectations for both mentor and mentee, with the entire process of mentoring being "more formal than originally thought." Nita's realization of the informative nature of the module was succinctly stated in her comment regarding the description of a good leader and the definition of a coach. She concluded that this information "intrigues me and I am reviewing how I have been using the term (coach) which is more comparable to a mentor." Loretta acknowledged that she had not fully understood the qualifications, characteristics and responsibilities of mentoring another person, because she had never "really considered being a mentor for someone else".

The historical perspective of mentoring as either new information or the most informative aspect of the module was agreed upon by four of the six participants. Eve commented that she "had not read of the history" of mentoring and that "it was very interesting". Loretta began her comment by stating that while she thought she had a good understanding of the mentoring process she had never known the history of mentoring. Nita reiterated that the historical perspective was most informative and that she would "use it in my mentoring." Lauren also "... particularly enjoyed the historical perspective on the subject" of mentoring.

The challenges of mentoring were identified by three participants as either new information or as most informative. Loretta was not aware of the "the pitfalls or the negative side" of mentoring and stated that she would "refer back" to this portion for

future reference when working with her mentee. Referencing the risks of mentoring, Lou "associated with the threat to one's professional image and failure as a mentor" as both the most informative and useful aspect of the module. She continued by saying the information "helped dispel my fears" while she was appreciative that "there are mentoring tools to support the success of the mentoring process". While Cheryl commented that the module "did not hesitate to explore the few drawbacks of mentoring", she did not proceed to specify any of the drawbacks associated with mentoring.

The participants identified many fundamental aspects of mentoring (Table 3). Even though they were experienced practitioners with an average of twenty years experience in their field, they perceived information presented as useful and informative. Informing the soon-to-be-mentors of distance dietetics management graduate students of the scope of mentoring through the mentor training program could enable them to form a solid relationship with their students, allowing the students to fulfill the required research component while further developing their professional potential (155).

Communication Module

Although all six of the participants commented that much of the information presented in the communication module was a review due to the depth of their experience and personal backgrounds, three participants were in agreement regarding the value of the inclusion of the four-step process of advising mentees (34). Eve's comment summarized the nature of these responses, "Chip Bell's four steps (of

Table 3.

Perceptions of New and Informative Materials in Web-Based Training Program

Module	Training Topic
Mentoring	Role of the Mentor
	Role of the Mentee
	Coaching
	Benefits of Mentoring
	Challenges of Mentoring
	Developing a Mentoring Relationship
	Ability to Teach Mentoring
	Mentoring Characteristics:
	Formal Aspects
	Personal Aspects
	Professional Aspects
	Historical Nature of Mentoring
Communication	Advising Mentees
	Communication Checklist
Research Methods	Classifications of Types of Research
	Non-Experimental Research Methods
	Chenail's Qualitative Matrix
	Hyper-Links/Resources
	Ethics
	Technical Writing
	Considered Most Beneficial Module
Guidelines for Graduate Students	Distance Dietetics Management Program
	Graduate School Survival Guide

advising mentees) were very helpful in establishing a mental mentoring plan" to follow while engaging in the mentor/mentee relationship.

Three participants, Loretta, Eve and Nita, all agreed the information addressed in the communication checklist (220) was informative. Loretta stipulated she would use the checklist "…as a tool with my mentee…for keeping us both on track…" while Eve's succinct comment also mirrored this prevailing thought, "the communication

checklist was beneficial and included old and new information phrased in a helpful manner".

Participants did not provide suggestions or recommendations regarding the communication module although the module was perceived to be valuable and pertinent. Varying levels of experience will always be a factor to consider in the future of the mentor training program since criteria for the target participant included a graduate degree which typically accompanies experience in the workplace. Therefore, it will not be plausible to assume each participant will be proficient and would have experience in all areas of instructional information presented in the training program.

Research Methods Module

All six participants commented on the new and informative nature of the information dealing with research methods with varying levels of enthusiasm and a diversity of topics deemed as pertinent. Lauren presented her most enthusiastic comments concerning this module stating, "You hit pay dirt in this module! Very good! Wow... this module offered me some new information and sources of information that I found to be exciting" were her initial comments. She further described her assessment of the new information presented:

> I can't begin to describe the new information and resources
> which I just reviewed. Obviously, I am not a novice when it
> comes to research...even taught research methodologies
> several years ago; however, the resources you included in
> this module were numerous, informative and easy to access.

Loretta responded by stating she learned more new information in research methods than "in the previous two modules". She acknowledged "non-experimental research

methods was quite informative" then made the comment, "…while I thought I really knew most of this, I had never fully understood the various classifications and how to differentiate between the various types and methods of gathering information". Loretta also remarked "…all the web sites related to research methodologies were informative" and that she planned to revisit the sites "…as time allows." Cheryl's comments began with " …the information…was not new but it might as well be since the last time I read or worked with anything like this was 19 years ago". She noted that she would refer back to hyper-links, especially on technical writing, that she bookmarked. She concluded "I do not think that the information that was presented to me in graduate school was as clear and defined as it was in this presentation."

Responding to the information on technical writing, Eve, Loretta and Cheryl expressed uniformity of opinion regarding its benefit. Eve and Loretta thought the topic was most informative with Eve indicating that it was the value of the hyper-links to technical writing that helped make the online learning experience worthwhile. Cheryl's wry comment stated "…the links to technical writing sure beats a Turabian handbook".

Both Lou and Nita commented on the informative nature of the information presented in the hyper-link to Chenail's Qualitative Matrix (221) regarding the analysis and presentation of data. Again, Lou and Nita were in agreement that good research characteristics, types of research, and ethical issues were useful, informative topics.

Of the five participants who specified a module as being most beneficial, four agreed that they derived the most benefit from research methods. Lauren stated that she "loved" the research methods module. "I thought you provided a wealth of information…I thought it was a beautiful compilation of resources, links to resources".

Loretta thought the research methods module was most beneficial because "it had information that was totally new to me". While considering much of the information a review, Lou and Cheryl agreed the module had benefit. Lou appreciated information on research methods stating, "... it was a great review" especially since it "...had been a few years..." since she finished her graduate program. Cheryl stated not only was the module a good review, presenting information "...I thought I knew but had forgotten", but that there was a considerable amount of information in the module "...that was totally new to me..."

Three suggestions emerged from the participant's comments regarding the research methods module. Lauren suggested the material be shared with the distance graduate students stating, "...you provided a wealth of information...I would definitely share that information with the (distance dietetic management) students." Eve also considered the information presented in the training program worth sharing with the mentees so they could in turn "help mentor other students" and "extend the core material to other mentoring programs". Eve generated two additional suggestions from the module. She suggested a specific reference be included to the "...Institutional Review Board (IRB) requirements at OSU" identifying the importance of the mentor being aware of the IRB requirements the student must satisfy. Eve also suggested that it was necessary to know "what types of courses pertinent to research" the student has completed prior to the (research) project".

While all participants possessed advanced degrees, three with a doctorate, all were enthusiastic regarding the content of the research methods module. Even though they were familiar with research methods, none were actively involved in research and

it had been many years since they had taken a research methods course. The participants, enjoying the hyper-links to obtain additional information on topics, appreciated the "refresher" nature of this module. The information regarding technical writing perceived as "very interesting" and worth "...returning to these websites..." could prepare the mentor for assisting their student during the writing phase of their research project or thesis.

Guidelines for Graduate Students Module

Five of the participants specifically identified two topics as the most informative aspects of the module. Eve, Lou, Lauren, and Nita acknowledged the link to the Distance Delivery Program Master of Science Degree in the Department of Nutrition and Food Management (222) as informative. Noting differences from programs available in her respective state, Eve felt that "it is helpful to identify these differences". Lou thought the graduate program information "...will assist me in being a more effective mentor". With Lauren and Loretta concurring on the importance of the "Oregon State University Graduate Student Survival Guide" (212) as necessary information, Lauren considered it "...a very good tool" while Loretta thought "...the time lines the student must adhere to..." was very informative. Loretta made an additional positive comment, referring to the variety of library services available for the distance student.

One participant concluded that Guidelines for Graduate Students was the most beneficial of all the modules. Eve stated that the module gave her new information "...that I would not have had exposure to..." She concluded the module "...did provide

me with some background on where the student is coming from which helps me clarify

my role" as a mentor.

Theme 2
Perceptions of Technological Issues Used to Deliver Training

Responses were received from all participants to questions regarding

technological issues associated with the Web-based training program. Issues addressed

related to accessibility, including online and hyper-link access, format and navigability,

online experience, and internal technical issues.

Accessibility Issues Regarding Online Access:

Three participant's remarks focused the online access of the training program.

Eve and Loretta's comments were evolutionary in content, beginning with non-

affirmative comments while ending their observation on an affirmative note. Although

Eve was initially plagued by training program text that was blurred and "not corrected

by going forward or backward or returning...or by closing and opening again," her final

comments regarding the modules were the training program was "readily

accessible...user friendly..." and the instructions were clear and "...did not require

guesswork." Loretta experienced similar initial difficulties, saying, "...it would load

and I couldn't read it...it was out of focus and jumbled looking..." These issues

resolved, for in subsequent modules, Loretta stated, "(accessibility) was better for me

this time". By the completion of the training program, Loretta's comments were,

"…accessibility was OK". Lauren also expressed initial difficulty accessing the training program, however her situation resolved when she changed Internet providers.

Accessibility Issues Regarding Hyper-Link Access

Five participants presented favorable comments regarding the accessibility of links. Eve described the smoothness of the technical presentation as a function of the appropriateness of the links and that "the hyperlinks worked each time". Lauren stated, "Links were very accessible and informative" expanding her statement by saying, " (I) enjoy the links to additional information such as books and other related material … they were placed at appropriate intervals within the text to allow the reader to read more…if interested". She further described, "…the links added so much wonderful detail and diverse sources on the subjects". Eve concurred with Lauren, commenting, "…all links are smooth and work well…I like the links to the books."

Brief, concise remarks referring to the accessibility and activity of the links were included in comments from Cheryl, Loretta and Nita. Cheryl stated the process of accessing the links was "a piece of cake" with Loretta also agreeing that the links were "accessible". Nita's comment included "…great…links accessible to me".

Format and Navigability Issues

Each of the six participants responded to various issues referring to the format of and navigability within the web-based training program. Format issues included clarity and readability while navigability involved the movement from one page to another and from one hyper-link to another. Lauren's comments detailed a positive progression in her perception regarding the length of the modules and reading online. Initially, she

found the first module on mentoring "lengthy and tedious to read on a monitor". After reading the second module on communication, she concluded "… the format of this module was easily readable, clear, concise and navigable. For some reason I was not as put off/negative to have to read all this information on the monitor…maybe I have adjusted to reading long documents on the monitor". Continuing in the same vein as mentioned in the previous two modules, she again commented on the length of the third module and reading on-line, "I didn't even mind the length of this module. Maybe I am getting the hang of reading long documents on the monitor. I think I am no longer adverse to reading online". Cheryl stated that the format "context was very clear" and she had no trouble reading any of the modules while Lauren also noted the format of the modules was "clear…and easy to read and very well planned out." Lou's evaluation of the clarity and readability of the format was positively stated, "I was very pleasantly surprised with the ease and clarity of the entire program…" Her ending comment was that it was "very well planned". Eve's conclusions regarding the format of the materials were "User friendly, clean, professional and well presented' while Nita's concise evaluation of the format stated, "…it was really clear." Loretta also used simple terms such as "easy to follow" and "very good" in her evaluation of the format.

Referring to navigability within the modules, Eve discovered "quick movement from page to page…I thought it was quite easy" while Lauren stated she had "…no problems with navigability". Lou was pleased "… with my ability to easily move from area to area". Cheryl also did not encounter difficulty "navigating between text and links…I never seem to have any problem navigating through these modules…I didn't have any problem, I could get on, I could get where I needed to go. If I needed to email

you, your email worked". Nita's typically concise description noted " ...easy navigability."

Online Experience

Each participant brought varying degrees of online experience to the Web-based training program with three participants either mentioning or alluding to a lack of online experience. Lauren commented that she "...had not worked with distance learning programs before..." but that she "...certainly looked at websites and programs." Her lack of experience with the online nature of the training was evidenced by her comment, "...rather long transcript to read over the computer at least for a person who is not accustomed to that format". Lou also noted " ...I'm a beginning internet user." Nita's lack of experience online as well as with computers in general was evidenced by her comment, "...I am having real difficulty with being able to print the online info...the message is that I have performed an illegal function. I think the problem is likely on my end."

Internal Technical Problems

Two participants tended to be plagued by internal technical problems, coloring their original perceptions of the web-based training program. Citing internal computer problems in several personal emails to the researcher as well as in her module evaluations, Loretta reiterated having problems with her computer "... both at home and at work loading the materials clearly". Loretta described problems with the server in her rural setting as being troublesome. Nita's frustration with "internal problems" came through as she was receiving error messages. She continued to have difficulties printing

the web-based training program information and as late as the third week of the training program, she was the only participant that was "still having difficulty connecting with the site".

