EVALUATION OF THE OKLAHOMA COOPERATIVE EXTENSION NUTRITION WEB SITE

By

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EVALUATION OF THE OKLAHOMA

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NUTRITION WEB SITE

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Thanks to the Oklahoma Cooperative Extension Service Fanily and Consumer Science County Extension Educators for their input and participation in this study. And thanks to the Oklahoma Cooperative Extension Service for awarding me a graduate assistantship to help make this study possible.

I especially would like to thank my outstandingly supportive family. Special thanks to my parents, Mickey Cobb and Theresa Stafford for being there with encouragement and a laugh when I need it. To my sister Halley; yes, I'm finally finished! To my grandma, Cilia Livingston for her encouragement and support. To my mother-in-law and father-in-law, Pam and Jay Carson for cheering me on. Lastly, I would like to thank my husband Chris for his unfailing encouragement, advice, and perspective. I couldn't have done it with out you.

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CHAPTER I

INTRODUCTION

The Internet provides many opportunities for learning and education. In recent years the Internet has emerged as a viable means of disseminating nutrition information and providing nutrition education to the public and professionals (Muske et al., 2001). Information about nutrition, professional nutrition societies, and government organizations can be found via the Internet (Kipp et al., 1996). The exponential growth of the Internet has made nutrition and health information more and more accessible to all kinds of people. Unfortunately, about 60% of nutrition information found on the Internet is inaccurate (Sutherland, 1999). Anything can be published, by anyone, on the Internet which results in a confusing mixture of science, facts, knowledge, false knowledge, illusions, and lies (Smith, 1999). A need exists to educate professionals and consumers on how to access useful and factual information from the Internet (O'Neill, 1999). It is also important that factual information be available to professionals and consumers on the Internet.

Cooperative Extension Service professionals need access to a wide range of up to date, factual, scientific information. Electronic publications and resources can reduce the need for manuals, curriculums, lessons, and fact sheets that take up valuable storage space in many Cooperative Extension Service county offices (Tennessen et al., 1997).

In the past, the Oklahoma Cooperative Extension Service (OCES) – Family and Consumer Science (FCS) County Extension Educators received their core nutrition

information in manual format. Manuals provided an overview of nutrition information including sections on basic nutrition, nutrition through the lifecycle, nutrition for health promotion, and other special nutrition topics. The manuals have been a necessary tool for the OCES-FCS County Extension Educators, but are costly to produce and distribute. This excess cost has made it difficult to update manuals quickly enough to keep up with the ever-changing science of nutrition. Wide spread use and acceptance of the Internet has the potential for eliminating costly manuals.

The OCES Nutrition Web Site was developed to provide timely nutrition information and education materials in a variety of formats such as content text, news releases, consumer handouts, PowerPoint® presentations, and related links to OCES-FCS County Extension Educators. However, evaluation of the OCES Nutrition Web Site is needed to assure that it meets the needs of OCES-FCS County Extension Educators . This study will provide insights, which can be used to enhance the effectiveness of the OCES Nutrition Web Site for OCES-FCS County Extension Educators.

Purpose and Objectives

The purpose of this study is to evaluate the OCES Nutrition Web Site. The specific objectives were:

1. To evaluate the use of the OCES Nutrition Web Site by OCES-FCS County Extension Educators before, immediately after, and six months after in-service training on the OCES Nutrition Web Site.

2. To evaluate OCES-FCS County Extension Educators' preferences regarding web site characteristics, information sections, and information formats on the OCES Nutrition Web Site immediately after and six months after in-service training on the OCES Nutrition Web Site.

3. To evaluate the OCES-FCS County Extension Educators' level of comfort in using the OCES Nutrition Web Site before, immediately after, and six months after in-service training on the OCES Nutrition Web Site.

Null Hypotheses

Ho1: There will be no change in self-reported use of the OCES Nutrition Web Site by OCES-FCS County Extension Educators before, immediately after, and six months after in-service training on the OCES Nutrition Web Site.

Ho2: There will be no change in OCES-FCS County Extension Educators' preferences regarding web site characteristics, information sections, and information formats on the OCES Nutrition Web Site immediately after, and six months after in-service training on the OCES Nutrition Web Site.

Ho3: There will be no change in OCES-FCS County Extension Educator's self-reported level of comfort regarding use of the OCES Nutrition Web Site before, immediately after, and six months post in-service training on the OCES Nutrition Web Site.

Assumptions

In this study, it was assumed that the participants would complete the evaluation instruments honestly and completely.

Limitations

One limitation of this study was the relatively small sample size, partly due to the small target population (OCES-FCS County Extension Educators), and partly due to the fact that participation in the OCES Nutrition Web Site in-service was voluntary.

Another limitation of this study was technological difficulties. Many OCES-FCS County Extension Educators did not have the appropriate technology available in their county offices to fully utilize the OCES Nutrition Web Site. Some OCES County offices had inadequate Internet access and limited local service. Other OCES County offices did not have reliable computers making the process of using the Internet tedious.

Definitions

1. Oklahoma Cooperative Extension Service Family and Consumer Science (OCES-FCS): Provides Oklahomans with knowledge and education to help improve health, nutrition, family, leadership, home based business and financial planning skills.

2. OCES Family and Consumer Science County Extension Educators: Provide education in all areas of Family and Consumer Science in their respective counties.
3. OCES Nutrition Education Specialist: Provides research based, unbiased nutrition education to Oklahomans, provides nutrition in-service training to OCES-FCS County Extension Educators, develops nutrition education materials and curriculums, and serves as a resources for OCES-FCS County Extension Educators.
4. Web Site characteristics: Used to describe a group of characteristics related to the OCES Nutrition Web Site. Web Site characteristics include navigation, speed, content, links and graphics.
    a. Navigation: Used to describe the layout and organization of a web site.
    b. Speed: Used to describe the speed at which information from a web site is loaded to a personal computer.
    c. Content: Used to describe the information found on a web site.
    d. Links: Used to describe links on a web site to one or more other web sites.
    e. Graphics: Used to describe any and all pictures, clipart, and animation on a web site.
5. Information sections: Used to describe the five major sections of the OCES Nutrition Web site including nutrition basics, nutrition through the lifecycle, nutrition and health promotion, special issues, and hot topics related to nutrition.
    a. Nutrition basics: This section of the OCES Nutrition Web Site contains information on general nutrition topics including the Food Guide Pyramid, the

Dietary Reference Intakes, Dietary Nutrients, Dietary Guidelines for Americans, and evaluating nutrition information. Each topic contains a "content" page, which includes content text on the topic. Topics may also contain other information formats such as "handouts," "OCES Fact Sheets," "PowerPoint presentations," "news releases," and "related links."

b. Nutrition through the Lifecycle: This section of the OCES Nutrition Web Site contains nutrition information on nutritional needs throughout the life span. Topics included in this section are nutrition during pregnancy, nutrition for infants, toddlers, children, adolescents, and adults over 50. Each topic contains the information formats described above for the Nutrition Basics section.

c. Nutrition and health promotion: This section of the OCES Nutrition Web Site contains nutrition information related to health promotion topics. Nutrition topics in this section include osteoporosis, high blood pressure, heart disease, diabetes, cancer, weight management, food allergies and intolerances, and drug/nutrient interactions. Each topic contains the information formats described above.

d. Special issues: This section of the OCES Nutrition Web Site contains nutrition information related to current nutrition issues. Some topics include eating disorders, herbal supplements, fad diets, nutrition and physical activity, and vegetarian diets. Each topic contains the information formats described above.

e. Hot topics: This section of the OCES Nutrition Web Site contains news worthy and/or newly discovered or published nutrition information.

Information for the Hot topics section may fit into any of the other information sections, and is incorporated into the appropriate section when the Hot topics section is updated.

6. Information topics: Used to describe specific topics found under each of the information sections such as Food Guide Pyramid in Nutrition Basics, nutrition for infants in Nutrition through the Lifecycle, and nutrition for fitness in Special Issues.
7. Information formats: Used to describe different forms of information available on the OCES Nutrition Web Site including content, fact sheets, handouts, PowerPoint presentations, and news releases.
    a. Content: Used to describe information formatted as content text which is readily printable.
    b. Fact Sheets: Used to describe information formatted as Oklahoma Cooperative Extension Service consumer publications.
    c. Handouts: Used to describe information formatted to be used as a consumer handout.
    d. PowerPoint®: Used to describe information presented as PowerPoint presentations which OCES-FCS County Extension Educators can use in education programs.
    e. News Releases: Used to describe information formatted as ready-to-publish news articles.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The Internet is one of the most rapidly growing and evolving technologies in history (Horrigan, 2000). It has also become increasingly important in the learning environment (Lenhart et al., 2001). More than seventy percent of all higher education institutions use the Internet and many provide resources and courses online (Graves, 2000; Newman & Scurry, 2001). Beyond the boundaries of higher education, the Internet has expanded the horizons of learning, communication and resource sharing for both consumers and professionals (Muske et al., 2001; Graves, 2000; Kolasa & Miller, 1996). The Internet provides access to a wide range of nutrition and health information for consumers and professionals alike (Horrigan, 2000; Sutherland, 1999; Kolasa & Miller, 1996). This chapter will discuss Internet use by consumers and professionals related to nutrition and health.