Theme 3
Mentor and Mentee Benefits of the Training Program

Each participant made the discovery that the web-based training program was of benefit in a unique or specific manner, whether the benefit be directed to the participant as a mentor or to the mentee. Eve felt the information regarding the distance graduate program at Oregon State University was able give her background information on where the student is coming from which helped clarify her role as a mentor. Lou remarked how the information presented helped her "...to fully understand the unique challenges of the mentor program and will assist me in being a more effective mentor." Cheryl commented that participation in the web-based training program made her a " ... human sponge for knowledge – especially since I am now responsible for a student". Nita thought the information presented in the web-based training program "brought to the foreground key points to guide me in my role" as mentor. When reflecting on the challenges of mentoring, Loretta expressed her desire to "be a good mentor" and that "through establishing a good working relationship, I feel certain that this will be a good experience for both of us."

In perceiving the manner in which she could be of help to her mentee, Cheryl discovered her capacity to be a "resource" using the information from the training program "...I know I will get stuck, and will go back and think how can I handle this

based on what I learned from the training program." Eve also discovered that she would now be a "resource person" to help her mentee with her required research project. Lou perceived that she could now be "...much more helpful to her (mentee)" and through encouragement, would be able to provide "...that human contact... and keep her connected to the program...and help her avoid getting discouraged". Nita realized the information gained from the web-based training program "...heightened in me the importance of not having all the answers." She recognized that she could be supportive of her mentee through employing tactics such as "active listening" and continue to be supportive while allowing her mentee "...to explore questions and find her own solutions...give her time to do her own learning." Lauren described her mentee as "...an experienced practitioner, landlocked in a rural area, yet aspiring to an advanced degree credential. I have a feeling that she would have a lot to bring to any project." Lauren continued by saying now that she was prepared to form "...that mentor/mentee relationship..." she would be able to contribute to the success of her mentee by "...getting to know her better, to develop a closer relationship." Loretta, considering the achievement of skills to aid in building a closer mentor/mentee relationship a benefit of the program, felt she could help her mentee to "focus on things she needs to focus on, to slow down...to concentrate on what she is doing."

To help clarify her role Lou, considered it would be beneficial to include a "laundry list... to identify explicitly the expectations of the mentor" realizing if she had a schedule and was "...clear on what the nitty gritty expectations" were, she would be in a better position to guide her mentee.

The conference calls were provided to acquaint participants with the researcher and program director, answer questions regarding the Web-based training program and to initiate a sense of interconnectedness among the participants (78,99). A lack of personal contact has been described as a disadvantage of a distance learning experience (2). The conference calls involving all participants were described as an benefit even though the calls were not direct part of the Web-based training program. Four of the participants agreed that the conference calls, as Eve stated "…were a good idea." Eve suggested that three rather than the two conference calls involving all participants might be appropriate, "…I like the contact with other people, hearing what their backgrounds were and it is a chance to say up front what the program expectations are". Lou agreed with Eve, stating the conference calls were a way to have "…human contact…" which she felt is an integral part of a web-based training program and that the lack of human contact "…is one of the downfalls of a website type program". Loretta agreed, stating that "…I think it is necessary to have voice contact…email is fine, but I do think there needs to be voice contact from time to time in a project like this." Nita also "appreciated the conference calls…they were very supportive and put you at ease. They opened the door to ask questions and I was impressed with how diverse, how many geographic locations people were from." Participants appreciated the interaction provided by the conference calls, perceiving benefits from the conference calls and recommending they be continued, with one participant suggesting the number of calls be increased to three. Providing voice contact and the interaction with others was encouraging to the participants, providing interactivity, viewed as a necessity in distance learning (1,78,93).

Pacing

Pacing of distance course material has been shown to be efficacious, allowing the learner to self-pace identified as being appropriate (43). Three participants commented during the four-week period of the web-based training program how their lives were extraordinarily busy. Lauren commented how she was "…busier than I have been in I don't know how long…" with Loretta and Nita making similar comments. All participants agreed the length of the training program was appropriate, with two actually being surprised that it was not longer. Cheryl's comments summarized thoughts of the other participants stating, "…the length was appropriate for someone who was a professional and has other commitments."

The training program was designed for participants to complete one module per week for four weeks with the option of completing the modules in a self-paced mode. Five participants completed the modules in the one-per-week format while Lou chose the self-paced mode, commenting how the time commitment to the training program was "…very reasonable, I just set aside a good day to do it and I think the amount of information and the expectation for each module were very realistic." All participants thought the amount of time necessary to complete each module was appropriate, with two commenting how, in one sitting at the computer, a module could be finished. Loretta suggested the time frame be extended to two weeks per module. Because of her busy schedule, she was thankful to the researcher for being "patient with me and extending the amount of time for me to complete the modules."

Evaluation Process

The process of evaluating the training program was a positive experience for the participants, as Lauren stated, "…it was appropriate for the audience and you hit the concepts I would think essential to address." The participants agreed that completing the training program was not difficult, with Cheryl commenting that she thought it would be "…tougher than it was. I was expecting long reports, but I found the evaluation to be fairly easy."

<div align="center">Scenario</div>

The six web-based training program participants were each paired randomly to collaborate together as mentors on a scenario depicting the work environment of a fictitious distance graduate student. The scenario (Appendix 22) was created with input from three experienced clinical dietetic practitioners. Receiving the scenario and instructions via email, the mentors were to discuss the scenario using a discussion board set up through Computing Services at Oregon State University, then submit answers to the three questions located at the end of the scenario via email to the researcher. Response rate to the scenario was incomplete, with one pair not responding to any questions regarding the scenario. The two groups who did respond did not follow stipulated directions resulting in a paucity of data that was inconsistent thus rendering the data unusable.

All six participants perceived value in the scenario, comments were offered, identifying shortcomings as well as suggestions on improving the scenario to make it a viable method of allowing the mentors to practice mentoring in a realistic setting. Eve

described the scenario as "…very thought provoking because it brought in the complex work environment and how it is difficult to separate the student from the environment in the mentoring process." Nita explained how the scenario "…was helpful because it made me go back and look at some of the modules and think through how I would respond to the situation and draw on my own expertise."

Lou thought the format of the scenario needed more structure and could be improved if it had "…stricter guidelines on what was really expected." Lou, Cheryl and Eve identified either poor communication or a total lack of communication with their scenario partner as "disappointing". Lou and Cheryl described inadequate time with their scenario partner to have a meaningful discussion of issues presented in the scenario while Eve was stymied by the lack of response from her partner, "I never did get anything but one short feedback that they read the scenario and they would get back to me and in essence, that was all the response." Another drawback identified was difficulty in accessing the discussion board, noted by Cheryl as time consuming and involving too many steps.

Lou, Cheryl, Eve and Nita offered suggestions to improve the scenario. Lou thought by identifying a specific number of "…discussions to be made between scenario partners would allow partners to come together and then come up with a recommended way to handle the situation. I think that would have forced us to be more communicative." Cheryl thought having an " instantaneous chat line" at a specific time between scenario partners would facilitate discussion. Eve recommended to allow the scenario to be "…open where everyone can give feedback to give more depth of response or better communication if everyone put their own thoughts in." Nita's

suggestion complimented Eve's idea of group involvement by allowing mentors to role play to "...develop both sides...that of the mentor and the student."

Even though the scenario was perceived to be hindered by a variety of issues, the participants provided positive, constructive comments to allow the scenario to fulfill its intended purpose – to provide a platform on which mentor training program participants could work together, putting into practice inherent skills as well as information gleaned from the training program.

Strengths and Limitations

The strengths of the study included: 1) the development of a means to train mentors to work with distance dietetic management graduate students, guiding their required research project or thesis and 2) to be on the ground floor in the evaluation of an exciting program that is the only one of its kind in the nation.

The limitations of the study could be the lack of generalizability. This research could not be generalized to other mentor or web-based training programs. It did initiate a database for demographics regarding the mentor training program at Oregon State University. The lack of sophistication of course authoring software used inhibited the technological aspects of the training program.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

The Web-based mentor training program proved to be a successful method in which to train professionals to mentor distance dietetic management graduate students. The research results yielded positive response to the first research question: can a model be developed and implemented for the web-based training of professionals with research based degrees who have agreed to mentor the research project of distance graduate students? Also affirmatively answered from a rich variety of qualitative data was the second research question: can identification occur of perceptions, reactions and responses of research mentors to being trained using web-based technology to ultimately guide the research of graduate students enrolled in a distance delivered Master of Science program?

The recruitment of mentors by distance dietetic management graduate students to guide the research project or thesis of the students was successful in providing motivated professionals, possessing advanced degrees and living in proximity to the students. It was assumed that the mentors would be motivated to complete the training program since they accepted the ambitious project of mentoring the research of a graduate student. Motivation has been shown to have a powerful effect on completion rates irregardless of the learning setting (43). Each of the six mentors recruited completed all modules of the mentor training program. The results of this research

project will provide baseline data regarding the demographic profile of a mentor to distance dietetic management graduate students.

Study participants found information presented in the four modules of the Web-based mentor training program to be efficacious, even the module perceived as providing the least new material and considered to be a review was nonetheless confirmed as valuable, providing pertinent information to the participants. The pilot study was successful in identifying topics to be included in the four modules to train mentors as was the proposal for the inclusion of meaningful assignments. Even though the scenario was unusable due to directions not being followed resulting in incomplete data, participants perceived the scenario assignment as valuable, describing the scenario as thought provoking and offering numerous suggestions for improvement.

Various features composing the design of the training program were successfully implemented to produce satisfactory comments from the participants. Regarding the format, the participants all positively discussed length of the modules, amount of time to complete the modules, clarity of the text and the inclusion of hyper-links in the text. The influence of time and a busy lifestyle impacted the participants and influenced comments regarding length of modules and the amount of time necessary to complete the modules. The length of the modules comprising the training program was perceived as not too long and the amount of time to complete the modules was not excessive. The text was identified as clean, easy to follow and professional. The inclusion of hyper-linked text was appreciated as a source of additional information pertinent to each topic under scrutiny. The participants positively perceived quality information presented in the modules as a significant source of new and informative

material that would benefit them as mentors and their mentees. Through exposure to the Web-based mentor training program, mentors could better appreciate their role as a mentor, identifying this as a benefit of the training program. The realization of the importance of communication in the mentor/mentee relationship and recognizing the importance of the emphasis placed on the research project or thesis could provide the mentor with foundational principles on which to base the mentoring relationship.

Technological issues involved in the web-based training program covered a variety of issues ranging from lack of computer experience to technological problems with the posting of the web-based training program to the Internet. Experience with computers and technology or the lack of, could color the participant's view of the web-based training program in a positive or negative manner. Considered a non-issue for participants comfortable with technology, the reverse was true for those who considered themselves in the "novice" category. Experience with computers and being comfortable with technology is a function of time and exposure. Professional organizations are encouraging members to make strides in adapting to technological change in order to be better prepared for the future (21,26). The mentors completing the Web-based training program have now experienced online training first-hand and will take this experience with them to the mentoring relationship and to their worksite, therefore this training program met a professional need.

Two of the three data collection strategies employed proved to be successful. A wide variety in length of written responses was given to questions posed at the end of each of the modules. Three participants could be characterized by the brief, succinct nature of their responses in contrast to the lengthy responses of one participant

consisting of thoroughly outlined modules. Irregardless of the length of sentences or number of words used, perceptions voiced by the participants provided a depth of information that added a tremendous dimension to the responses and therefore to the evaluation of the web-based training program. A spirit of cooperation that was present throughout the study culminated in the telephone interview. Information gleaned from the telephone interview was expressive with complete answers given to questions posed at the end of the Web-based training program. Participants were generous with their comments regarding the quality of the training program, but did not hesitate to offer suggestions regarding their impressions for improvement.

The evaluative comments supplied data necessary to provide for a formative evaluation of the web-based training program, allowing the participants to voice their perceptions as to whether the materials were appropriate and beneficial in the training of mentors as well as to identify pitfalls in the training program and make suggestions for improvement. Thus the two-fold purpose of formative evaluation was accommodated: positive comments referring to a wide range of features could reinforce the completeness of the web-based mentor training program while remarks providing suggestions for improvement would enable intervention to occur prior to the program being fully implemented (104). Comments provided by mentors participating in the initial Web-based mentor training program for distance dietetic management graduate students participating in the Dietetics Management Master of Science program at Oregon State University provided the basis for the evaluation of the training program. Professionals with advanced degrees could be trained to mentor distance graduate students using Web-based technology as the vehicle to provide the training.

<u>Recommendations</u>

Thoughtful suggestions proposed by the participants using their own words provided a realistic springboard for recommendations from this research. Participants provided rich, reflective suggestions regarding modules as well as technological issues and the scenario, identifying their perceptions for refinement.

Comments from the participants provided tremendous evidence that the mentoring module contained new and informative details to facilitate the mentoring process.

To give credence to Lou's suggestion, the creation of a Distance Dietetic Management Mentor Checklist, accessed by a navigation button, would include Distance Dietetic Management Program specific information such as a schedule for routine check-in or progress reports to monitor the mentee's advancement toward goals and forwarding the information to the campus advisor, would provide a reference point to identify expectations. An enclosure included in the brochure of the Dietetic Management Distance Delivery Program identified course offerings in the form of a three-year Tentative Schedule (Appendix 1). Inclusion of this information in the mentor training program would provide a time line for the mentor to track the progression of the mentee through the program. To further integrate Lou's suggestion, including this outline of course offerings in the mentoring Distance Dietetic Management Mentor Checklist or in the mentoring module would provide an overview of all course work required for the distance dietetic management student. The mentor could have access to course syllabi to identify subject matter expectations of their student.

The research methods module, considered as most beneficial of all the modules by four of the participants, received many constructive comments expressing the value of the material. Cheryl declared the information presented in the research methods module to be more clearly stated and defined than what was presented to her in graduate school. Lou, describing that she was "into scientific methodology" due to the nature of her work, liked the research methods module because it gave her "some of the verbiage and an idea of what the students might be looking at" in regards to research methods.

It could be appropriate to incorporate Lauren and Eve's suggestion regarding the sharing of information with the mentees. Allowing the mentees to be acquainted with the objectives and module contents of the mentor training program would provide the realization of the actual subject matter content the mentor will be familiar with prior to the beginning of the mentor/mentee relationship. This information, in abbreviated form, could be placed in the program brochure or in the distance graduate student guidelines the Nutrition and Food Management department provides each distance graduate student.

To integrate Eve's suggestion regarding IRB information, online access to Institutional Review Board information at Oregon State University is readily available. The website contains an online handbook available since September 2000. The process by which research is deemed exempt from full board review or necessitates an expedited or full board review is information that can easily be made available to mentors by means of a link to the website (221) and to the handbook (222).

The Dietetic Management Distance Delivery Program brochure (Appendix 1) identifies twelve hours of research courses including Research Methods, Statistics and

Research Studies or Thesis as basic to meet program requirements. The "Tentative Schedule" (Appendix 1) identifying the courses and term sequencing necessary for distance dietetic management students to accomplish while in the program will also afford the mentors the nature of the research coursework necessary for completion of program requirements. This information could be included in the Distance Dietetic Management Mentor Checklist.

Introducing the material presented in the Guidelines for Graduate Students module at the beginning of the web-based training program as the first module rather than the fourth or last module was suggested by three of the participants. Lou's proposal succinctly summarizes the perceived benefit of placing this module first will aid the mentor in understanding the requirements the students are expected to fulfill as a preface to "…the outcomes and information presented in subsequent modules." Eve considering the Guidelines for Graduate Students module as most beneficial of all the modules in the web-based training program, proposed four ideas to further clarify material in the module. She suggested it would be instructive to have additional information "…on the mission and scope of the Department of Nutrition and Food Management" as well as the department's requirement for a "publishable paper." Another consideration included, "…it would be helpful to know if the student is required to use APA or MLA (format)." She posed another suggestion regarding the required format, "Those of us that are APA, or vise versa might need to do some review to better help the student with their writing. Perhaps that might be an optional module."

Reorganizing the modules to allow the Guidelines for Graduate Students module to appear as the first module would address the concern voiced by Lou by placing the

module advantageously to give mentors an initial understanding of requirements the students need to fulfill. By incorporating previous suggestions to include a checklist for the distance dietetic management mentor as well as an outline of required courses, the information from both these sources would help clarify the program requirements of distance dietetic management graduate students. The course offerings are currently identified rather deep into the hyper-link, 'distance dietetic management' and could have been overlooked by the participants. Identifying the course offerings within the module and not in a hyper-link, would allow the information to be readily accessible and in full view for the mentor to fully comprehend.

The scope and mission of the Nutrition and Foodservice Management Department is not identified in the department web page. Listed as separate entities under the Undergraduate Programs bullet, the Nutrition site is under construction while the Foodservice Management site identifies the scope and mission of this facet of the department. Appropriate hyper-links to these completed sites would satisfy the need to know regarding the scope and mission of each emphasis within the Nutrition and Food Management Department.

Addressing the guidelines for a publishable paper and appropriate format could be dealt with in tandem and added to the Guidelines for Graduate Students module or to the new mentor checklist. Although the research requirement of a publishable manuscript is mentioned in the Dietetic Management Distance Delivery Program brochure, it is not further identified or described for clarification purposes for the benefit of the mentors. A section could be included in the Distance Dietetic Management Mentor Checklist to be created that would identify not only the rationale

for the publishable paper, but also criteria for its development. The Graduate School Online Thesis Guide (223) explains the bibliographic format of a paper will reflect the style established by the department. In this case, the Nutrition and Food Management Department uses the number system. As identified in the Graduate School Online Thesis Guide, "In the number system, material cited in the text is directly followed by a number in parentheses; numbers begin with "1" and run consecutively throughout the main body of text." Including a section in the Distance Dietetic Management Mentor Checklist or in the Guidelines for Graduate Students module to address the publishable paper as well as bibliographic format with a link to this website would be appropriate.

Three participants alluded to "internal difficulties" eleven times throughout the discourse referencing various situations that added a sense of frustration to responses. Typical issues addressed included: 1) loading the program; 2) printing of modules; 3) blurred print in text of modules and 4) connecting to server. Various degrees of experience working with both computers and Internet use came into play with three participants admitting to their novice status.

Loretta reiterated having problems with her computer, "… both at home and at work loading the materials clearly". Nita's frustrations with "internal problems" were evidenced by error messages while printing text from modules identifying "…that I have performed an illegal function. I think the problem is likely on my end." Eve was frustrated with sections of the first module containing "blurred text" while Loretta described problems with the "crazy server" in her rural setting as being troublesome.

Issues regarding technical difficulties involved the lack of online experience and/or computer experience. Being uncomfortable with technology can adversely affect the success of the web-based learner (6). Computer and Internet experiences of participants involved in the web-based training program to train mentors for distance dietetic management students will continue to vary while criteria for possessing an advanced degree will remain constant. Practitioners are being encouraged to employ "rapid adaptation to technological advances" to increase and improve skills as the use of computers and the Internet continue to escalate in the workplace (21,26).

To help participants cope with internal problems and lack of technological experience, a section to identify frequently asked questions (FAQ's) could provide questions referencing potential problems and answers to their solutions to help alleviate frustrations associated with the lack of technical knowledge. A FAQ's navigation button added to the existing navigation buttons could allow participants to easily access the questions and answers.

A problem occurred when originally loading the Web-based training program through Oregon State University's WebWorks (225). Instructions sent to the researcher did not allow for the training program to be fully operational. Blurring of text and incomplete loading were the initial problems. To solve the problem, the web-based training program was deleted from the original URL provided for the training program and was posted to the researcher's Oregon State University URL. When participants identified loading problems as well as blurring of text, they had accessed the training program during this transition period when the site was not fully functional. Once the training program was posted to the other URL, these problems subsided. It would prove

advantageous to provide the URL to future participants in the mentor training program after the program has been completely loaded, tested and found to be error free. Since web pages are interpreted by a web browser, there may be variations in the way the pages are presented to the viewer. A software program, such as *Adobe Acrobat,* which allows materials to be viewed exactly as they were produced could be added to the list of electronic requirements to facilitate clear viewing of all produced materials (225).

Training Program Format

With busy lifestyles and work schedules escalating, the amount of time available to complete a Web-based training program will continue to be an issue to program participants. Participants in future web-based mentor training programs will continue to be busy professionals, involved in a variety of activities while agreeing to work with graduate students. It will be important to keep the length of modules appropriate as to not require an inordinate amount of time for completion. Negative aspects of lengthy online learning experiences have been reported to include information overload, loss of ability to follow visual cues and difficulty in navigating online (226). Maintaining the dual option for completing the four modules in a weekly as well as a self-paced mode will be advantageous to busy mentors (43). The conference calls give the mentors voice contact with the program director as well as other mentors. Offering an additional conference call, mid-way during the training program to allow the mentors to give feedback on materials completed thus far would provide mentors with the opportunity

to give evaluation that would be of personal benefit as well as to the whole group of participants as also identified by Palloff (6).

Even though data from the scenario was unusable due to incomplete data, participants made constructive comments to enable the scenario to be improved and used in the future as an exercise allowing mentors to put into practice appropriate mentoring skills. Since participants in the web-based mentor training program will always be busy professionals, balancing career, service and a personal life, the training program must be tailored to accommodate the active professional while not sacrificing content. Incorporating suggestions from participants of this study could improve the scenario: 1) by providing clear, specific directions to the scenario including recommendations regarding the amount of interaction between scenario partners; 2) through improving the discussion board, and 3) by incorporating feedback from all participants allowing the learning to be interactive.

The original instructions to study participants regarding the scenario were emailed to participants with the scenario presented as an attachment (Appendix 16). Three questions were to be answered based on the situational circumstances identified in the scenario through incorporating the knowledge and expertise of the mentors. Additional structure and clarification can be added to the instructions by having all materials posted in the web-based training program rather than sending the material via email. Posted scenario information would identify specific instructions for completing the scenario by providing the goal and objectives of the scenario, the list of questions to be answered, a time line regarding when the assignment is due, guidelines on working as scenario partners and the final discussion of results. Providing additional guidance

and details will provide structure and additional information, providing a clear path for successful completion of the scenario. However, Palloff warned against providing structure that is too rigid stating that it can be a deterrent to participants and their online involvement (6).

Improving the discussion board, changing it from the asynchronous format presented in the training program to a synchronous format as in a chat room would help bring participants together in real time and foster interconnectedness. Technical advances in software have made it less problematic to incorporate interactive discussion groups fostering an interdependence among the participants (6).

Overall Research Recommendations

Incorporating participant's recommendations into the web-based mentor training program will increase the effectiveness of the program for future participants, facilitating the mentor training process:

- Create a Distance Dietetic Management Mentor Checklist to be accessed by a navigation button
- Publicize Mentor Training Program objectives and topical contents of modules in materials accessible to distance dietetic management graduate students
- Rearrange modules to allow Guidelines for Graduate Students to be the first module
    - Include hyper-links to IRB Web site and handbook

     o Define criteria for publishable paper with publication

       requirements

     o Include hyper-link to Online Thesis Guide

- Create a FAQ's site accessed by a navigation button

- Include *Adobe Acrobat* as a technology requirement

- Keep length of modules reasonable for the busy professional

- Maintain dual option for pacing

- Maintain conference calls

- Refine structure of the scenario

- Allow all materials to be available to participants at the beginning of the
  training program

Summative evaluation of future web-based training programs will provide for on-going

feedback regarding the effectiveness of the training program as suggested by Moran

(105).

Summary

   The concepts of distance education and online learning have brought about an

exciting technological platform from which students can learn while providing a healthy

challenge to the role of educator. Accepting the technology challenge, The Nutrition

and Food Management Department at Oregon State University saw opportunity in this

new method of reaching and teaching students by being the first institution to develop a

web-based distance delivery program to train graduate students from across the nation

in the field of dietetics management. Objectives of this degree were to enable dietitians

to prepare for administrative responsibilities through technologically enhanced communication skills, advanced career preparation, strengthened research skills through expansion of their professional network. To fulfill the research requirement for the Master of Science degree, program developers of the Dietetic Management Distance Delivery Program devised that a mentor would provide guidance to the distance dietetic management student to facilitate completion of the required research project. Each distance dietetic management graduate student was to select a mentor, who met the program criteria of: 1) possessing an advanced degree; 2) demonstrated technical writing skills; 3) willingness to commit to involvement in a mentor training program and mentoring the student through completion of the research project and 4) willingness to be involved in academic pursuit and keep in close contact with both the student and the academic major professor.

A method was needed to prepare mentors to work with distance dietetic management graduate students. A case study design was chosen with qualitative methods of collecting data for this unique web-based training program. A two-phase study was conducted: phase one included the design of a web-based training program using the authoring tool, Microsoft Publisher 98 (174); phase two involved the formative evaluation of the study by participants, the mentors selected by the distance dietetic management graduate students.

In phase one, the web-based training program was designed to consist of four instructional modules referencing mentoring, communication, research methods and guidelines for graduate students at Oregon State University. To verify validity of the qualitative data, triangulation was employed. Multiple sources of data included answers

to standard questions posed at the end of each module, a semi-structured telephone interview at the conclusion of the web-based training program and questions from a realistic but fictitious scenario created to allow for application of mentoring skills (Appendix 22, 24).

In phase two, six participants were involved in the case study to evaluate the feasibility of training mentors via web-based technology to work with distance dietetic management students. The participants lived in proximity to their distance dietetic management graduate students, one from Alabama, one from Illinois and four from Oregon. All were experienced practitioners either in the field of dietetics or nursing, three possessing a Master of Science degree and three an earned doctorate, each agreeing to mentor their respective graduate student through the completion of the required research project. The participants completed the four modules, answering questions posed at the end of each module as well as being involved in a semi-structured telephone interview at the completion of the training program. Because of incomplete and inconsistent participation, the scenario was not used as a data source.

Three main themes emerged from this qualitative case study: 1) perceptions of quality of new information presented in the web-based training modules; 2) perceptions of technological issues used to deliver training and 3) perceived benefits of the training program. Regarding the first theme, participants discovered new, valuable information in three module – mentoring, research methods and guidelines for graduate students, while perceiving information from the communication module as a pertinent review. In the second theme involving technological issues, initial technical problems loading the web-based training program and inexperience with computer and Internet use were

an issue. Navigability posed no problem and while not an integral part of the web-based training program, the participants overwhelmingly endorsed the conference calls conducted prior to the start of the training program. The third theme referencing perceived benefits of the web-based training program included both mentor and mentee as benefiting from the training program. Participants commented on possessing a better understanding of both the role of the mentor and challenges of mentoring. Referencing benefits to the mentee, participants realized how being a resource person to the mentee would be of aid to the mentee in helping foster the mentor/mentee relationship.