Consumer Use of the Internet Related to Nutrition and Health

The Internet is a powerful resource providing vast amounts of health related information to consumers (Rourke et al., 2000). One survey revealed that 54% of Internet users collected health information online in the year 2000 (Horrigan, 2000). Consumers

are using this information for a variety of reasons. Information about disease and nutrition are the two most popular health related online search topics (Miller & Reents, 1998; Lacroix, 2001). Consumers seek this information to help them make healthcare decisions, enhance information received from a physician or healthcare professional, and educate themselves on a specific diagnosis or disease (Fox & Rainie, 2000).

There are many factors driving the increasing popularity of online nutrition and health information. Changing technologies allow consumers to access nutrition and health information at any time, day or night (Olson et al., 2000; Sieving, 1999). Consumers who are seeking online health information are older, better educated, and have higher incomes than the general online population (Miller & Reents, 1998). Increased consumer education levels and willingness to use newer technologies drives the movement further (Sieving, 1999). The changing atmosphere of healthcare is encouraging consumers to be better educated about their health. Physicians have less time than ever before to spend with patients. Healthcare professionals view consumers as partners in healthcare and expect them to play a role in making healthcare decisions (Miller & Reents, 1998; Rourke et al., 2000). A consumer who is educated about his condition can make better use of the limited time spent with the physician (Rourke et al., 2000).

Consumers who seek online nutrition and health information, in general, are not doing so carelessly. Consumers are concerned about the quality and credibility of the information they obtain from the Internet. (Fox & Rainie, 2000; Cline & Haynes, 2001). These concerns are not unsubstantiated. Sutherland found in a study of 112 nutrition related web sites that more than 60% contained inaccurate or outdated information, and

less than 10% of these web sites contained information about the author's professional credentials and sources of information (Sutherland, 1999).

In spite of the increase in demand for online nutrition and health information, there are some barriers to consumer use of the Internet for accessing nutrition and health information. The large amount of inaccurate health information published on the Internet presents a significant barrier to all users (Sutherland, 1999). The cost of computer equipment presents a barrier for limited resource populations. Limited ability to understand and use health information also present barriers for low-literacy populations (Miller & Reents, 1998; Licciradone et al., 2001). Few websites exist for the low literacy consumer (Olson et al., 2000). In addition, difficulties exist among persons over 60 years old, and people who live in rural areas where Internet access is limited (Licciardone et al., 2001; Smith-Barbaro et al., 2001).

Online nutrition and health resources are beginning to move in new directions for consumers. Web sites that have interactive properties are more conducive to learning than non-interactive web sites (Stout et al., 2001). The University of Cincinnati in Ohio developed a health related web site to meet the demands of consumers called NetWellness. NetWellness was developed by a team of librarians, computer experts, and health care professionals. One of the more popular features of NetWellness is the "Ask an Expert" link. Specific questions can be emailed to a registered dietitian or other health care professional. Questions are answered promptly via return email. This provides easy access to a registered dietitian for consumers who submit 4-5 diet and nutrition related questions each week (Rourke et al., 2000).

Professional Use of the Internet Related to Nutrition and Health Information

Part of the mission of Cooperative Extension Services is to provide continuing education to Cooperative Extension Service professionals (Fulton, 1992). Technologies have made it possible to offer many in-service training programs remotely (Fulton, 1992). Cooperative Extension Service has implemented a variety of different distance education methods for in-service training and education (Fitzpatrick et al., 1997). Written, audio tape, and film materials are commonly used in distance training (Muske et al., 2001; Fitzpatrick et al., 1997). Conference calls, satellite links, computer aided programs and videoconferencing offer a more high tech approach (Muske et al., 2001; Dooley et al., 1999; Struempler et al., 1997). The Internet is a medium for distance education that allows people to take courses from their homes, and provides flexibility to meet individual needs, schedules, and learning styles (Cohen et al., 1997; Sigulem et al., 2001). Cooperative Extension Service is currently exploring the Internet as a means of providing in-services and workshops to Cooperative Extension Service Professionals (Muske et al., 2001; Lippert et al., 1998; Lippert et al., 2000).

In addition to in-service training, the Internet can be used as a resource for Cooperative Extension Service professionals as well as other professionals. County Extension Educators need access to unbiased, timely, research based information (Taylor & Curtis, 1999). Journals, manuals, and curricula are expensive to print and take up valuable storage space in Cooperative Extension Service county offices. County Extension Educators could benefit from greater use of the Internet (Tennessen et al., 1997). The Internet provides access to a vast array of nutrition and health information

including scientific journals and other online publications reducing the need to keep hard copies of these materials in the office (Tennessen et al., 1997; Kipp et al., 1996). In order to obtain this information, professionals must know how to navigate the Internet effectively (Miller & Achterberg, 1997). Professionals must also be prepared to evaluate information found online for timeliness, accuracy, and the agenda of the author, because there are no regulations regarding accuracy of online publications (Kipp et al., 1996)

One way to reduce the need for County Extension Educators to evaluate online material themselves is to provide web sites with information developed and evaluated by Cooperative Extension Service State Specialists. Taylor & Curtis published a study in 1999 evaluating use and acceptance of North Carolina's Food Safety and Quality Cooperative Extension Major Program (CEMP) Web Site by North Carolina County Extension Educators. CEMP is a food safety information retrieval system designed to help North Carolina Cooperative Extension County Extension Educators promote food safety in their state. The goal was to provide County Extension Educators with easily accessible, reliable food safety information online. After a short demonstration, County Extension Educators were asked to evaluate the web site. All County Extension Educators who participated rated the online information excellent or good. All agreed the web site was easy to use and designed for any level of computer skills. A follow-up survey indicated that approximately 75% of County Extension Educators were using the web site (Taylor & Curtis, 1999).

CHAPTER III

RESEARCH PROCEDURE

Introduction

This chapter describes the study procedure including development of the OCES Nutrition Web Site, subject recruitment, in-service training, study design, and statistical analysis. This study was approved by the Oklahoma State University Human Subjects Institutional Review Board (Appendix A).

Development of the Oklahoma Cooperative Extension Nutrition Web Site

The OCES Nutrition Web Site was developed by the OCES-FCS State Nutrition Education Specialist to provide current and accurate nutrition information and nutrition education materials specifically designed to aid OCES-FCS County Extension Educators with their community nutrition education programs. The OCES Nutrition Web Site contains nutrition information in five major nutrition information sections including basic nutrition, nutrition through the lifecycle, nutrition and health promotion, special issues related to nutrition, and hot topics (Figure 1).

- Nutrition Basics: This section of the OCES Nutrition Web Site contains information on general nutrition topics including the Food Guide Pyramid, the Dietary Reference Intakes, Dietary Nutrients, Dietary Guidelines for Americans, and evaluating nutrition information. Each topic contains a "content" page, which includes content text on the topic. Topics may also contain other information formats such as "handouts," "OCES Fact Sheets," "PowerPoint presentations," "news releases," and "related links."

- Nutrition through the Lifecycle: This section of the OCES Nutrition Web Site contains nutrition information on nutritional needs throughout the life span. Topics included in this section are nutrition during pregnancy, nutrition for infants, toddlers, children, adolescents, and adults over 50. Each topic contains the information formats described above for the Nutrition Basics section.

- Nutrition and Health Promotion: This section of the OCES Nutrition Web Site contains nutrition information related to health promotion topics. Nutrition topics in this section include osteoporosis, high blood pressure, heart disease, diabetes, cancer, weight management, food allergies and intolerances, and drug/nutrient interactions. Each topic contains the information formats described above.

- Special Issues Related to Nutrition: This section of the OCES Nutrition Web Site contains nutrition information related to current nutrition issues. Some topics include eating disorders, herbal supplements, fad diets, nutrition and physical activity, and vegetarian diets. Each topic contains the information formats described above.

- Hot Topics: This section of the OCES Nutrition Web Site contains newsworthy and/or newly discovered or published nutrition information. Information in the Hot Topics section may fit into any of the other information sections, and is incorporated into the appropriate section when the Hot Topics section is updated.

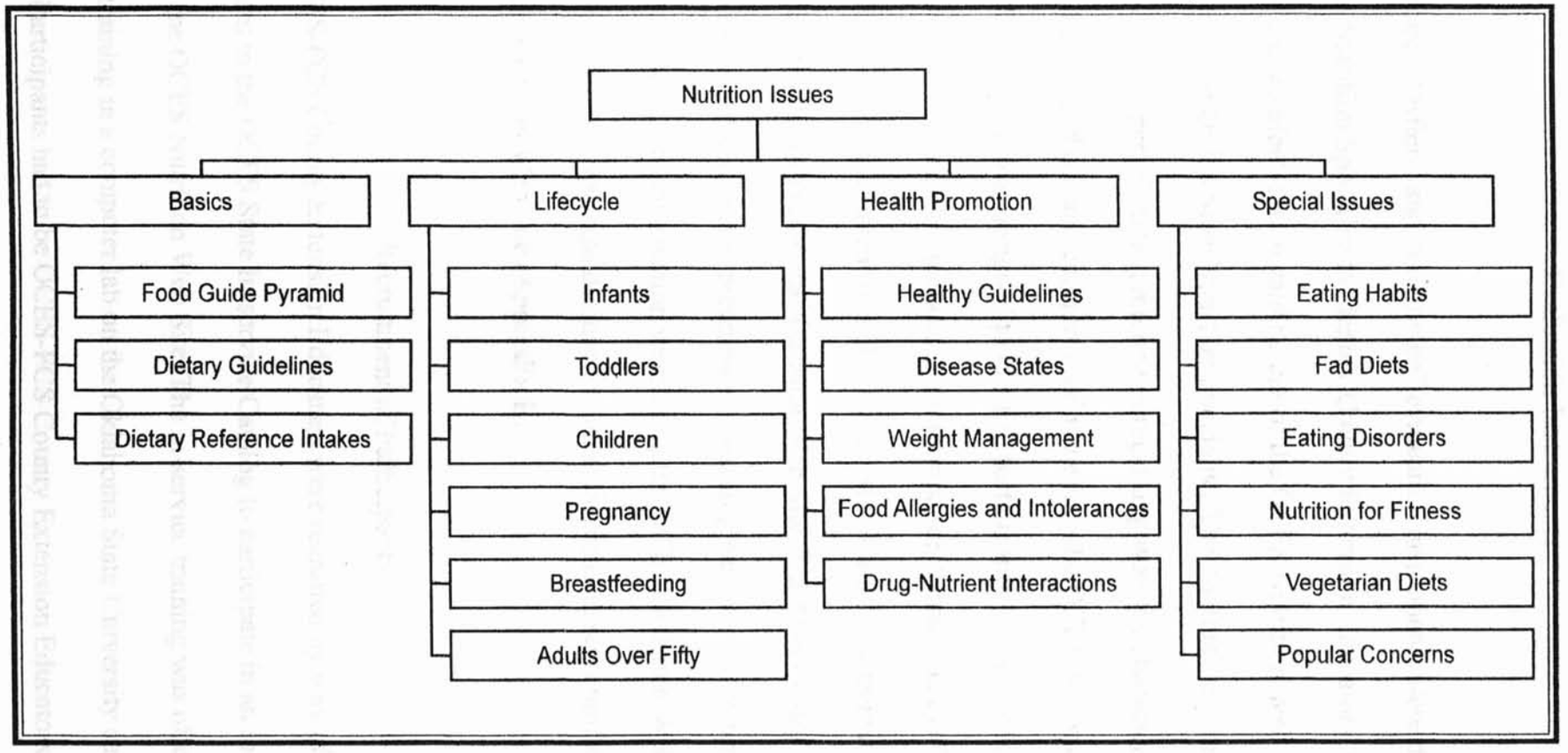

Figure 1. Organization chart of main information sections and topics found on the OCES Nutrition Web Site

Evaluation Instruments

"Before," "After," and "Follow-up" evaluation instruments were developed by the OCES State Nutrition Specialist to identify County Extension Educators' use, preferences, and comfort level regarding use of the OCES Nutrition Web Site. Questions were written by the OCES State Nutrition Specialist. The "Before" instrument was designed to identify participants' preferences regarding web site characteristics, general use of the Internet, and use and comfort level regarding the OCES Nutrition Web site. The "After" instrument was designed to identify participants' preferences regarding web site characteristics, information sections, and information formats on the OCES Nutrition Web Site. The "After" instrument was also designed to identify participants' comfort level and expected use of the OCES Nutrition Web Site. The "Follow-up" instrument was designed to identify participants' preferences regarding web site characteristics, information sections, and information formats on the OCES Nutrition Web Site. The "Follow-up" instrument was also designed to identify participants' comfort level and use of the OCES Nutrition Web Site (Appendix B).

Recruitment of Participants

OCES-FCS County Extension Educators were recruited by way of an advertisement in the OCES State In-service Catalog to participate in an in-service training on the OCES Nutrition Web Site. The in-service training was offered as a classroom training in a computer lab on the Oklahoma State University campus, or via telephone. Participants had to be OCES-FCS County Extension Educators.

A comparison group of OCES-FCS County Extension Educators who did not sign up to participate in the in-service training were contacted via telephone and recruited to complete the "Before" instrument. Participants in the comparison group also had to be OCES-FCS County Extension Educators.

OCES-FCS County Extension Educators who volunteered to participate in the in-service received information packets to aid them during the in-service training. Each packet included detailed descriptions of each step needed to operate all of the features of the Nutrition Web Site. Step by step instructions were coupled with pictorial images of the OCES Nutrition Web Site (Appendix C). All OCES-FCS County Extension Educators completed the "Before" instrument prior to receiving the information packet.

OCES Nutrition Web Site In-service

In-service training was delivered in two formats. Twelve OCES-FCS County Extension Educators attended an in-service training held in a computer lab located on the Oklahoma State University campus. The in-service leader walked participants through each step necessary to successfully navigate the OCES Nutrition Web Site. Participants also received instruction packets containing detailed directions to aid them during the in-service. The in-service leader's computer screen could be viewed on a projector screen located at the front of the classroom. Participants were encouraged to perform each step, as it was demonstrated, on their own computer terminal.

Twenty-two OCES-FCS County Extension Educators received the in-service training via telephone. The telephone in-service training was conducted with each OCES-

FCS County Extension Educator in a one-on-one format. Participants were walked through each step of the in-service as they performed each step of the procedure on their office computer. Participants in the telephone in-service training received their instruction packets in the mail prior to their in-service appointment. All participants received the same instruction packets. All in-service training sessions, both in the classroom and via telephone, were conducted by the same in-service leader.

Evaluation of the OCES Nutrition Web Site and In-service

The design for this study was a pre, post, delayed post longitudinal design with a comparison group (Figure 2). OCES-FCS County Extension Educators who participated in the in-service completed the "Before" evaluation instrument immediately before the in-service, the "After" evaluation instrument immediately after the in-service, and the "Follow-up" evaluation instrument six months after in-service. All participants were contacted via telephone for completion of the "Follow-up" instrument.

OCES-FCS County Extension Educators in the comparison group completed the same "Before" instrument as those who participated in the in-service training, but did not complete the "After" or "Follow-up" instruments.

Figure 2. Illustration of the study design

	Instrument		
	"Before"	"After"	"Follow-up"
On-campus in-service	X	X	X
Telephone in-service	X	X	X
Comparison group	X		

Statistical Analysis

Independent t-tests were conducted on each question of the "Before" instrument between participants who attended the in-service in person with those who received the in-service training by telephone. There were no significant differences between the groups. Therefore, data from participants who received in-service training in person and by telephone were analyzed as one group. Means, frequencies, Chi square analysis, and independent t-tests were used to compare data from the "Before" instrument between OCES-FCS County Extension Educators who participated in the in-service training and those in the comparison group who did not participate in in-service training. Means, frequencies and paired t-tests were used to compare data between the "After" and "Follow-up" instruments. Data were analyzed using the Statistical Package for the Social Sciences (SPSS version 10.0, Chicago, IL). The level of significance was set at $p<0.05$.

Before Instrument Analysis

Analysis of the "Before" instrument was a comparison between OCES-FCS County Extension Educators who participated in the in-service and OCES County Extension Educators who did not participate in the in-service.

Before question 1: Do you have access to a computer with web capabilities at work? Chi square analysis was conducted on frequency responses from participants who attended the in-service and those who did not attend the in-service.

Before question 2: Do you use the web to gather information? Chi square analysis was conducted on frequency responses from participants who attended the in-service and those who did not attend the in-service.

Before question 3: How often do you use the web to gather information? Chi square analysis was conducted on frequency responses from participants who attended the in-service and those who did not attend the in-service. The original responses to question 3 were "Daily," "2-3 days a week," "1 day a week," "Less than 1 day a week," and "Never." Responses were grouped to increase sample size for Chi square analysis. The responses "Daily" and "2-3 days a week" were collapsed into one group and labeled "Heavy users." The responses "1 day a week," "less than 1 day a week," and "Never" were collapsed into one group and labeled "Light users."

Before question 4: Thinking of your favorite web sites, rank these characteristics in order of importance (number 1 being the most important and number 6 being the least important). Means and independent t-tests were used to compare responses from participants who attended the in-service to those who did not attend the in-service. Web site characteristics included "Navigation," "Content," "Speed," "Links," and "Graphics." Mean rankings were calculated for each web site characteristic for independent t-test analysis. Mean rankings were calculated based on participant rankings of web site characteristics from number 1 being the most important and number 6 being the least important.

Before question 5: Have you located the OCES Nutrition Web Site? Chi square analysis was conducted on frequency responses from participants who attended the in-service and those who did not attend the in-service.