Research results indicated recommendations to improve the web-based mentor training program. Recommendations were: 1) to maintain the format of the four modules, mentoring, communications, research methods and guidelines for graduate students, provide updates to instructional materials including hyper-links to both the Institutional Review Board and handbook and provide scope and mission of the Nutrition and Food Management Department; 2) create a Distance Dietetic Management Mentor Checklist to provide mentors with a list of program expectation they need to follow, such as criteria for publishable paper, bibliographic format, coursework requirements necessary for completion of degree; 3) reorganize modules to place guidelines for graduate students as the first module; 4) create a frequently asked question (FAQ's) section to be accessed by a FAQ's navigation button to provide answers to common technology-based problems; 5) maintain the conference calls as an integral part of the overall web-based training program experience; 6) improve the scenario by incorporating more structure in the guidelines, provide recommendations regarding the amount of interaction required between scenario partners, incorporate

feedback from all participants and improve access to the discussion board through incorporating new technology.

A web-based training program is an appropriate, viable method to train professionals to mentor distance dietetic management graduate students. The thrust of the future is to educate by employing the most current technological trends and provide educators with the ability to be on the cutting edge of technology.

> ...the learning process helps to create a learning experience that is empowering and rich. It is essential to impart the importance of this process to faculty in order to maximize the use of the electronic medium in education. Without it, we are simply recreating our tried and true educational model and calling it innovative... (6).

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APPENDICES

APPENDIX 1

Dietetic Management

Distance Delivery Program Brochure

Research

The student will complete a research study at their place of employment or other community site. Upon completion of the study, a publishable manuscript is required. To help make this possible, adjunct OSU faculty will be available in the area to guide and mentor the student in conjunction with the resident OSU faculty.

Benefits

The MS Degree in Dietetic Management will be delivered to students throughout the United States. Benefits include:
- ✗ No relocation necessary
- ✗ Remain employed
- ✗ No out of state tuition
- ✗ Earn MS Degree in your professional area

Fees

Upon acceptance to the MS Degree program in Dietetic Management at OSU, registration materials will be sent to you from the Office of Continuing Higher Education.

Fees: $290 per quarter credit (1998-99)

The fees are established through the Office of Continuing Higher Education and are the **same** for in-state and out-of-state students.

NOTE: Course offerings and tuition costs are subject to change at any time.

Ann M. Messersmith, PhD, RD, LD
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Oregon State University
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http://osu.orst.edu/dept/nfm/distdel.htm

Dietetic Management

Distance Delivery Program

Master of Science Degree

Oregon State University

College of Home Economics and Education
Department of Nutrition and Food Management

DIETETIC LEADERS TO MEET THE MANAGEMENT CHALLENGES OF THE 21ST CENTURY

Program Description

Master of Science (MS) Degree in Dietetic Management is offered through distance education at Oregon State University (OSU). This degree program may be completed in three years by taking two to three courses per term. The major (30 credits) will include courses such as Organization and Management of Food and Nutrition Service, Seminar, Selected Topics In Dietetic Management, and Research, as well as individually designed experiences to meet personal program goals. The minor (15 credits) can be selected from Public Health, Business, or Education.

Objectives

The objective of the MS Degree focusing on Dietetic Management is to enable dietitians to prepare for administrative responsibilities in the next century through:

- → advanced career preparation
- → enhanced technology communication skills
- → strengthened research skills
- → expansion of professional networks

Course Delivery

Courses will be offered through a variety of distance delivery methods, including electronic mail, audio conferencing, World Wide Web, one-way or two-way video/audio and U.S. Mail. Students will be able to receive course materials electronically at their own location, whether at home, work, university or library.

Admissions

To register for the program, you must be enrolled at OSU as a graduate student. Application forms required for admission to the Graduate School are available from Nutrition and Food Management Department, 108 Milam Hall, Corvallis, OR 97331-5103; phone 541-737-3561; e-mail: distdel@ccmail.orst.edu.

Restricted Admission

The MS Degree in Dietetic Management will accept applicants who meet the University Admission Department criteria and who are *Registered Dietitians*. Applications are to be received in the Spring Term for the following fall. However, late applications will be evaluated as space allows throughout the summer.

Application Requirements

- ➤ Completion of a Baccalaureate Degree
- ➤ Be a Registered Dietitian
- ➤ Last 90 quarter hours or 60 semester hours of Baccalaureate Degree are to be a 3.0 Grade Point Average on a 4.0 scale
- ➤ Complete university admission forms
- ➤ Complete department admission forms

Program Requirements

Requirements for the Nutrition and Food Management MS Degree in Dietetic Management are summarized as follows:

Foundation Courses (8 credits)
Orientation: Dietetics
Advanced Food and Nutrition Management
Seminar (minimum of 2 credits/presentations)*

Research Courses (12 credits)
Research Methods
Statistics
Research Studies or Thesis

Individual/Custom Courses (minimum of 10 credits)
Event Planning/Management
Computer Assisted Food and Nutrition Management
Facility Design for Food and Nutrition Services
Organization and Management of Clinical Services
Procurement and Inventory Systems
Selected Topics In Dietetic Management
Practicum (up to 4 credits for prior dietetic internship and experience)

Suggested Minor Area of Study (15 credits)
Select from: Public Health
Education
Business

Total of 45 credits

NOTE: Two seminars are required. Attendance at a seminar held at the site of The American Dietetic Association annual meeting the weekend prior to the start of the annual meeting will be required one time.

MS Dietetic Management
Department of Nutrition and Food Management
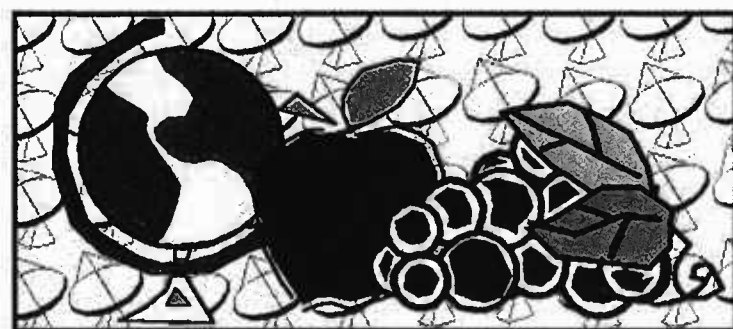### Oregon State University
Tentative Schedule (1998-2001)

Minimum of 30 hours major, 15 hours minor, for a total of 45 hours.		
1998-1999 **FALL**	**WINTER**	**SPRING**
NFM 540X (3) Orientation: Dietetics Management	*NFM 541 (3) Facility Design for Food and Nutrition Services	*NFM 549X (3) Organization and Management of Clinical Services
NFM 507 (1) #Seminar	XXX--(3) Research Methods (transfer credit) *NFM 509 (4) Practicum	XXX--(3) Minor Course
1999-2000 **FALL**	**WINTER**	**SPRING**
XXX--Minor Course (3) NFM 507 (1) #Seminar XXX--(3) Statistics (transfer credit)	NFM 556 (3) Advanced Food and Nutrition Management XXX--(3) Minor Course	*NFM 542 (4) Procurement and Inventory Systems *NFM 553X (3) Selected Topics in Dietetic Mangement
2000-2001 **FALL**	**WINTER**	**SPRING**
XXX--(3) Minor Course NFM 507 (1) #Seminar NFM 501 (3) Research **OR** NFM 503 (3) Thesis	*NFM 555 (3) Computer-Assisted Dietetic and Food Management NFM 501 (3) Research **OR** NFM 503 (3) Thesis	*NFM 548X (3) Event Planning/Management XXX--(3) Minor Course

*Major electives: must take a minimum of 10 quarter credit hours.
#Seminar attendance at ADA will be required one time. You will need to participate in only two seminars as part of the required courses.

APPENDIX 2

Guidelines for Identifying A Research Mentor

NUTRITION AND FOOD MANAGEMENT
OREGON STATE UNIVERSITY

Guidelines for Identifying A Research Mentor
Fall, 1998

Congratulations!
You are now in the second year of your masters in dietetic management program. This is a pivotal year, for you will be making important decisions regarding your graduate research, which will be the culmination of your graduate program here at Oregon State.

Mentor Model
A unique mentor model is currently being developed to strengthen research activities and communication for students involved in the distance delivery program. Through the research to develop this model, a research mentor will be trained. The research mentor will then be able to augment the relationship and communication necessary between you and your major professor as you conduct and complete the research necessary for the completion of your advanced degree. The research mentor, a professional peer living in your geographical area, will thus interface to form a team with the student and major professor, helping to guide and direct your research.

Criteria for Research Mentor
The research mentor will serve as a third party working with you and your major professor. It is not necessary that the mentor possess skill and knowledge in your area of study. What is important is that they must have previous experience in conducting research or studies. The research mentor will help to guide you through the various phases of research, networking together within your research environment.

Criteria include:
- Possess a master's degree or doctorate
- Demonstrated technical writing skills - having accomplished a research project with published (or publishable) outcome

- Willingness to commit to time frame including research mentor training program and bringing student to research completion
- Possess a willingness to be involved in academic pursuit and to keep in close communication with the student and the major professor

Benefits for Dietetic Management Students
- Establishment of a local support system for research consultation
- Networking with a professional peer
- Enhancing the expediency of your research

Benefits for Research Mentor
- Gain knowledge and experience from working with current concepts related to dietetics management, mentoring and research methods
- Adjunct faculty status at Oregon State University
- Authorship status - listed as a contributing author on publishable student research
- Receive continuing education units from the American Dietetic Association or as a member of other professional organizations
- Receive a stipend for research mentoring while student is actively enrolled in research at Oregon State University
- Personal library will be expanded to include appropriate research resources

Electronic Requirements for Research Mentor
- Computer access, including
    - modem
    - web browser
- E-mail
- Fax

Sources for Research Mentors
- Professional peers
- Colleagues
} obtained from local, regional, state dietetic directories and other professional connections

Anticipated Outcomes
This program will be a win-win situation for everyone concerned.
- Implementation of your research will be facilitated through increased communication between you, the mentor and the major professor
- Your research site and Oregon State University will benefit from the positive promotion from the research mentor

Time Frame for 1998-1999
The research mentor must be identified by the beginning of winter term. The research mentor training program will begin fall, 1999 and will be a four-week, web-based program. By winter term, 2000 your research mentor will be trained and ready to help guide your research(when you are scheduled to take NFM 501 or 503).

APPENDIX 3

Mentor Intent Form

Oregon State University
Department of Nutrition/Food Management

Research Mentor Intent

The completion of this form signifies intent to be involved as a research mentor with the graduate research of _____
(name of graduate student)

Mentor Name _____

Social Security Number _____

Position/Title _____

Email_____

Phone (Work) _____(Home) _____

Fax _____

Send this completed form and a current resume to:

      Suzanne R. Curtis, MS, RD   or   curtiss@orst.edu
      Oregon State University
      NFM Department
      Milam 108
      Corvallis, Oregon
      97330

APPENDIX 4

Mentor Information Form

Oregon State University
Nutrition and Food Management

Mentor Information Form

Date_____

Name_____

Social Security Number_____

Dietetic Registration R.D. Number _____
   Or membership in other professional organizations

_____

Electronic mail _____
                          (address)

Telephone_____
              (home)   (work)

FAX_____
         (home)   (work)

Please enclose:
- Cover letter
- Resume (include education; R.D. completion date, membership number; work experience; field of research; research site; list of publications)
- Copy of transcripts, if available

Mail to:
   Ann M. Messersmith, Ph.D, R.D., L.D.
   Professor and Head
   Department of Nutrition and Food Management: Mentorship
   Milam Hall 108
   Oregon State University
   Corvallis, OR 97331-5103

For additional information or questions, contact Ann Messersmith at 541-737-3561 or e-mail:messersa@orst.edu

APPENDIX 5

Fall, 1999 Letter to Mentor

September 15, 1999

XXXXXXXXX
XXXXXXXXX
XXXXXXXXX

Dear _____:

It is with great anticipation and excitement that we welcome your participation in the Mentor Training Program for Distance Dietetic Management Students at Oregon State University. We appreciate your willingness to mentor _____ and be a part of this research project. Information gathered from this research project will be used to further refine the mentor training program to benefit all students enrolled in the program from this time forward.

This exciting graduate program is in its third year, allowing dietetic professionals to obtain a graduate degree without having to come to the Oregon State campus. Your participation in this project will definitely expedite _____ progress toward her goal of a master's degree in Dietetic Management. It is our desire that the mentoring association will be a positive experience for both parties involved and that the information you receive in this training program will be beneficial to not only to you, but will ultimately benefit _____.

The program will be fully explained once you are able to go on-line and view the program materials in their entirety. If you have any questions, please do not hesitate to contact us. In the meantime, the following information should answer many of the questions you may have regarding the training program:

- ◆ **Four Modules** - The training program consists of four modules designed to be completed at a schedule of one module per week or may be completed in a self-paced mode. A module evaluation will be due via email on each Sunday during the four week program, however the evaluation may be sent any time during the week prior to the Sunday deadline. If you wish to complete the modules in a self-paced mode, evaluations may be sent at the completion of each module.
- ◆ **Time Frame** - Time frame for the training program will be from October 25 through November 21, 1999 if you are completing one module per week. You may complete the program earlier if you prefer working in a self-paced mode.