Before question 6: If yes to number 5, how often do you use the OCES Nutrition Web Site? Chi square analysis was conducted on frequency responses from participants who attended the in-service and those who did not attend the in-service. Responses were grouped to increase sample size for Chi square analysis. The original responses were "Daily," "2-3 days a week," "1 day a week," "Less than 1 day a week," and "Never." The responses "Daily" and "2-3 days a week" were collapsed into one group and labeled "Heavy users." The responses "1 day a week," "less than 1 day a week," and "Never" were collapsed into one group and labeled "Light users."

Before Question 7: I am comfortable using the OCES Nutrition Web Site to find nutrition information. Chi square analysis was conducted on frequency responses from participants who attended the in-service training and those who did not attend the in-service training. Responses were grouped to increase sample size for Chi square analysis. The original responses were "Strongly agree," "Agree," "Disagree," and "Strongly disagree." The responses "Strongly agree" and "Agree" were collapsed into one group and labeled "Agree." Responses "Strongly disagree" and "Disagree" were collapsed into one group and labeled "Disagree."

After and Follow-up Instrument Analysis

Analysis of the "After" and "Follow-up" instruments was a comparison of OCES-FCS County Extension Educators who participated in in-service training immediately after and six months after the in-service training.

After/Follow-up question 1: The OCES Nutrition Web Site in-service was helpful to me. Paired t-tests were used to compare participants' responses immediately after in-service training to their responses six months after the in-service training. Means for paired t-test analysis were calculated using a score assigned to each response; "Strongly Agree"=1, "Agree"=2, "Disagree"=3, and "Strongly Disagree"=4.

After/Follow-up question 2: How often will/do you use the OCES Nutrition Web Site? Paired t-tests were used to compare participants' expectant use of the OCES Nutrition Web Site immediately after in-service training to their actual use of the OCES Nutrition Web Site six months after the in-service training. Means for paired t-test analysis were calculated using a score assigned to each response; "Daily"=1, "2-3 days per week"=2, "Once a week"=3, "Less than once a week"=4, and "Never"=5.

After/Follow-up question 3: What characteristics do you like about the OCES Nutrition Web Site? Rank these characteristics in order of importance, (number 1 being the most important and number 6 being the least). Paired t-tests were used to compare participants ranking of web site characteristics immediately after the in-service training

with rankings six months after the in-service training. Web site characteristics included "Navigation", "Content", "Speed", "Links", "Graphics", and "Other." Mean rankings were calculated for each web site characteristic for paired t-test analysis based on participant rankings of web site characteristics from 1 being the most important and 6 being the least important.

After/Follow-up question 4: What sections of the OCES Nutrition Web Site will/do you use the most: Rank the sections in order of importance, (number 1 being the most important and number 5 being the least). Paired t-tests were used to compare participants' rankings of the OCES Nutrition Web Site information sections immediately after the in-service training with rankings of information sections six months after the in-service training. OCES Nutrition Web Site information sections included "Basics," "Lifecycle," "Special Issues," "Health Promotion," and "Hot Topics." Mean rankings were calculated for each OCES Nutrition Web Site information section for paired t-test analysis based on participant rankings of information sections from 1 being the most important and 5 being the least important.

After/Follow-up question 5: What forms of information from the OCES Nutrition Web Site will/do you use the most? Rank the forms in order of importance, (number 1 being the most important, and 6 being the least important). Paired t-tests were used to compare participants' rankings of information formats immediately after the in-service training with rankings of information formats six months after the in-service training. Information formats included "Content," "Handouts," "Brochures," "Fact Sheets,"

"PowerPoint," and "News Releases." Mean rankings were calculated for each information format for paired t-test analysis based on participant rankings of information formats from 1 being the most important and 6 being the least important.

After/Follow-up question 6: How will/do you use the OCES Nutrition Web Site information? Rank in order of importance, (number 1 being the most important, and 4 being the least). Paired t-tests were used to compare participants' expectant uses immediately after the in-service training to their actual uses six months after the in-service. Uses included "Education Programs," "Individual Handouts," and "News Releases," and "Other." Mean rankings were calculated for each possible use for paired t-test analysis based on participant rankings from 1 being the most important and 4 being the least important.

After/Follow-up question 7: I am comfortable using the OCES Nutrition Web Site. A paired t-test was used to compare participant comfort level immediately after the in-service training to their comfort level six months after the in-service training. Means for paired t-test analysis were calculated using a score assigned to each response; "Strongly agree"=1. "Agree"=2, "Disagree"=3, and "Strongly disagree"=4.

Follow-up Instrument Analysis

Analysis of the "Follow-up" instrument consisted of participants', who attended the OCES Nutrition Web Site in-service, responses to two questions not included in either the "Before" or "After" instruments.

Follow-up question 8: I would like more training on using the OCES Nutrition Web Site. Frequency responses were used to identify participants' perception of their need for more training on the OCES Nutrition Web Site.

Follow-up question 9: I have shared the OCES Nutrition Web Site address with the following; clients, other OCES professionals, and friends/family. Frequency responses were used to identify how many OCES County Extension Educators had shared the OCES Nutrition Web Site address with others.

Before, After, and Follow-up Instrument Analysis

Analysis of the "Before," "After," and "Follow-up" instruments consisted of participants', who participated in the OCES Nutrition Web Site in-service, responses to two questions which were included in all three instruments.

Before, After, and Follow-up question: How often will/do you use the OCES Nutrition Web Site. Paired t-tests were used to compare participants', who attended the OCES Nutrition Web Site in-service, use of the OCES Nutrition Web Site before the in-service training with expectant use immediately after the in-service training, and with

participants' actual use six months after the in-service training. Means were calculated using a score assigned to each response; "Daily"=1, "2-3 days a week"=2, "One day a week"=3, "Less than 1 day a week"=4, and "Never"=5.

Before, After, and Follow-up question: I am comfortable using the OCES Nutrition Web Site. Paired t-tests were used to compare participants' comfort level before, immediately after, and six months after in-service training. Means for paired t-test analysis were calculated using a score assigned to each response: "Strongly agree"=1, "Agree"=2, "Disagree"=3, and "Strongly disagree"=4.

CHAPTER IV

RESULTS AND DISCUSSION

Introduction

The purpose of this study was to evaluate OCES-FCS County Extension Educators' use and level of comfort regarding the OCES Nutrition Web Site before, immediately after, and six months post in-service training on the OCES Nutrition Web Site. This project also evaluated OCES-FCS County Extension Educators' preferences regarding web site characteristics, information sections, and information formats on the OCES Nutrition Web Site immediately after and six months post in-service training.

Description of Subjects

The participants in this study were OCES-FCS County Extension Educators who participated in an in-service training entitled Navigating the OCES Nutrition Web Site. A total of 34 County Extension Educators, 12 in person and 22 via telephone, participated in the training and completed the evaluation instruments. Independent t-tests were conducted on each question of the "Before" instrument between participants who attended the in-service training in-person with those who received in-service training via telephone. There were no significant differences between the groups. Therefore, data from participants who received in-service training in person and by telephone were

analyzed as one group. A comparison group of 31 County Extension Educators who did not participate in the in-service also completed the "Before" instrument.

"Before" Instrument Analysis

Analysis of the "Before" instrument was a comparison between responses from OCES-FCS County Extension Educators who participated in the in-service on Navigating the OCES Nutrition Web Site and OCES-FCS County Extension Educators who did not participate in the in-service.

Before Question 1

Before question 1: Do you have access to a computer with web capabilities at work? Chi square analysis was conducted on frequency responses from participants who attended the in-service and those who did not attend the in-service. Ninety-seven percent of participants who attended the in-service responded "yes" and 3% responded "no" (Table 1). Eighty-seven percent of participants who did not attend the in-service responded "yes" and 13% responded "no" (Table 1). Chi square analysis was conducted; however, the number of subjects was too small in some cells to perform the analysis. Overall, the majority of participants in both groups had access to a computer with web capabilities at work. It is unknown if the computer with web capabilities was located at the participants' desk or somewhere else in the office.

Before Question 2

Before question 2: Do you use the web to gather information? Chi square analysis was conducted on frequency responses from participants who attended the in-service and those who did not attend the in-service. Ninety-seven percent of those who attended the in-service responded "yes" and 3% responded "no" (Table 1). Eighty-four percent of participants who did not attend the in-service responded "yes" and 16% responded "no" (Table 1). Chi square analysis was conducted; however, the number of subjects was too small in some cells to perform the analysis. Over all, the majority of participants indicated they used the web to gather information. A slightly higher percentage of those who attended the in-service reported they used the web to gather information than those who did not attend the in-service.

Before Question 3

Before question 3: How often do you use the web to gather information? Chi square analysis was conducted on frequency responses from participants who attended the in-service and those who did not attend the in-service. The original responses to question 3 were "Daily," "2-3 days a week," "1 day a week," "Less than 1 day a week," and "Never." Responses were collapsed to increase sample size for Chi square analysis. The responses "Daily" and "2-3 days a week" were collapsed into one group labeled "Heavy use." The responses "1 day a week," "less than 1 day a week," and "Never" were collapsed into one group labeled "Light use." Sixty-one percent of participants who attended the in-service training responded "Heavy use," 39% responded "Light use." Seventy-four percent of participants who did not attend the in-service training responded "Heavy use," and 26% responded "Light use" (Table 1). There was no significant

relationship between self-reported use of the web between and whether or not participants attended the in-service training.

Table 1. Before instrument frequency responses of computer access and web use by participants who attended the OCES Nutrition web site in-service training and those who did not.

Question	Participants attending in-service training				Participants not attending in-service training			
	Yes		No		Yes		No	
	n	%	n	%	n	%	n	%
Do you have a computer with web capabilities at work?	32	97	1	3	27	87	4	13[1]
Do you use the web to gather information?	33	97	1	3	26	84	5	16[1]
	Heavy use		Light use		Heavy use		Light use	
	n	%	n	%	n	%	n	%
How often do you use the web to gather information	20	61	13	39	20	74	7	26

[1] Chi square analysis was conducted, but n was too small in some cells to perform the analysis.

[a] Numbers in a row with different superscripts are significant, $p<0.05$

Before Question 4

Data for "Before" question 4: Thinking of your favorite web sites, rank these characteristics in order of importance. (number 1 being the most important, and 6 being the least important), are presented in Tables 2 and 3. "Web site characteristics" is a term used to describe a group of characteristics related to the OCES Nutrition Web Site. Web Site characteristics include "Navigation," "Speed," "Links," "Content," and "Graphics." "Navigation" is a term used to describe the layout and organization of a web site. "Speed" is a term used to describe the speed at which information from a web site is loaded to a personal computer. "Content" is the term used to describe the information found on a web site. "Links" is a term used to describe any links found on a web site to one or more other web sites. "Graphics" is the term used to describe any and all pictures, clipart, and animation on a web site.

Mean rankings were calculated for each web site characteristic based on participant rankings from 1 being the most important to 6 being the least important (Table 3). Independent t-test analysis was used to compare mean rankings of web site characteristics between participants who attended the OCES Nutrition Web Site in-service and participants who did not attend the in-service.

Navigation: Among participants who attended in-service training, 25.8% ranked Navigation" number 1, 19.4% ranked "Navigation" number 2, 38.7% ranked "Navigation" number 3, 12.9% ranked "Navigation" number 4, 3.2% ranked "Navigation" number 5, and 0% ranked "Navigation" number 6 (Table 2). The mean ranking for "Navigation" among participants who attended the in-service was 2.48 (Table

3). Of those who did not attend the in-service 23.3% ranked "Navigation number 1, 23.3% ranked "Navigation" number 2, 30.0% ranked "Navigation" number 3, 16.7% ranked "Navigation" number 4, 6.7% ranked "Navigation" number 5, and 0% ranked "Navigation" number 6 (Table 2). The mean ranking for "Navigation" among participants who did not attend the in-service was 2.60 (Table 3). There was no significant difference in the mean ranking of "Navigation" between participants who attended the in-service training and those who did not attend.

Content: Of the participants who attended the in-service, 60.0% ranked "Content" number 1, 23.3% ranked "Content" number 2, 16.7% ranked "Content" number 3, and 0% ranked "Content" number 4, 5, or 6 (Table 2). The mean ranking for "Content" among participants who attended the in-service was 1.57 (Table 3). Of those who did not attend the in-service 48.4% ranked "Content" number 1, 29.0% ranked "Content" number 2, 9.7% ranked "Content" number 3, 9.7% ranked "Content" number 4, 3.2% ranked "Content" number 5, and 0% ranked "Content" number 6 (Table 2). The mean ranking for "Content" among participants who did not attend the in-service was 1.90 (Table 3). There was no significant difference in the mean ranking for "Content" between participants who attended the in-service training and those who did not attend.

Speed: Of the participants who attended the in-service, 16.7% ranked "Speed" number 1, 33.3% ranked "Speed" number 2, 20.0% ranked "Speed" number 3, 16.7% ranked "Speed" number 4, 13.3% ranked "Speed" number 5, and 0% ranked "Speed" number 6 (Table 2). The mean ranking for "Speed" among participants who attended the

in-service was 2.77 (Table 3). Of those who did not attend the in-service 23.3% ranked "Speed" number 1, 13.3% ranked "Speed" number 2, 23.3% ranked "Speed" number 3, 23.3% ranked "Speed" number 4, 16.7% ranked "Speed" number 5, and 0% ranked "Speed" number 6 (Table 2). The mean ranking for "Speed" among participants who did not attend the in-service was 2.97 (Table 3). There was no significant difference in the mean ranking for "Speed" between participants who attended the in-service training and those who did not attend.

Links: Of participants who attended the in-service, 0% ranked "Links" number 1, 20.0% ranked "Links" number 2, 20.0% ranked "Links" number 3, 46.7% ranked "Links" number 4, 13.3% ranked "Links" number 5, and 0% ranked "Links" number 6 (Table 2). The mean ranking for "Links" among participants who attended the in-service was 3.53 (Table 3). Of those who did not attend the in-service, 6.7% ranked "Links" number 1, 26.7% ranked "Links" number 2, 33.3% ranked "Links" number 3, 26.7% ranked "Links" number 4, 6.7% ranked "Links" number 5, and 0% ranked "Links" number 6 (Table 2). The mean ranking for "Links" among participants who did not attend the in-service was 3.00 (Table 3). There was a significant difference in the mean ranking of "Links" between participants who attended the in-service training and those who did not attend. Participants who did not attend the in-service training ranked "Links" significantly more important than participants who attended the in-service training ($p=0.046$) (Table 3).

Graphics: Of participants who attended the in-service, 0% ranked "Graphics" numbers 1 or 2, 3.3% ranked "Graphics" number 3, 23.4% ranked "Graphics" number 4, 70.0% ranked "Graphics" number 5, and 3.3% ranked "Graphics number 6 (Table 2). The mean ranking for "Graphics" among participants who attended the in-service was 4.73 (Table 3). Of participants who did not attend the in-service, 0% ranked "Graphics" number 1, 6.7% ranked "Graphics" number 2, 3.3% ranked "Graphics" number 3, 23.3% ranked "Graphics" number 4, 66.6% ranked "Graphics" number 5, and 0% ranked "Graphics" number 6 (Table 2). The mean ranking for "Graphics" among participants who did not attend the in-service was 4.50 (Table 3). There was no significant difference in the mean ranking of "Graphics" between participants who attended the in-service training and those who did not attend.

Over all, the mean ranking order for web site characteristics, from most important to least important, among participants who attended in-service training as well as those who did not attend was; "Content," "Navigation," "Speed," "Links," and "Graphics."

Table 2. Before instrument rankings of web site characteristics by participants who attended the OCES Nutrition Web Site in-service training and those who did not.

Characteristic	Participants attending in-service training												Participants not attending in-service training											
	1		2		3		4		5		6		1		2		3		4		5		6	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Navigation	8	25.8	6	19.4	12	38.7	4	12.9	1	3.2	0	0.0	7	23.3	7	23.3	9	30.0	5	16.7	2	6.7	0	0.0
Content	18	60.0	7	23.3	5	16.7	0	0.0	0	0.0	0	0.0	15	48.4	9	29.0	3	9.7	3	9.7	1	3.2	0	0.0
Speed	5	16.7	10	33.3	6	20.0	5	16.7	4	13.3	0	0.0	7	23.3	4	13.3	7	23.3	7	23.3	5	16.7	0	0.0
Links	0	0.0	6	20.0	6	20.0	14	46.7	4	13.3	0	0.0	2	6.7	8	26.7	10	33.3	8	26.7	2	6.7	0	0.0
Graphics	0	0.0	0	0.0	1	3.3	7	23.4	21	70.0	1	3.3	0	0.0	2	6.7	1	3.3	7	23.3	20	66.6	0	0.0

Web site characteristics were ranked from 1 being the most important to 6 being the least important.

Table 3. Before instrument mean[1] rankings of web site characteristics by participants who attended the OCES nutrition web site in-service training and those who did not.

Characteristic	**Immediately after in-service training** Mean ranking ± SD	**Six months after in-service training** Mean ranking ± SD
Navigation	2.48±1.12	2.60±1.22
Content	1.57±0.77	1.90±1.14
Speed	2.77±1.30	2.97±1.43
Links	3.53±0.97[a]	3.00±1.05[b]
Graphics	4.73±0.58	4.50±0.86

[1] Mean rankings were calculated based on participant rankings of web site characteristics from 1 being the most important to 6 being the least important.

[a] Means in a row with different superscripts are significantly different, $p < 0.05$.

Before Question 5

Before question 5: Have you located the OCES Nutrition Web Site? Chi square analysis was conducted on frequency responses from participants who attended the in-service and those who did not attend the in-service. Fifty-two percent of those who attended the in-service responded "yes" and 48% responded "no." Seventy-four percent of participants who did not attend the in-service responded "yes" and 26% responded "no" (Table 4). There was no significant difference between responses from participants who attended in-service training and those who did not attend.