- ◆ **Conference Calls** - There are two conference telephone calls mentors will participate in. The first call is Tuesday, October 1999 at 6:00 p.m. PST. The second call will be Tuesday, November 11, 1999 at 6:00 PST.
- ◆ **Group Assignment** - There will be one group assignment in which two mentors will be paired and discuss a mentor/student scenario via an internet chat line.
- ◆ **Follow-up Telephone Evaluation** - After completion of all training program modules, you will be asked to participate in a final telephone evaluation.
- ◆ **Electronic Requirements** - include a computer, modem, web-browser and e-mail.
- ◆ **Confidentiality** - the University requires that the identity of all participants of a research project be given complete anonymity. You will be sent an Informed Consent Form for you to complete and return to the NFM office at Oregon State.

Again, let us thank you for your willingness to participate in this research project. We look forward to working with you during the training program which will be the first step in the successful mentoring relationship between you and Cindy.

Sincerely,

Ann M. Messersmith, PhD, RD, LD
Head, Department of Nutrition/Food Management
Oregon State University
541-737-0958
messersa@orst.edu

Suzanne R. Curtis, MS, RD
PhD Student
Oregon State University
512-835-1444
curtisrs@texas.net

APPENDIX 6

Informed Consent Form

**OREGON STATE
UNIVERSITY**

Informed Consent Form

Title: A Web-based Training Program for Research Mentors

Investigator: Ann M. Messersmith, PhD, RD,LD
Suzanne R. Curtis, MS, RD
Department of Nutrition/Food Management
Oregon State University

Purpose: This study will involve the implementation and evaluation of a web-based training program to train professionals to be research mentors to dietetics management students enrolled in a distance delivered Master of Science program in the Nutrition/Food Management Department at Oregon State University. The purpose of this study is to obtain evaluation information relating to materials included in the web-based training program as well as issues involving the format and design of the training program.

Procedures: The subjects will be involved in three procedures: 1) subjects will read web-based materials contained in four modules and answer questions which will be submitted by email, (2) subjects will be paired and work together via email to answer questions based on a realistic mentor/student scenario, (3) subjects will participate in an interview via telephone; questions asked will pertain to their perceptions regarding training program materials as well as the format and design of the web-based training program.

Foreseeable Risks: There are no known risks for involvement in this study.

Benefits of the Study: It is the opinion of the researcher that the subjects will benefit from participating in this study by furthering their knowledge base of mentoring, communication skills, research methods, expectations of graduate students at Oregon State University as well as gaining insight to web-based training programs. Mentors will be eligible to be courtesy faculty at Oregon State University. After completion of the training program, mentors will receive research texts to expand their personal library. A stipend of $400.00 will be paid to the mentor upon the student's completion of the research project. The mentor will have the option to be listed as a contributing author on published research.

Confidentiality: The researcher will maintain subjects' anonymity and confidentiality as necessary for ethical instructional and research practice. Any information obtained will be kept confidential. A first name only pseudonym will be given each subject and will be used to identify results and other information

provided. The only person who will have access to this information will be the investigator(s) and no names will be used in any data summaries or publications.

Voluntary Participation Statement: Participation in this study will be entirely voluntary and you may discontinue participation at any time. If you withdraw from this study before it is completed, the amount of compensation may be less than the full amount.

If You Have Questions: Questions regarding this research may be directed to:

> Suzanne Curtis
> Department of Nutrition/Food Management
> Oregon State University
> Corvallis, Oregon 97331-3502
> 541-737-3561
> curtiss@orst.edu

Questions regarding your rights as a research subject may be directed to the IRB Coordinator, OSU Research Office. 541-737-8008.

Understanding and Compliance: My signature below indicates that I have read and that I understand the procedures described above and give my informed and voluntary consent to participate in this study. I understand that I will receive a signed copy of this consent form.

_____   _____
Signature of Subject   **Name of Subject**

_____   _____
Subject's Present Address   **Subject's Phone Number**

_____   _____
Signature of Principal Investigator   **Date Signed**

APPENDIX 7

Oregon State University Web Guidelines

Five OSU Web Page Guidelines - Oregon State U...

Oregon State University
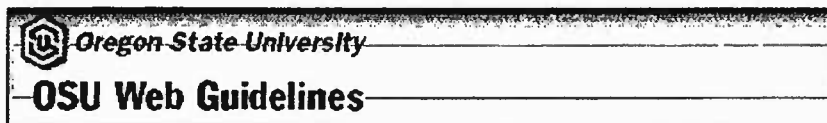
OSU Web Guidelines

The University-wide Web Advisory Group has identified five important items to provide readers a sense of continuity as they progress from the initial OSU web pages to those sites developed by individual OSU departments, their units, teachers, researchers and students. When department pages follow the five suggestions, the official pages produced by the central web are eliminated.

1. **The words "Oregon State University" should appear near the top of all major web pages and in the page titles.**
   - Departments are encouraged to develop their own look. A uniform graphic with the OSU logo, the title "Oregon State University" and the department name can be provided.
   - A small OSU logo and "Oregon State University" will suffice. An OSU wordmark is under consideration by a university graphic identity committee.

2. **OSU sites should provide a link to the OSU home page and use "Oregon State University" in their HTML titles.**
   - Use the home page address http://osu.orst.edu/index.html.
   - Informative titles are important. Example:
     `<title>Library Hours, Valley Library, Oregon State University</title>`
   - If readers visit an OSU page as the result of a search on a particular topic, they should be informed that they are at Oregon State University and be encouraged to browse for additional information (useful links).
   - A simple text link to "Oregon State University Home Page" may be used. Identifying graphical buttons can be provided on request.

3. **Hyperlinked E-Mail addresses should be provided on all OSU sites.**
   - If the reader has comments or needs additional information, a link providing immediate access to an e-mail screen preprogrammed with the address of a reliable source should be made available to facilitate communication about Oregon State University.

Five OSU Web Page Guidelines - Oregon State U...

4. **The university provides disclaimer statement.**
   - The permanent address of the official OSU disclaimer statement is: **http://osu.orst.edu/aw/disclaim.htm**
   - The link must appear somewhere on each home page (index.html or index.htm. Placement is at the discretion of each web editor.

5. **OSU expects sites to be accessible.**
   - Home pages (index.html or index.htm) will be designed to accommodate text-only browsers. Graphics must include an alternative description of the graphics (alt tags).

Notes on how to include the "alt" attribute in your image tags can be found at The OSU Web Editor's Intranet Guide to HTML.

E-Mail about your account: account@osu.orst.edu | Questions and comments, contact: osuweb@osu.orst.edu

More Web Standards

APPENDIX 8

Oregon State University Web Disclaimer

Official Web Disclaimer

* Use information here at your own risk.

* Information In the Oregon State University Web Is provided by many different people. While we try to keep it accurate and up-to-date, we cannot guarantee that it always will be. If you see something in an OSU document that should be corrected or updated, send mail to the address on the document (or to <osuweb@lists.orst.edu> if the document is unsigned). Be sure to give the full URL of the document in your letter. We'll see if the information can be corrected.

* Unless otherwise noted, the web information does not represent official statements or views of Oregon State University.

OSU Computing Facilities Acceptable Use Policy | OSU Copyright Center

Affirmative Action/Equal Opportunities Statement - Oregon State University is an affirmative action equal opportunity employer.

Americans with Disabilities Act - This publication will be made available in accessible formats upon request. Please call 541-737-4411 for further information.

Send comments to: <aw@lists.orst.edu>
Oregon State University | Search | Disclaimer
Admissions | Write to Admissions
[Updated: Jan. 30, 2001]

APPENDIX 9

Pilot Study

Open-ended Questions

Questions for Research Professionals Regarding
Development of a Web-Based Mentor Training Program

1. Now that you understand the purpose and scope of this study, what are your thoughts on how we should go about teaching this web-based training program for research mentors?

2. What do you see as the number one priority in teaching a dietetic professional how to be a research mentor?

3. Describe your thoughts regarding the format of the training program being web-based.

   Do you foresee any advantages to this type of format?

   Do you foresee any difficulties with this type of format?

4. If you were conducting a training program of this type, how long would your make it?

5. What type of assignments do you think would be relevant to these adult learners training to be research mentors?

6. Do you think an on-line reflective journal would be an effective tool for recording the perceptions of the adult learners regarding their assignments and the teaching modules?

   Why? How?

APPENDIX 10

Pilot Study

Proposed Training Topics

Developing A Web-Based Mentor Training Program

This study is a preliminary step in a research project that will involve the development, implementation and evaluation of a web-based training program that will be used to train   dietetic professionals to be research mentors to dietetics management graduate students enrolled in a distance delivered Master of Science program in the Nutrition/Food Management Department at O S U.

The research mentor, living in the geographical location of the graduate student, will play a important role in helping guide the research of the graduate student as well as partnering with the on-campus major professor.

The purpose of this study is to obtain information relating to material to be included in the web-based training program as well as issues involving the format and evaluation of the training program.

Proposed Training Topics

Rank in order of importance, from 1 to 8 with 1 being most important and 8 least important, these proposed topics for the web-based training program.

_____ The Mentor as a Negotiator

_____ Benefits/Concerns of the Mentor

_____ Recognizing Human Motivation Needs

_____ Feedback and Coaching Skills

_____ Goal Setting/Creating an Action Plan

_____ Roles of the Mentor, Student and Major Professor

_____ How the Mentor Training Program Supports the
Goals of OSU Research

_____ Defining the Role of Research Mentor

APPENDIX 11

Mentor Training Program

Home Page

Department of Nutrition/Food Management

OREGON STATE UNIVERSITY

Mentor Training Program Fall 1999

Welcome...
to the Nutrition/Food Management Department's web site for...
The Mentor Training Program

This unique program trains mentors to work with graduate students enrolled in the Dietetic Management Distance Delivery Program at Oregon State University, instituted in 1997 to prepare dietetic leaders to meet the management challenges of the 21st century.

Training mentors to work with graduate students as they conduct the program required research will help provide each student the one-on-one relationship traditional on-campus graduate students receive from the major professor.

Benefits to the mentors in the training program include:

- Mentoring and research methods update

- Courtesy faculty status at OSU

- Authorship status on student's published research is an option

- Continuing education credits for American Dietetic Association Members

- Stipend paid after student has completed research project

For more information regarding this program call Laura Reid at 541-737-3561 or email reidi@orst.edu

Oregon State University
OSU Web Disclaimer

Contact us:
Curtis Messersmith

APPENDIX 12

Mentor Training Program

Introduction

Department of Nutrition/Food Management

OREGON STATE UNIVERSITY

Mentor
Training Program
Fall 1999

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Introduction

Welcome to the Training Program for Mentors. We are anxious to embark on this important phase for the readying of our distance master's students to begin their research.

Did you ever think you would have a major role in making history? Your role in this training program is vital and historical! This is the first time this training program has been conducted in the Department of Nutrition/Food Management therefore you are helping us create something new and innovative.

Purpose of the Mentor Training Program

The rationale behind this training is to make you comfortable with your new role by informing you of what is expected of a mentor as well as what the university expects from your graduate student. The general purposes of this program are to :

- Identify, develop and/or refine mentoring knowledge and skills
- define expectations/role of the mentor
- assist and encourage professional growth

Once you understand and are comfortable with your role, you will be able to guide your student through the process of creating their graduate research project.

The actual training program will last four weeks, completing one module per week. You may also complete the modules in a self-paced mode. Upon completion of the training program, you will be asked to participate in one telephone interview for a final training program evaluation.

You are encouraged to ask questions so **please contact us** so we can be of help to you.

Suzanne R Curtis
PhD Student
OSU
512-835-1444
curtisrs@texas.net
Fax: 512-836-2741

Ann M Messersmith
Head, NFM Department
OSU
541-737-0958
messersa@orst.edu
Fax: 541-737-6914

APPENDIX 13

Mentor Training Program

Syllabus

Department of Nutrition/Food Management

OREGON STATE UNIVERSITY

Mentor Training Program Fall 1999

Syllabus

Instructors/Facilitators:

Suzanne Curtis curtisrs@texas.net
Ann Messersmith messersa@orst.edu

Program Description

The overall intent of this four week web-based program is to train mentors to support the NFM distance graduate students in their research project. Through the completion of on-line assignments and telephone conferencing, the mentor train-ees will gain the knowledge and skills necessary to meet the research needs of the student and to comply with all university and department criteria for graduate research.

Program Outcomes
Benefits to the Mentor:

- Opportunity to develop a collegial relationship
- Opportunity to share experience and knowledge
- Guide student to an outcome of publishable research

Program Assignments

All program assignments will be accomplished electronically. There will be two group conference calls, one during week one and a final conference call during week four for group discussions. There will be one group assignment in which two mentors will electronically discuss a mentor/student scenario.

Required Readings

Required readings will include: web generated tutorials and web-based readings identified as links. There is no required text for this program.

Time Frame

The time frame for the training program will be from October 25 through November 21, 1999 if completing one module per week. The program may be completed in a self-paced mode.

Evaluation

At the end of each module, an evaluation will be completed and submitted electronically. At the end of the training program, each mentor will be contacted individually for a final evaluation via telephone (see calendar for specific dates).

Contact us
Curtis   Messersmith

APPENDIX 14

Mentor Training Program

Calendar

Department of Nutrition/Food Management

OREGON STATE UNIVERSITY

Mentor Training Program Fall 1999

Calendar
Schedule of Events

Calendar for the Fall 1999 Mentor Training Program:

October 25 – 31: Week One. Audio conference Wednesday October 27, 1999 at 6:00 PST. Read Module 1 – The Mentoring Process. Module evaluation* 1 due Sunday, October 31 by 6:00 p.m. PST.