Before Question 6

Before question 6: If yes to number 5, how often do you use the OCES Nutrition Web Site? Chi square analysis was conducted on frequency responses from participants who attended the in-service and those who did not attend the in-service. Responses were collapsed to increase sample size for Chi square analysis. The original responses were "Daily," "2-3 days a week," "1 day a week," "Less than 1 day a week," and "Never." The responses "Daily" and "2-3 days a week" were collapsed into one group labeled "Heavy use." The responses "1 day a week," "less than 1 day a week," and "Never" were collapsed into one group labeled "Light use" (Table 4). Eleven percent of participants who attended the in-service training indicated "Heavy use," and 89% indicated "Light use." Thirty-nine percent of participants who did not attend the in-service training indicated "Heavy use," and 61% indicated "Light use" (Table 4). Chi square analysis was conducted; however, the number of subjects was too small in some cells to perform the analysis. Over all, a higher percentage of participants who did not attend the in-service

reported "Heavy use" of the OCES Nutrition Web Site compared to those who attended the in-service.

Before Question 7

Before question 7: I am comfortable using the OCES Nutrition Web Site to find nutrition information. Chi square analysis was conducted on frequency responses from participants who attended the in-service training and those who did not attend the in-service training. Responses were collapsed to increase sample size for Chi square analysis. The original responses to question 7 were "Strongly agree," "Agree," "Disagree," and "Strongly disagree." The responses "Strongly agree" and "Agree" were collapsed into one group labeled "Agree." Responses "Strongly disagree" and "Disagree" were collapsed into one group labeled "Disagree." Sixty-one percent of participants who attended the in-service training responded "Agree" and 39% responded "Disagree." Of participants who did not attend the in-service training, 89% responded "Agree," and 11% responded "Disagree" (Table 4). Chi square analysis was conducted, however the number of subjects in some cells was too small to conduct the analysis.

Table 4. Before instrument frequency responses for locating, use, and comfort with the OCES Nutrition Web Site by participants who attended the OCES Nutrition web site in-service training and those who did not.

Question	Participants attending in-service training				Participants not attending in-service training			
	Yes		No		Yes		No	
	n	%	n	%	n	%	n	%
Have you located the OCES Nutrition Web Site?	17	52	16	48	23	74	8	26
	Heavy use		Light use		Heavy use		Light use	
	n	%	n	%	n	%	n	%
How often do you use the OCES Nutrition Web Site?	2	11	17	89	9	39	14	61[1]
	Agree		Disagree		Agree		Disagree	
	n	%	n	%	n	%	n	%
I am comfortable using the OCES Nutrition Web Site to find Nutrition Information.	16	61	10	39	24	89	3	11[1]

[1] Chi square analysis was conducted, but n was too small in some cells to perform the analysis.

[a] Numbers in a row with different superscripts are significant, $p<.05$

After and Follow-up Analysis

Analysis of the "After" and "Follow-up" instruments was a comparison of OCES-FCS County Extension Educators', who participated in an in-service, responses immediately after and six months after the in-service training.

After/Follow-up Question 1

After/follow-up question 1: The OCES Nutrition Web Site in-service was helpful to me. Paired t-tests were used to compare the responses of participants who attended the OCES Nutrition Web Site in-service immediately after in-service training to their responses six months after the in-service training. Mean scores were calculated using a score assigned to each response; "Strongly agree"=1, "Agree"=2, "Disagree"=3, "Strongly disagree"=4. Immediately after the in-service, 82% of participants responded "Strongly Agree," 18% responded "Agree," and 0% responded "Disagree" or "Strongly Disagree" (Table 5). The mean score among participants immediately after the in-service was 1.19 (Table 6). Six months after the in-service training, 28% of participants responded "Strongly Agree," 52% responded "Agree," and 0% responded "Disagree" or "Strongly Disagree" (Table 5). The mean score among participants six months after the in-service was 1.52 (Table 6). Overall, participants indicated the in-service was significantly more helpful immediately after the in-service compared to six months after the in-service ($p=0.005$) (Table 6).

Name: _____ SSN: _____ Acct # 1-1-70100-2460

DATE	DAY	IN	OUT	IN	OUT	IN	OUT	IN	OUT	Hours Worked	Time R
20	SA										
21	SU										
22	MO	8:50	12:20							3.5	
23	TU	11:45	3:15							3.5	
24	WE	1:15	3:00							1.75	
25	TH										
26	FR										
					* Minutes Converted to Decimals				TOTAL	6.75	

Student Signature: _____ Supervisor's Signature: _____

DATE	DAY	IN	OUT	IN	OUT	IN	OUT	IN	OUT	Hours Worked	Time R
27	SA										
28	SU										
29	MO										
30	TU	11:45	3:15							3.5	
1	WE	11:45	3:15							3.5	
2	TH	[illegible]									
3	FR										
					* Minutes Converted to Decimals				TOTAL	7	

Student Signature: _____ Supervisor's Signature: _____

DATE	DAY	IN	OUT	IN	OUT	IN	OUT	IN	OUT	Hours Worked	Time R
4	SA										
5	SU										
6	MO										
7	TU	11:45	12:00							.25	
8	WE	12:45	3:30							2.75	
9	TH	12:30	3:00							2.5	
10	FR	8:00	11:00							3.0	
					* Minutes Converted to Decimals				TOTAL	8.5	

Student Signature: _____ Supervisor's Signature: _____

DATE	DAY	IN	OUT	IN	OUT	IN	OUT	IN	OUT	Hours Worked	Time R
11	SA										
12	SU										
13	MO										
14	TU	11:30	3:00							3.5	
15	WE	11:45	3:30							3.75	
16	TH	11:30	3:15							3.75	
17	FR										
					* Minutes Converted to Decimals				TOTAL	11	

Student Signature: _____ Supervisor's Signature: _____

Table 5. After/Follow-up instrument frequency responses of participants who attended the OCES Nutrition Web Site in-service training.

Question	Immediately after in-service training								Six months after in-service training							
	Strongly Agree		Agree		Disagree		Strongly Disagree		Strongly Agree		Agree		Disagree		Strongly Disagree	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
The OCES Nutrition Web Site In-service was helpful to me.	25	82.0	6	18.0	0	0.0	0	0.0	15	28.0	16	52.0	0	0.0	0	0.0

	Daily		2-3 days/week		1 day/week		<1 day/week		Never		Daily		2-3 days/week		1 day/week		<1 day/week		Never	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
How often will/do you use the OCES Nutrition Web Site?	5	15	18	53	8	23	3	9	0	0	1	3	6	20	10	32	10	32	4	13

Table 6. After/Follow-up instrument means of participants who attended the OCES Nutrition Web Site in-service training.

Question	Immediately after in-service training	Six months after in-service training
	mean ± SD	mean ± SD
The OCES Nutrition Web Site In-service was helpful to me.[1]	1.19±0.40[a]	1.52±0.51[b]
How often will/do you use the OCES Nutrition Web Site?[2]	2.23±0.024[a]	3.32±1.05[b]

[1] Means were calculated using a score assigned to each response; Strongly agree=1, Agree=2, Disagree=3, Strongly disagree=4.
[2] Means were calculated using a score assigned to each response; Daily=1, 2-3 days a week=2, 1 day a week=3, <1 day a week=4, Never=5.
[a] Means in a row with different superscripts are significantly different, $p < 0.05$.

After/Follow-up Question 3

Data for after/follow-up question 3: What characteristics do you like about the OCES Nutrition Web Site? Rank the characteristics in order of importance, (number 1 being the most important and number 6 being the least important): are presented in Tables 7 and 8. "Web site characteristics" is a term used to describe a group of characteristics related to the OCES Nutrition Web Site. Web Site characteristics include "Navigation," "Speed," "Links," "Content," and "Graphics." "Navigation" is the term used to describe the layout and organization of a web site. "Speed" is the term used to describe the speed at which information from a web site is loaded to a personal computer. "Content" is the term used to describe the information found on a web site. "Links" is the term used to describe any links on a web site to one or more other web sites. "Graphics" is the term used to describe any and all pictures, clipart, and animation on a web site. Mean rankings were calculated for each web site characteristic based on participant rankings from 1 being the most important to 6 being the least important (Table 8). Paired t-test analysis was used to compare mean rankings of web site characteristics, from participants who attended the in-service training, immediately after the in-service and six months after the in-service.

Navigation: Among participants who responded immediately after the in-service, 38.2% ranked "Navigation" number 1, 32.4% ranked "Navigation" number 2, 23.5% ranked "Navigation" number 3, 5.9% ranked "Navigation" number 4, and 0%, ranked "Navigation" 5 or 6 (Table 7). The mean ranking for "Navigation" immediately after the in-service was 1.88 (Table 8). Among participants who responded to the follow-up

questionnaire, 42.3% ranked "Navigation" number 1, 11.5% ranked "Navigation" number 2, 30.8% ranked "Navigation" number 3, 11.5% ranked "Navigation" number 4, 3.8% raked "Navigation" number 5, and 0% ranked "Navigation" number 6 (Table 7). The mean ranking for "Navigation" six months after the in-service was 2.23 (Table 8). There was no significant difference between the mean ranking for Navigation immediately after the in-service training and six months after the in-service training.