November 1 – 7: Week Two. Read Module 2 – Communication Techniques. Module evaluation* 2 due Sunday, November 7 by 6:00 p.m PST.

November 8 – 14: Week Three. Read Module 3 – Research Methods. Module evaluation 3* due Sunday, November 14 by 6:00 p.m. PST.

November 15 – 21, 1999 Week Four: Audio conference on Wednesday, November 17, 1999 at 6:00 pm PST to prepare for the scenario assignment. Read Module 4 – Guidelines for Graduate Students. Module evaluation* 4 due Sunday, November 21 by 6:00 p.m. PST

November 22 – 28, 1999 Week Five: Final evaluation telephone interviews

November 29 – December 5, 1999 Week 6: Continuation of final evaluation telephone interviews

* Module evaluations may be submitted before the due date

APPENDIX 15

Mentor Training Program

Discussion Board

Department of Nutrition/Food Management

OREGON STATE UNIVERSITY

**Mentor
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Fall 1999**

Discussion Group for Scenario

WWW Board Discussion

**Click Here To Access
Discussion Board**

APPENDIX 16

Email to Mentors Regarding Discussion Board and Scenario

Email to mentors Re: scenario/discussion board

Name of Mentor:
As I mentioned in the conference call Wednesday night, the scenario exercise will be another means to help us evaluate the Mentor Training Program as well as for you to practice how to handle various mentoring situations.

I.   There are 2 attachments: 1) the instructions regarding how to access and use the discussion board; 2) the scenario.

II.   You will need a user name and password to access the bulletin board. Your user name is: Your password is: Your user name and password allow you to access the discussion board and is different from your pseudonym.

III.   Remember to use your pseudonym (   ) when posting messages to the discussion board. Place your pseudonym along with the subject of your message in the Subject text box. This will identify to your mentor partner that you are the author of that message. (You will learn about the Subject text box in the Instruction attachment).

IV.   The pseudonym of the mentor you will be working with is _____.

V. Questions to answer are included in the scenario. Please contact me with questions so I can help facilitate the process, if need be. curtisrs@texas.net

Instructions For Access to Discussion Board
Go on-line to access the Mentor Training Program, then follow these instructions:

1. From the home page or any page of the Mentor Training program, click on **"Discussion Group" or** you may go directly on line to http://instruct.orst.edu:8080 and omit step 2.

2. From the Discussion Group page, click on the green **"click here".**

3. From the *Oregon State University* page, click on **"Archives".**

4. From the Archives page, click on **"Statewide Courses".**

5. From the Statewide page scroll down and click on **"Readings and Conference (NFM405)".**

6. The discussion board is password protected. At this time, a screen will pop up and ask for your user name and user ID or password. After entering your user name and user ID (password), click OK.

7. This will bring you to the *Bulletin Board Announcements* page. From the menu on the left, click on **"Communication".**

8. From the *Communication Center* page, click on **"Discussion Board".**

9. This will bring you to the *Discussion Board.* Click on **"Mentor Training Program Scenario Thread".**

10. To read all previously posted discussions, click on **"View All Messages"** and click on each message to open and read.

11. To create a message or "thread", click on **"Start New Thread".**

12. This will bring you to the *Create New Message* page. Simply include a subject heading in the **"Subject"** text box then type in your comments/questions in the **"Message"** text box. Be sure to include your pseudonym in the "Subject" box.

13. To preview what you have just written, click on **"Preview"**. If you wish not to send the message, click **"Cancel"**.

14. If you wish to make a correction, click on the **"Back"** button. You can now edit your message. To send your message, click **"Submit"** to post your message.

15. To answer a thread, click on **"Reply"** which will take you to a *Response* page. Type in your comments then preview or submit your message.

That's it! You can now check the Discussion Board for comments/questions relating to the scenario. If you have never used a discussion board before, I suggest you practice by sending a test message prior to your first posting.

APPENDIX 17

Faculty Profile

Department of Nutrition/Food Management

OREGON STATE UNIVERSITY

Mentor Training Program Fall 1999

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Faculty Profile

Distance Dietetics Management Program Researchers:

Ann M Messersmith, PhD, RD, LD
Department Head – Nutrition/Food
Management
541-737-3561
email: messersa@orst.edu
Teaching Responsibilities: Undergraduate and graduate food and dietetics management courses; dietetic program administration
Research Interests: Forecasting, energy, training, clinical nutrition management

Suzanne R Curtis, MS, RD
PhD Candidate
512-835-1444
email: curtisrs@texas.net
Teaching Responsibilities: Undergraduate food management related courses at University of Texas at Austin
Research Interests: Retirement, long term care feeding; sanitation/food safety, cultural foods.

Other Distance Dietetic Management Faculty:
Mary Cluskey PhD, RD, LD
Assistant Professor
541-737-0960
e-mail: cluskeym@orst.edu
Teaching Responsibilities: Undergraduate and graduate food management related courses
Research Interests: The elderly and long term care

Jennie Sneed, PhD, RD
Assistant Professor
541-737-5098
Email: jeannie.sneed@orst.edu
Teaching Responsibilities: Undergraduate and graduate food management related courses
Research Interests: job characteristics and job satisfaction in foodservice; child nutrition programs

Contact us
Curtis Messersmith

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APPENDIX 18

Module 1

Mentoring

Department of Nutrition/Food Management

Mentor Training Program Fall 1999

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Module 1
Mentoring

1

Module Purpose:
This module will introduce mentor training program participants to their role as "mentor" through defining the term mentor, defining related work relationships, identifying the characteristics, role, benefits and challenges of mentoring.

Module Objectives:
The objectives of this module are to:
- Define mentoring
- Describe the mentoring relationship
- Identify mentor characteristics
- Define the role of mentor
- Identify benefits and challenges of mentoring

Mentoring Overview
Background:
In ancient Greece, Odysseus entrusted his young son to a valued household servant, Mentor. Mentor served in a father role to the young boy, teaching, guiding and protecting him until Odysseus returned from his lengthy journey. This type of relationship continued in medieval trade guilds where masters passed on the art and skill of their craft as well as social, religious and personal values to apprentices.

In the mid-70's, research studies of both men and women linked successful adult growth and development to having had a mentor, someone who had taken a personal interest in them and guided and supported them in their career. Mentoring soon became a hot topic!

Since the 1995, an explosion of additional research studies and practical experiences of companies with formal mentor programs have provided insight into the nature of mentorships, the benefits, drawbacks and conditions that support effective mentorships.

Department of Nutrition/Food Management

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Module 1   2
Mentoring

Definition:
Mentoring is a relatively long-term relationship between junior and senior colleagues or between peers that provides information, support and guidance for professional and/or personal development. Chip Bell, author of *Managers as Mentors* simplifies the definition by describing a mentor as one who "helps someone else learn something the learner would otherwise have learned less well, more slowly, or not at all". Other definitions and explanations of mentoring broaden the magnitude of the subject.

Definitions of Other Related Terms
Mentee – the recipient of the mentoring process. Other labels describing a mentee include protégé, advisee, counselee, trainee, partner or student. (In this training program, the term mentee is used interchangeably with the term distance graduate student).
Adult Learner – a person over the age of 18 who is desirous of developing their career, educational or personal potential.

Types of Mentorships:
Informal – relationships that develop naturally and spontaneously because of mutual interests, attraction and goals.
Formal – relationships that develop through formally planned, structured and managed organizational programs.

Mentorship Functions:
Mentors typically provide two basic types of functions: professional and personal. **Professional functions** are career related and refer to the ability of the mentor to provide both insight into and linkages within the organization or field of endeavor as a whole. Common functions are sponsorship, coaching, protection, exposure (visibility), challenging work assignments and advocacy. **Personal functions** help the individual develop self confidence and competence. Common functions include role modeling, counseling, acceptance and confirmation, friendship, advising and supporting.

Department of Nutrition/Food Management

OREGON STATE UNIVERSITY

Mentor
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Module 1
Mentoring

3

Mentoring relationships differ in their length, intensity and the number of functions or roles the mentor provides. While some may involve an intense, intimate, long-term relationship with both personal and professional development and lasting many years, others may last only one or two years and focus on career-related support, guidance and feedback. Traditionally, mentors were senior people, higher in the organization with power and influence. Many experts now recognize the value of developing mentor-like relationships with a diversity of people including bosses, peers, consultants, professional associates, family and friends.

Other Working Relationships:
Peer – a coequal within a work situation; includes sharing of work strategies and coping mechanisms.
Supervisor – the person responsible for evaluating your work; has many roles, only one of which is helping employees succeed and develop.
Coach – team efforts to increase productivity has popularized the coach, focusing on competition within a group rather than individual achievement; implies specific, technical skills training. Desires employee success.
Counselor – in a business setting as a personnel specialist or in postsecondary education setting; has had formal preparation as a trained helping professional.

Characteristics of a Mentor
Leadership – a good leader is able to communicate a clear vision as well as a definite direction. Will inspire, encourage and provide performance feedback.
Trustworthy and Sincere – willing to be accountable and responsible.
Positive Interpersonal Skills – people oriented, exhibiting a willingness to share personal experiences. Possesses empathy; able to practice responsive listening and respond nonjudgmentally.
Proficiency in Career Path – regarded as successful within their field of endeavor. Aware of outside resources available to facilitate mentee's progress.

Contact us
Curtis   Messersmith

Department of Nutrition/Food Management

OREGON STATE UNIVERSITY

Mentor Training Program Fall 1999

Module 1   4
Mentoring

The Role of a Mentor

Establish a Developmental Relationship – creating a climate of trust to allow the mentor/mentee relationship to move forward.

Provide Information – after determining from the mentee both the amount and type of information needed, the mentor offers specific information relevant to meet the needs of the mentee.

Be Facilitative – be able to present options to mentee, allowing for the exploration of alternative views and ideas.

Provide Challenge – tactfully posing questions to further both decision making and actions of the distance student. (Helping them to become unstuck).

Be a Mentor Model – being a role model through the sharing of experiences and knowledge to enrich the relationship as it progresses toward achieving the goals of the mentee.

Provide Vision – the mentor will stimulate critical thought processes regarding envisioning personal potential as well as future endeavors within the distance graduate student.

Responsibilities Involved in Mentoring
Mentor Responsibilities

Build confidence – by establishing an adult centered environment, allowing the distance graduate student to feel valued by establishing trust and respect;

Establish communication – engaging in responsive listening, the careful phrasing of questions and providing constructive feedback will facilitate building a solid relationship between mentor/mentee. (More will be presented on communication in Module 2).

Source of information/networking – providing a myriad of technical and experiential information as well as networking contacts will allow the mentor to facilitate progress in the research of the distance graduate student.

Willing to fulfill time requirement – need to be accessible. Studies have shown that successful mentors interact with their mentees more than once per week. Your involvement will need to be individualized with your distance graduate student.

Contact us
Curtis Messersmith

Department of Nutrition/Food Management

OREGON STATE UNIVERSITY

Mentor Training Program Fall 1999

Module 1
5
Mentoring

Mentee Responsibilities

Establish clear goals – making sure that goals are appropriate and attainable; willing to spend time reflecting on goals, being prepared for appointments to work with the mentor.

Communicate openly – voicing goals and needs in a clear manner to allow for progress to be made.

Willing to listen/learn – be willing to benefit from the expertise offered by the mentor to learn, grow, solve problems. Be receptive to constructive feedback.

Take responsibility for personal growth/development – create and maintain clear expectations of progress to be made and how it is to be achieved. Commit to life-long learning.

Effectively use mentor's time – keeping appointments and being prepared for scheduled meetings for effective and productive outcomes.

Benefits and Challenges of Mentoring

Individual Rewards of Mentoring

Positive relationship based on mutual respect – laying the foundational groundwork early in the mentoring relationship will allow for the reaping of rewards throughout the mentoring process. Respecting each others knowledge, skills and abilities will facilitate rewards for both the mentor and mentee.

Opportunity to demonstrate leadership – translating your ideas, insights, skills and abilities into an action plan to lead the mentee forward toward achieving goals.

Making a significant contribution to the life and   career of the student – "generativity" – the idea of passing on personal experience and standards to another generation. It is the idea of "passing the torch" which can be a fulfillment of professional existence.

Personal satisfaction from guiding the research of the student Personal boost in enthusiasm and job satisfaction – gaining satisfaction from guiding the research of the distance graduate student to achieve the goal of a master's degree. It has been documented that 80% of persons involved in a mentoring process reported a boost in enthusiasm and job satisfaction. The joys of mentoring spill over into your personal realm. Professional **development** – coaching, counseling and management skills will all increase as a result of the mentoring process thus increasing the effectiveness of the mentor.

Department of Nutrition/Food Management

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Challenges of Mentoring

A mentor cannot be an all encompassing entity for the mentee. A mentor does not have all the answers, is not always able to solve all problems in every situation, is not available 24 hours a day and does not accomplish work for the mentee. The challenges/risks of mentoring include:

- **Time** – finding the time to spend with your mentee will be a big challenge. Adjusting schedules of two busy people will at times be difficult and frustrating. Setting a meeting schedule up front and pledging to adhere to it is an important first step in the mentoring process. Once a meeting time is established, make the most of each meeting by determining the most urgent needs and goals (what the mentee needs to learn from you).