Content: Among participants who responded immediately after the in-service, 52.9% ranked "Content" number 1, 35.3% ranked "Content" number 2, 11.8% ranked "Content" number 3, and 0% ranked "Content" 4, 5, or 6 (Table 7). The mean ranking for "Content" immediately after the in-service was 1.65 (Table 8). Among participants who responded to the follow-up questionnaire, 42.3% ranked "Content" number 1, 42.3% ranked "Content" number 2, 15.4% ranked "Content" number 3, and 0% ranked "Content" 4, 5, or 6 (Table 7). The mean ranking for "Content" six months after the in-service was 1.73 (Table 8). There was no significant difference between the mean ranking for "Content" immediately after in-service training and six months after in-service training.

Speed: Among participants who responded immediately after the in-service, 5.9% ranked "Speed" number 1, 5.9% ranked "Speed" number 2, 20.6% ranked "Speed" number 3, 50.0% ranked "Speed" number 4, 17.6% ranked "Speed" number 5, and 0% ranked "Speed" number 6 (Table 7). The mean ranking for "Speed" immediately after the in-service was 3.69 (Table 8). Among participants who responded to the follow-up

questionnaire, 3.8% ranked "Speed" number 1, 7.7% ranked "Speed" number 2, 30.8% ranked "Speed" number 3, 38.5% ranked "Speed" number 4, 19.2% ranked "Speed" number 5, and 0% ranked "Speed" number 6 (Table 7). The mean ranking for "Speed" six months after the in-service was 3.62 (Table 8). There was no significant difference in the mean ranking for "Speed" immediately after and six months after the in-service training.

Links: Among participants who responded immediately after the in-service, 2.9% ranked "Links" number 1, 23.5% ranked "Links" number 2, 41.2% ranked "Links" number 3, 29.4% ranked "Links" number 4, 2.9% ranked "Links" number 5, and 0% ranked "Links" number 6 (Table 7). The mean ranking for "Links" immediately after the in-service was 3.12 (Table 8). Among participants who responded to the follow-up questionnaire, 11.5% ranked "Links" number 1, 34.6% ranked "Links" number 2, 23.1% ranked "Links" number 3, 26.9% ranked "Links" number 4, 3.8% ranked "Links" number 5, and 0% ranked "Links" number 6 (Table 7). The mean ranking for "Links" six months after the in-service was 2.77 (Table 8). There was no significant difference between the mean ranking for "Links" immediately after the in-service training and six months after the in-service training.

Graphics: Among participants who responded immediately after the in-service, 0% ranked "Graphics" number 1, 3.0% ranked "Graphics" number 2, 3.0% ranked "Graphics" number 3, 15.2% ranked "Graphics" number 4, 78.8% ranked "Graphics" number 5, and 0% ranked "Graphics" number 6 (Table 7). The mean ranking for

"Graphics" immediately after the in-service was 4.65 (Table 8). Among participants who responded to the follow-up questionnaire, 0% ranked "Graphics" number 1, 3.8% ranked "Graphics" number 2, 0% ranked "Graphics" number 3, 23.1% ranked "Graphics" number 4, 73.1% ranked "Graphics" number 5, and 0% ranked "Graphics" number 6 (Table 7). The mean ranking for "Graphics" was 4.65 (Table 8). There was no significant difference in the mean ranking immediately after the in-service training and six months after the in-service training.

Over all, the mean ranking order for web site characteristics from most important to least important immediately after and six months after the in-service training was; "Content," "Navigation," "Links," "Speed," and "Graphics."

Table 7. After/Follow-up instrument ranking[1] frequencies of OCES Nutrition Web Site characteristics by participants who attended the OCES Nutrition Web Site in-service training.

Characteristic	Immediately after in-service training												six months after in-service training											
	1		2		3		4		5		6		1		2		3		4		5		6	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Navigation	13	38.2	11	32.4	8	23.5	2	5.9	0	0.0	0	0.0	11	42.3	3	11.5	8	30.8	3	11.5	1	3.8	0	0.0
Content	18	52.9	12	35.3	4	11.8	0	0.0	0	0.0	0	0.0	11	42.3	11	42.3	4	15.4	0	0.0	0	0.0	0	0.0
Speed	2	5.9	2	5.9	7	20.6	17	50.0	6	17.6	0	0.0	1	3.8	2	7.7	8	30.8	10	38.5	5	19.2	0	0.0
Links	1	2.9	8	23.5	14	41.2	10	29.4	1	2.9	0	0.0	3	11.5	9	34.6	6	23.1	7	26.9	1	3.8	0	0.0
Graphics	0	0.0	1	3.0	1	3.0	5	15.2	26	78.8	0	0.0	0	0.0	1	3.8	0	0.0	6	23.1	19	73.1	0	0.0

[1] Web site characteristics were ranked from 1 being the most important to 6 being the least important.

Table 8. After/Follow-up instrument mean[1] rankings of OCES Nutrition Web Site characteristics from participants who attended the in-service training.

	Immediately after in-service training Mean ranking ± SD	Six months after in-service training Mean ranking ± SD
Navigation	1.88±0.91	2.23±1.24
Content	1.65±0.75	1.73±0.72
Speed	3.69±1.09	3.62±1.02
Links	3.12±0.86	2.77±1.11
Graphics	4.65±0.72	4.65±0.69

[1] Mean rankings were calculated based on participant rankings of web site characteristics from 1 being the most important to 6 being the least important.

[a]Means in a row with different superscripts are significantly different, $p < 0.05$.

After/Follow-up Question 4

Data for after/follow-up question 4: What information sections of the OCES Nutrition Web Site will/do you use the most: Rank the sections in order of importance, (number 1 being the most important, and 5 being the least important): are presented in Tables 9 and 10. Information sections is a term used to describe the four major sections of the OCES Nutrition Web Site including "Nutrition basics," "Nutrition through the lifecycle," "Nutrition and health promotion," "Special issues," and "Hot topics related to nutrition."

Mean rankings were calculated for each information section based on participant rankings from 1 being the most important and 5 being the least important (Table 10). Paired t-test analysis was used to compare participants, who attended the OCES Nutrition Web Site in-service, responses immediately after the in-service with responses six months after the in-service.

Basics: Among participants who responded immediately after the in-service, 41.1% ranked "Basics" number 1, 5.9% ranked "Basics" number 2, 11.8% ranked "Basics" number 3, 8.8% ranked "Basics" number 4, and 29.4% ranked "Basics" number 5 (Table 9). The mean ranking for "Basics" immediately after the in-service was 2.77 (Table 10). Among participants who responded to the follow-up questionnaire, 26.9% ranked "Basics" number 1, 19.2% ranked "Basics" number 2, 19.2% ranked "Basics" number 3, 3.8% ranked "Basics" number 4, and 30.8% ranked "Basics" number 5 (Table 9). The mean ranking for "Basics" six months after the in-service was 2.92 (Table 10).

There was no significant difference in the mean ranking for "Basics" immediately after the in-service training and six months after the in-service training.

Lifecycle: Among participants who responded immediately after the in-service, 0% ranked "Lifecycle" number 1, 14.7% ranked "Lifecycle" number 2, 17.6% ranked "Lifecycle" number 3, 47.1% ranked "Lifecycle" number 4, and 20.6% ranked "Lifecycle" number 5 (Table 9). The mean ranking for "Lifecycle" immediately after the in-service was 3.69 (Table 10). Among participants who responded to the follow-up questionnaire, 0% ranked "Lifecycle" number 1, 11.5% ranked "Lifecycle" number 2, 11.5% ranked "Lifecycle" number 3, 42.3% ranked "Lifecycle" number 4, and 34.6% ranked "Lifecycle" number 5 (Table 9). The mean ranking for "Lifecycle" six months after the in-service was 4.00 (Table 10). There was no significant difference between the mean ranking for "Lifecycle" immediately after the in-service training and six months after the in-service training.

Special Issues: Among participants who responded immediately after the in-service, 35.3% ranked "Special Issues" number 1, 23.5% ranked "Special Issues" number 2, 11.8% ranked "Special Issues" number 3, 17.6% ranked "Special Issues" number 4, and 11.8% ranked "Special Issues" number 5 (Table 9). The mean ranking for "Special Issues" immediately after the in-service was 2.54 (Table 10). Among participants who responded to the follow-up questionnaire, 19.2% ranked "Special Issues" number 1, 26.9% ranked "Special Issues" number 2, 11.5% ranked "Special Issues" number 3, 26.9% ranked "Special Issues" number 4, and 15.4% ranked "Special Issues" number 5

questionnaire, 46.2% ranked "Hot Topics" number 1, 20.0% ranked "Hot Topics" number 2, 20.0% ranked "Hot Topics" number 3, and 0% ranked "Hot Topics" numbers 4 or 5 (Table 9). The mean ranking for "Hot Topics" six months after the in-service was 1.81 (Table 10). Immediately after the in-service training, "Hot Topics" was ranked significantly less important than six months after the in-service training (P= 0.002) (Table 10).