- **Mismatch of Styles** – fear that the mentor and mentee will clash and not be able to work together. This fear can be overcome by the early establishment of a working relationship with the mentee.

- **Manipulation by Mentor** – the mentor must be aware of the potential to "power trip" and take control of the mentoring process. Equally destructive is the seemingly benign ability of being too helpful or knowing too much. These behaviors can help destroy a mentoring relationship. Likewise, the mentor needs to be on guard against a manipulating mentee who is desirous of running the show to achieve a personal agenda.

- **Over-dependence on the Mentoring Relationship** – while it is true that in this case the distance graduate student needs a mentor, the relationship must not be based on dependence. The mentor is providing guidance and is nurturing to achieve independence and clarity of thought, not dependence. Chip Bell, in *Managers as Mentors*, puts it well when he says the object is to help the mentee become strong, not to help the mentee feel good about being weak.

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Module 1
Mentoring

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In a nutshell, mentoring is where a wiser more experienced person assists another person to grow and learn. It is an effective method to teach new information and pass on valuable lessons learned from life experiences. This module has been a brief overview of mentoring. To learn more on the subject, many books have been written and you may find it valuable to add one or more to your personal library.

Evaluation for Module 1
The following evaluation statements will allow you to give feedback to the distance Dietetic Management program researchers regarding the contents of this module. Please email your answers making sure you identify **Module 1** within the subject heading of the email. Within the body of the email, your answers should correspond with each question number. Submit your response upon completion of this module evaluation.

Questions:

1. Describe new information gained as a result of Module 1.

2. Describe the most informative aspect of Module 1.

3. Describe the least informative aspect of Module 1.

4. Describe the accessibility and activity of links within Module 1.

5. Describe the clarity, navigability and readability of the format of Module 1.

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APPENDIX 19

Module 2

Communicating Within the Mentor/Mentee Relationship

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Module 2
Communicating Within the Mentor/Mentee Relationship

Module Purpose
This module will present the mentor with an overview of traditional communication tools which will be helpful in establishing a positive relationship with the distance graduate student.

Module Objectives
Reviewing communication skills will enable the mentor to become familiar with interpersonal communication skills:

* Responsive listening which involves eye contact, facial expression, gestures/body language, and tone of voice
* Use of open-ended questions to enhance communication
* Giving advice and feedback

Responsive Listening
Studies show that people normally listen at only 35% of their normal capability. Listening responsively will allow your mentee to feel important, since listening is a form of giving -- you are giving the gift of your time to listen to your mentee. A mentor engaging in responsive listening communicates concern, identifying that what the mentee has to say is important thus confirming the importance of the mentor/mentee relationship. The mentee will respond accordingly to cues set up by the mentor. An aloof or distancing listening style portrayed by the mentor can cause the mentee to withdraw and give either limited responses or none at all. Responsive listening may be verbal or non-verbal.

The verbal aspect of responsive listening in the form of **paraphrasing** allows the mentor to restate the message delivered by the mentee to assure that the verbal message was fully understood. Restating the intended message by giving a summary of the key points provides feedback to the mentee and clarification on the part of the mentor. The process can be reversed by the mentor asking the mentee to paraphrase a comment to make sure the mentee has grasped the message.

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Non-verbal aspects of responsive listening includes eye contact, facial expressions, gestures/body language, and tone of voice. These non-verbal acts can have either a positive or negative impact on the mentor/mentee relationship by either promoting, interfering with or preventing learning from occurring.

- Eye contact greatly influences the development of trust in a mentoring relationship. As Cohen states in *Mentoring Adult Learners*, "warmth" in the eyes enhances an atmosphere of concern and acceptance and thus facilitates communication.

- Facial expressions display a wide variety of emotions from serious to friendly depending on the topic under discussion. A relaxed expression on the face of the mentor will communicate openness and a positive attitude of acceptance. The bottom line for the mentor to remember is to always communicate an expression of worth and acceptance regardless of actions or decisions made by the mentee.

- Gestures/body language, physical actions made by the mentor will influence the mentee's perception of comfort within the mentoring relationship. The mentor can utilize gestures and body language to control the responses of the mentee. A relaxed demeanor will produce a similar response from the mentee. Gestures/body language can be categorized as positive or negative. Positive gestures include: 1) leaning forward slightly when listening or speaking to convey openness. 2) uncrossed arms portrays acceptance; 3) nodding the head in a relaxed manner shows both understanding and approval. Gestures perceived as negative include: 1) leaning backwards gives the impression of distancing oneself; 2) crossed arms can allow the mentee to receive the impression that the mentor is being nonacceptant; 3) resting the chin on the hand can be viewed as a judgmental stance. Gestures may be purely unintentional on the part of the mentor. Taking a personal inventory of gestures and informing the mentee not to interpret specific moves (or lack of) in an offensive

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Module 2
3
Communicating Within the Mentor/Mentee Relationship

- Tone of voice – positive or negative interactions can result from voice intonations. A cool tone of voice can destroy constructive dialog between mentor and mentee and prohibit progress in the mentoring relationship. A tone of voice that invokes warmth will encourage and build communication, allowing the mentee to progress toward goal achievement.

Asking Open Ended Questions

In a mentoring relationship, it is advantageous to use questions that will open the door to effective communication rather than closing it. Using questions the mentee can give a one word answer to, such as yes or no, closes the door to communication. Using words such as "what" and "why" at the beginning of a question may seem like the appropriate way to begin a line of questioning. However, these seemingly innocent words can carry a defensive punch to the mentee. Reacting in a defensive mode and feeling the need to apologize for decisions made is not the response the mentor desires. Verbal response and details is what the mentor is searching for, therefore, using words such as "how", "who", "when" will help facilitate an open response and encourage dialog.

Teaching/Advising/Providing Feedback
Definition:
The basic premise of the mentoring relationship is for the mentee to benefit from the expertise and advice provided by the mentor. For this to occur, the mentor must teach or advise and provide feedback. Giving advice and feedback provide another avenue for the mentee to react defensively thus creating one of the challenges to mentoring. Chip Bell in *Managers as Mentors* strongly suggests the mentor follow four steps when teaching/giving advice to the mentee.
Step 1 – the goal of mentoring must be clearly stated. This step has already been accomplished in this mentoring relationship. Each mentor is aware that they are guiding the graduate student toward the goal of completing their graduate research. There should be no ambiguity or confusion regarding this goal. Therefore the teaching and advice provided by the mentor will focus on the achievement of this goal.

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Step 2 – The mentor and mentee must **agree on the focus** of the relationship. Both mentor and mentee acknowledge the goal of completing the required research, however, the mentee may have unrealistic expectations of the process that lies ahead. Since the mentor has experience in the research process, a clear, rational picture of the process can be presented to the mentee, clarifying the focus.

Step 3 – Tactfully **provide advice in a non-controlling manner.** The tone of voice, choice of words and body language greatly come into play in this step. The mentor must communicate advice while not evoking resistance from the mentee. If resistance is encountered, take a step backward and examine what you said and how it was stated. Always admit and apologize if you come on too strong.

Step 4 – **Teach/advise in the *first person singular*.** The mentee will raise red flags and defense mechanisms if the mentor says "...*you* should handle this situation...". Use of the first person singular filters out resistance and defensiveness. "I have found from my experience that this method is successful" as opposed to saying "you should use this method." When the mentor combines experience and sensitivity, the mentee will progress with confidence as well as competence.

Feedback
Definition:

The goal in providing feedback is making it productive. A mentee may feel embarrassed when the mentor provides feedback focusing on a blind spot. Sensitivity on the part of the mentor by identifying personal experiences such as "I experienced the same thing when..." will help put the mentee at ease and help further establish rapport. Present the mentee with the rationale for the specific feedback – exactly what purpose is it serving. The mentor's goal is to make the picture crystal clear, never confusing or confounding the issue in question. Be honest and straightforward when providing feedback but never abrupt or cruel. Practice empathy, remembering what it is like to receive feedback. Give feedback as you would prefer it given to you.

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Module 2   5
Communication Skills

Allow feedback to be a two way proposition by always asking your mentee to provide you with feedback. This is another method of allowing yourself to be put in the mentee's shoes.

Clear communication within the mentoring relationship will benefit both the mentor and the mentee. The mentor may find that reviewing a communication checklist that focuses on the features of effective communication may be helpful in clarifying their role in this important aspect of mentoring.

Evaluation for Module 2

The following evaluation statements will allow you to give feedback to the distance Dietetic Management program researchers regarding the contents of this module. Please email your answers making sure you identify **Module 2** within the subject heading of the email. Within the body of the email, your answers should correspond with each question number. Submit your response upon completion of this module evaluation.

1. Describe new information gained as a result of Module 2

2. Describe the most informative aspect of Module 2

3. Describe the least informative aspect of Module 2

4. Describe the accessibility and activity of links within Module 2

5. Describe the clarity, navigability and readability of the format of Module 2

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APPENDIX 20

Module 3

Research Methods

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Module 3
Research Methods

Module Purpose
The distance graduate student will work directly with the major professor at OSU to determine a research topic and method. Since all of the mentors in this training program have advanced degrees and have been involved in the detailed aspects of a research project, the purpose of this module is to provide an overview of potential research methods that the distance graduate may be using for the research project.

Module Objectives
This module will identify the characteristics of research, the different types of research, qualitative and quantitative research and ethical issues.

Characteristics of Research
A researcher does not have to follow the stereotypical picture of someone in a white lab coat. A keen interest in seeking and understanding the who, what, where, when and why of situations with an outcome of using new information for the benefit of others is the foundation of research. Good research can be described by its varied characteristics including:

- **Is based on the work of others** – reading journals or texts to glean ideas from what other researchers have done to use as a springboard to create additional research
- **can be replicated** – following the methodology identified will allow similar results to be obtained
- **is generalizable to other settings** – the outcome of one study in a specific setting would probably transfer in another related setting. Not all types of research are generalizable, but most research can generally contribute something to another setting.
- **is based on logical rationale** – a common theme or theory is what ties research projects together
- **is able to be accomplished** – research must be doable and feasible. Questions must be able to be answered, even though the answer may not be the one expected.
- **generates new questions** – information generated by research encourages thought which prompts and poses additional questions

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- **is gradual and progressive** – contributions to knowledge come in small pieces, built one on another like building blocks as research progresses.
- **is for the benefit of all** – research is conducted to improve, to better conditions for the benefit of many and not for the grandiesment of self.

Types of Research

Research can be categorized as nonexperimental, experimental and quasi-experimental.

Nonexperimental Research Methods

This type of research does not test cause and effect relationships. Three types of nonexperimental research methods that will be identified are: descriptive, historical and correlational.

- **Descriptive** nonexperimental research describes the charcteristics of phenomena, the conditions existing at the time of the study. This type of research is taking a picture of a moment in time. A case study is the detailed examination of a single unique situation. A case study may focus on a department, a business, a school, an organization or an individual. Use of surveys in the form of questionnaires can specifically identify characteristics such as attitudes, preferences and opinions. An interview can be thought of as a verbal questionnaire and can vary in degree of structure. A structured interview question is seeking a specific answer. "How many full time foodservice staff are employeed at your facility?" This question has a focus that calls for a specific answer. An unstructured interview question allows room for response. "Describe the experience level of your production staff" gives the respondent time and space for a broad response.
- **Historical** research describes events that have occurred in the past. It can be effectively used to examine trends in the foodservice industry, what they were in the past, thus using them as a comparison to the present. Primary sources for historical research are people who have experienced an event first hand or original documents. Secondary sources are people with experience but without first hand knowledge or second hand documents (a report of a happening, not the original).

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- **Correlational** research can help examine linear relationships among variables or events by giving some indication as to how variables may be related to each other. The correlation coefficient is used to measure the power of the relationship, the higher the correlation, the higher the degree of relatedness. For example, you could assess the relationship between amount of labor hours spent in a given period of time and the perceived quality of food.

Experimental Research
Cause and effect relationships are investigated in experimental research. Research study participants are placed in groups based on treatment variables. Factors that could influence effects are *controlled* with the exception of the treatment variable. The degree of control in experimental research varies with the type of experimental designs. Experimental designs will be beyond the scope of the research project for the distance graduate student.

Quasi-Experimental Research
In quasi-experimental research, study participants are placed in groups based on an innate ability or characteristic such as age, experience, type of job or position. These group assignments are naturally occurring and the researcher does not have any control over who belongs in various groups, therefore this type of research does not have the power of experimental research.

Qualitative vs Quantitative Research
Quality refers to how, what, and/or when whereas quantity refers counts and measures. In research, qualitative measures are used because not all experiences can be measured or expressed by numbers. Qualitative research can be defined as methods used to process data that are represented by words not by numbers. Qualitative research methods are more open-ended than quantitative research methods. Data include the words and phrases used to describe a setting, therefore the more open-ended the question, the more data will be obtained. The basic vehicles used to collect qualitative data are observations and interviews. However, focus groups, Delphi technique, free elicitation and cognitive response task are newer tools used to collect qualitative data.

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Quantitative research is often more respected since "science" is generally regarded as precise and being related to numbers.

It is specifically designed to produce accurate and reliable measurements that permit statistical analysis. Quantitative research is appropriate for measuring both attitudes and behavior. Quantitative research should also be used when you want to profile a group of people based on shared characteristics (such as demographics). Through advanced statistical techniques such as correlation, regression, cluster analysis or factor analysis, quantitative research can be used to create models that predict whether or not someone holds a particular opinion or would act in a certain way based on an observable characteristic.

Volumes have been written on both qualitative and quantitative research methods. A library search or viewing the shelves of an on-line bookstore can provide much additional reading.

Ethical Issues

In the research process, the practice of honesty and truthfulness are paramount. Ethically, the researcher must publish valid data, be objective in the analysis of data and present an unbiased interpretation of data to the reader. Any limitations encountered in the study must also be identified. Fraudulent research practices include: selective reporting of findings, concealing data and presenting only favorable data. Monson

In *Research: Successful Approaches*, indicates that multiple small articles that represent fragments of a research project are a "disservice to readers" by not allowing the "whole picture" to be seen. This fragmentation approach to writing research articles is referred to as "salami science".

In recognizing the importance of ethical considerations, the mentor will be able to instruct and guide the student in incorporating honesty and integrity into the research process.

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Interesting Links Regarding Technical Writing
Because of the mentor's experience in technical writing, a helping hand may be given to the student when it comes time to organize and put results on paper. Listed below are numerous links to sites dealing with technical writing to share with the student.
http://www.io.com/~hcexres/tcm1603/acchtml/acctoc.html

http://bartleby.com/141/index.html

http://www.writerswrite.com/technical/

http://www.clet.ait.ac.th/el21open.htm

http://andromeda.rutgers.edu/~jlynch/Writing/links.html

http://www.studyweb.com/grammar/comp/techwri.htm

http://www.studyweb.com/grammar/style.htm

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Module 3
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Evaluation for Module 3

The following evaluations statements will allow you to give feedback to the distance Dietetic Management program researchers regarding the contents of this module. Please email your answers making sure you identify **Module 3** within the subject heading of the email. Within the body of the email, your answer should correspond with each question number. Submit your response upon completion of this module evaluation.

Questions:

1. Describe new information gained as a result of Module 3

2. Describe the most informative aspect of Module 3

3. Describe the least informative aspect of Module 3

4. Describe the accessibility and activity of links within Module 3

5. Describe the clarity, navigability and readability of the format of Module 3

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APPENDIX 21

Module 4

Guidelines for Graduate Students at OSU

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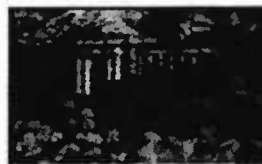
Module 4   1
Guidelines For Graduate Students at Oregon State University

Module Purpose
The module will give the mentor an overview of the workings of Oregon State University to better understand the university requirements for a master of science degree.

Module Objectives
The objectives of the module are to:
- Provide a brief history of OSU
- Identify the mission of OSU
- Describe the scope of The Graduate School
- Identify the requirements of master's degree
- Provide access to the Graduate School Survival Guide

Oregon State University has a worldwide reputation for its graduate teaching and research. The Department of Nutrition and Food Management has added its unique, one-of-a-kind distance degree in Dietetics Management to a diverse university-wide curriculum of over 70 different graduate degrees. This unique distance degree has allowed dietetic professionals to meet the career goal of achieving an advanced degree without having to attend classes on the Oregon State campus or to interrupt employment.

Oregon State has a rich history dating back to 1858 when, under the auspices of the Methodist Episcopal Church, Corvallis College began. The college was designated as the state agriculture college in 1868 and offered its first baccalaureate degrees in 1870.
he first graduate degree was awarded in 1876. Milam Hall, was named for Ava Milam, dean of the School of Home Economics from 1917 to 1950. Oregon State has many distinguished alumni from Home Economics. Mercedes Bates, Class of 1936, was the fictional "Betty Crocker" as well as head of the Betty Crocker Kitchens at General Mills ultimately becoming their first woman corporate officer. Another alum following in the footsteps of Mercedes Bates is Jean Thomas, Class of 1978, who has been a major player in the development of the *Snack-wells* product line.

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Module 4   2
Guidelines For Graduate
Students at Oregon State University

The mission of Oregon State University is to serve not only the people of Oregon, but also the people of the nation and the world. The university is committed to providing students with an educational experience of the highest quality. Providing for the achievement of a high level of scholarship allows the graduate student to expand his or her horizons of learning and to prepare for leadership roles for personal gain as well as for the good of society.

Organization of Graduate Studies at OSU:

The Graduate School is responsible for administering all graduate work at Oregon State with the Dean of the Graduate School being responsible for the implementation of all policies, procedures and regulations.

The Graduate Council maintains responsibility for basic policies, procedures and requirements for all graduate work. Each academic school or college has one representative on the council. Duties of the council include:
- establishing admission standards
- basic degree requirements
- approval for all graduate faculty
- review of existing graduate programs

The Graduate Faculty is chosen from the faculty of the University for their educational background, experience as well as competency to guide graduate students. The graduate faculty in the Nutrition/Food Management Department represents vast experience in the areas of foods, nutrition and food management.

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Guidelines for Graduate Students at Oregon State University

OSU STATEWIDE

Distance Education

To meet the multifaceted needs of higher education in Oregon, the OSU Statewide program was instituted. It not only reaches throughout the state, but allows nationwide as well as worldwide participation in programs ranging from allowing high school students to begin college course work to distance undergraduate and graduate programs. Methods of distance delivery include the Web, email, videotape, live interactive television, CD-ROM, printed materials, and face-to-face instruction.

Library Services

To help facilitate the research process, OSU provides a host of library services to the distance graduate student. From research databases to the ability to deliver books, the Valley Library offers a wide range of services to the distance graduate student thus "bridging the distance". Jean Caspers is the distance librarian.

General Requirements for Master's Degree
The Major:
The basic, minimum graduate credit hour requirement for all master's programs at Oregon State is 45 (courses with a 500 or 600 number). For the distance Dietetic Management master's degree, these courses will include Nutrition/Food Management courses as well as courses from other departments. A minimum of 30 hours is required for these courses. The distance Dietetic Management student will be required to take a minimum of two credit hours of seminar, one of which will be held at a national meeting of The American Dietetic

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The Minor:
A minor must be selected with a minimum total of 15 hours. The minor may be in the areas of Public Health, Education or Business.

Graduate Committee:
A four member graduate committee will be selected by each graduate student. The committee will consist of:
the major professor, the minor professor, an NFM or other faculty member and a Graduate Council Representative.

Program of Study:
Before completing 18 hours of graduate courses, the distance graduate student must complete the appropriate form and file a Program of Study with the Graduate School.

Research Project:
The distance Dietetic Management student will complete a research study at their place of employment or other community site. Upon completion of the study, a publishable manuscript is required.

Time Limit:
The distance Dietetic Management degree may be completed in three years by taking two to three courses per term. All work must be completed within seven years.

Graduate School Survival Guide
The Survival Guide identifies important Graduate School regulations. It also addresses the most frequently asked questions by graduate students, thus providing a wealth of information. While it remains the responsibility of the student to be familiar with the procedures and chronology of the Survival Guide, it will be very helpful to mentors to also be aware of this important information. Following the various links in Procedure Leading To a Master's Degree as well as Deadlines will be very beneficial to the mentor as the distance graduate student draws close to completing the required research

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Calendar	The previous information has been presented in order to give mentors a "feel" for the requirements for graduate students at Oregon State University. Being familiar with these requirements will allow the mentor to help facilitate the progress of the distance graduate student toward the goal of a master's degree in dietetic management.
Discussion Group	
Faculty Profile	**Evaluation for Module 4** The following evaluations statements will allow you to give feedback to the distance Dietetic Management program researchers regarding the contents of this module. Please email your answers making sure you identify **Module 4** within the subject heading of the email. Within the body of the email, your answer should correspond with each question number. Submit your response upon completion of this module evaluation.
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Module 3	1. Describe new information gained as a result of Module 4
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4. Describe the accessibility and activity of links within Module 4

5. Describe the clarity, navigability and readability of the format of Module 4

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APPENDIX 22

Scenario

Scenario

You are mentoring Janice Norman, RD. Janice is the foodservice director for a 150 bed long term care facility. She graduated in 1992 from a dietetics program at a mid-western university and completed a general internship in 1993. She has enthusiastically been a participant in OSU's distance Dietetic Management master's program for the past 2 1/2 years. Her career goals include progressing to manage the dietary department of a larger facility and ultimately being involved in consulting.

Janice has yet to totally formalize her research plan with her on-campus major professor, but she knows she will include resident compliance to prescribed diets in her research. She has been strong in her convictions that residents must follow the physician prescribed diet. The following diets are included on her diet roster:

Prescribed Diet	# of Residents Receiving Diet
NAS	18
2 gm Sodium	20
Regular	19
Mechanical Soft	38
Puree	27
Calorie Controlled	12
Cross-over diets	16

Janice is having difficulty with nursing in getting the information she needs to be able to collect her data. She has access to the medical charts, but the nurses logs that identify percentage of food eaten at meals and amount of nourishments taken between meals is very incomplete. A smoldering feud is beginning. While making her rounds, Janice is noticing candy and cookies in nearly all of the patient's rooms. She feels that nursing is "dropping the ball" by not policing the rooms and getting rid of the food items that are contrary to the prescribed diet.

About 30% of the residents are cognizant of the fact that Janice is in graduate school and that they will somehow be involved in her study. She has assured them that she will send them a letter describing her study and exactly what she is doing as soon as she has time.

Janice has cancelled the last three of your scheduled visits to follow her research progress. Last Friday, she was able to keep your 2:00 pm appointment at her facility.
While walking through the kitchen to her office, you spotted three roaches scurrying across the floor and into a box of potatoes. You mentioned that you had just seen pests in the kitchen. She replied that her administrator will not allow her to call the pest control company with whom they contract and that she must wait until the next scheduled quarterly visit.

Based on your knowledge of mentoring, what can you do to help Janice? What are the key issues she is dealing with and how can you, as her mentor, help her with these issues?

APPENDIX 23

Thank You Letter

January 28, 2000

XXXXXXXXX
XXXXXXXXX
XXXXXXXXX

Dear_____:

Time marches on and a new century is waiting for us to leave our mark. By participating in the Mentor Training Program, you have indeed left your mark and influenced the future of the Distance Dietetics Management Master's Program at Oregon State University.

We appreciate your time and energy spent in participating in the conference and follow-up calls as well as the evaluation of each module. The project could not have progressed without you. Thank you!

As a tangible thank you, two references to add to your library are being shipped separately. Hopefully they will be both a resource for future use as well as a reminder of our appreciation of the vital role you played in the Mentor Training Program.

We wish you much success as you progress in the mentoring process.

Sincerely,

Suzanne R. Curtis, MS, RD
PhD Candidate
Nutrition and Food Management
Oregon State University

Ann M Messersmith, PhD, RD, LD
Head, Nutrition and Food Management
Oregon State University

APPENDIX 24

Telephone Interview Format

Final Evaluation via Telephone for Mentor Training Program

I will be conducting a semi-structured interview. Which means that I have a prescribed set of questions that I will be asking you. However, you are free to go back to any question to give more of an explanation and I will be interacting with you to some degree regarding your responses.

With your permission, this conversation will be tape recorded. The information given during this conversation will not be attributed to your actual identify, but will be identified by the use of your pseudonym for analysis as well as publication purposes. Do I have your permission to tape this conversation?

I.   General Comments Regarding Mentor Training Program:
        A. Comment on the length of the modules; too much information presented, too little, just right?

        B. Of the four modules, was one more helpful, beneficial?
           Mentoring   Research Methods
           Communication   OSU Requirements for Graduate Students

        C. Of the four modules, was one less beneficial? What could be done to increase its benefit to the training program?

        D. Which other topics do you think could have been included in the training program?

        E. Overall time commitment to the training program, the amount of time it took you to complete it. Comments:

        F. Comment on technical aspects of the modules:
           Accessibility, ease of use, readability
           Links, working,
           Navigability between pages, links

        G. Other comments regarding the mentor training program
           * Telephone conferences?

II.   Comments Regarding the Scenario

        A. How was the scenario helpful in integrating information presented in the mentor training program with your current knowledge, i.e. being a vehicle in giving you the opportunity to put your mentoring skills into practice...

B. In your opinion, could anything be done to improve the scenario exercise?

C. Any other comments regarding the scenario?

III. How do you think (___ name of mentee) will benefit from your efforts in the mentor training program?

IV. Any other comments?

APPENDIX 25

List of Codes

List of Codes

Application of training program to other programs

Attitude

Audience for training program

Benefit to mentees

Benefit to work setting

Conference calls

Depth of information provided

Distance, Internet experience

Drawbacks

Evaluation

Experience-based comment

Final comments

Format clarity, navigability

How training program will benefit mentee

How training program will benefit mentor

Integrating scenario with current knowledge

Internal problems

Least beneficial module

Least informative

Length of module

Leniency

Link accessibility/activity

Links comments

Mentor/mentee relationship

Most beneficial module

Most informative

New information

Other scenario comments

Other topics to include in training program

Other training program comments

Personal time constraints

Print off text

Problems

Reading on line

Revelations

Review

Scenario integrating mentoring skills

Suggestions regarding modules

Suggestions to improve scenario

Suggestions, miscellaneous

Technical aspects

Time commitment

Too convoluted to code

Use for future reference