Over all, the mean ranking order for information sections from most important to least important immediately after the in-service training was; "Special Issues," "Basics," "Hot Topics," "Health Promotion," and "Lifecycle." The mean ranking order for information sections six months after the in-service training was; "Hot Topics," "Special Issues," "Basics," "Health Promotion," and "Lifecycle."

(Table 9). The mean ranking for "Special Issues" six months after the in-service was 2.92 (Table 10). There was no significant difference between the mean ranking for "Special Issues" immediately the after in-service training and six months after the in-service training.

Health Promotion: Among participants who responded immediately after the in-service, 2.9% ranked "Health Promotion" number 1, 26.5% ranked "Health Promotion" number 2, 32.4% ranked "Health Promotion" number 3, 20.6% ranked "Health Promotion" number 4, and 17.6% ranked "Health Promotion" number 5 (Table 9). The mean ranking for "Health Promotion" immediately after the in-service was 3.19 (Table 10). Among participants who responded to the follow-up questionnaire, 7.7% ranked "Health Promotion" number 1, 15.4% ranked "Health Promotion" number 2, 30.8% ranked "Health Promotion" number 3, 26.9% ranked "Health Promotion" number 4, and 19.2% ranked "Health Promotion" number 5 (Table 9). The mean ranking for "Health Promotion" six months after the in-service was 3.35 (Table 10). There was no significant difference between the mean ranking for "Health promotion" immediately after the in-service training and six months after the in-service training.

Hot Topics: Among participants who responded immediately after the in-service, 17.6% ranked "Hot Topics" number 1, 29.4% ranked "Hot Topics" number 2, 26.5% ranked "Hot Topics" number 3, 5.9% ranked "Hot Topics" number 4, and 20.6% ranked "Hot Topics" number 5 (Table 9). The mean ranking for "Hot Topics" immediately after the in-service was 2.81 (Table 10). Among participants who responded to the follow-up

Table 9. After/Follow-up instrument ranking[1] frequencies of OCES Nutrition Web Site information sections by participants who attended the OCES Nutrition Web Site in-service training.

Characteristic	Immediately after in-service training										Six months after in-service training									
	1		2		3		4		5		1		2		3		4		5	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Basics	15	41.1	2	5.9	4	11.8	3	8.8	10	29.4	7	26.9	5	19.2	5	19.2	1	3.8	8	30.8
Lifecycle	0	0.0	5	14.7	6	17.6	16	47.1	7	20.6	0	0.0	3	11.5	3	11.5	11	42.3	9	34.6
Special Issues	12	35.3	8	23.5	4	11.8	6	17.6	4	11.8	5	19.2	7	26.9	3	11.5	7	26.9	4	15.4
Health Promotion	1	2.9	9	26.5	11	32.4	7	20.6	6	17.6	2	7.7	4	15.4	8	30.8	7	26.9	5	19.2
Hot Topics	6	17.6	10	29.4	9	26.5	2	5.9	7	20.6	12	46.2	7	20.0	7	20.0	0	0.0	0	0.0

[1] Web site information sections were ranked from 1 being the most important to 5 being the least important.

Table 10. After/Follow-up instrument mean rankings of OCES Nutrition Web Site information sections by participants who attended the in-service training.

	Immediately after in-service training Mean ranking ± SD	Six months after in-service training Mean ranking ± SD
Basics	2.77±1.77	2.92±1.62
Lifecycle	3.69±.88	4.00±.98
Special Issues	2.54±1.50	2.92±1.41
Health Promotion	3.19±1.31	3.35±1.20
Hot Topics	2.81±1.44[a]	1.81±.85[b]

[1] Mean rankings were calculated based on participant rankings of web site information sections from 1 being the most important to 6 being the least important.

[a] Means in a row with different superscripts are significantly different, $p < 0.05$

After/Follow-up Question 5

Data for after/follow-up question 5: What forms of information from the OCES Nutrition Web Site do you use the most? Rank the forms in order of importance, (number 1 being the most important, and 6 being the least important) are presented in Tables 11 and 12. Information formats is a term used to describe different forms of information available on the OCES Nutrition Web Site including "Content," "Fact sheets," "Handouts," "PowerPoint®" presentations, and "News releases." "Content" is information formatted in a readily printable format. "Fact Sheet" is information formatted as an OCES consumer publication. "Handout" is information formatted to be used as consumer documents. "PowerPoint®" presentations are information formatted as a complete presentation for use by OCES-FCS County Extension Educators' to use in education programs. "News Releases" are complete and ready-to-publish news articles.

Mean rankings were calculated for each information format based on participant rankings from 1 being the most important to 6 being the least important (Table 12). Paired t-test analysis was used to compare mean rakings immediately after the in-service with mean rankings six months after the in-service.

Content: Among participants who responded immediately after the in-service, 55.5% ranked "Content" number 1, 14.7% ranked "Content" number 2, 17.6% ranked "Content" number 3, 8.8% ranked "Content" number 4, 0% ranked "Content" number 5, and 2.9% ranked "Content" number 6 (Table 11). The mean ranking for "Content" immediately after the in-service was 2.08 (Table 12). Among participants who responded to the follow-up questionnaire, 34.6% ranked "Content" number 1, 7.7% ranked

"Content" number 2, 26.9% ranked "Content" number 3, 23.1% ranked "Content" number 4, 3.8% ranked "Content" number 5, and 3.8% ranked "Content" number 6 (Table 11). The mean ranking for "Content" six months after the in-service was 2.65 (Table 12). There was no significant difference between the mean ranking for "Content" immediately after the in-service training and six months after the in-service training.

Handouts: Among participants who responded immediately after the in-service, 8.8% ranked "Handouts" number 1, 41.2% ranked "Handouts" number 2, 26.5% ranked "Handouts" number 3, 17.6% ranked "Handouts" number 4, 2.9% ranked "Handouts" number 5, and 2.9% ranked "Handouts" number 6 (Table 11). The mean ranking for "Handouts" immediately after the in-service was 2.88 (Table 12). Among participants who responded to the follow-up questionnaire, 12.0% ranked "Handouts" number 1, 32.0% ranked "Handouts" number 2, 20.0% ranked "Handouts" number 3, 28.0% ranked "Handouts" number 4, 8.0% ranked "Handouts" number 5, and 0% ranked "Handouts" number 6 (Table 11). The mean ranking for "Handouts" six months after the in-service was 2.88 (Table 12). There was no significant difference in the mean ranking for "Handouts" immediately after and six months after the in-service training.

Brochures: Among participants who responded immediately after the in-service, 0% ranked "Brochures" number 1, 6.1% ranked "Brochures" number 2, 6.1% ranked "Brochures" number 3, 24.2% ranked "Brochures" number 4, 48.5% ranked "Brochures" number 5, and 15.2% ranked "Brochures" number 6 (Table 11). The mean ranking for Brochures immediately after the in-service was 4.72 (Table 12). Among participants who

responded to the follow-up questionnaire, 0% ranked "Brochures" numbers 1 or 2, 8.0% ranked "Brochures" number 3, 8.0% ranked "Brochures" number 4, 36.0% ranked "Brochures" number 5, and 48.0% ranked "Brochures" number 6 (Table 11). The mean ranking for "Brochures" six months after the in-service was 5.24 (Table 12). There was no significant difference between the mean ranking for "Brochures" immediately after the in-service training and six months after the in-service training.

Fact Sheets: Among participants who responded immediately after the in-service, 8.8% ranked "Fact Sheets" number 1, 14.7% ranked "Fact Sheets" number 2, 5.9% ranked "Fact Sheets" number 3, 23.5% ranked "Fact Sheets" number 4, 14.7% ranked "Fact Sheets" number 5, and 32.4% ranked "Fact Sheets" number 6 (Table 11). The mean ranking for "Fact Sheets" was 4.20 immediately after the in-service training (Table 12). Among participants who responded to the follow-up questionnaire, 20.0% ranked "Fact Sheets" number 1, 24.0% ranked "Fact Sheets" number 2, 20.0% ranked "Fact Sheets" number 3, 28.0% ranked "Fact Sheets" number 4, 8.0% ranked "Fact Sheets" number 5, and 0% ranked "Fact Sheets" number 6 (Table 11). The mean ranking for "Fact Sheets" six months after the in-service training was 2.80 (Table 12). Immediately after the in-service training "Fact Sheets" was ranked significantly less important than six months after the in-service training ($p=0.0001$) (Table 12).

PowerPoint: Among participants who responded immediately after the in-service, 12.1% ranked "PowerPoint" number 1, 9.1% ranked "PowerPoint" number 2, 27.3% ranked "PowerPoint" number 3, 18.2% ranked "PowerPoint" number 4, 18.2% ranked

"PowerPoint" number 5, and 15.2% ranked "PowerPoint" number 6 (Table 11). The mean ranking for "PowerPoint" immediately after the in-service was 3.60 (Table 12). Among participants who responded to the follow-up questionnaire, 2.9% ranked "PowerPoint" number 1, 2.9% ranked "PowerPoint" number 2, 5.7% ranked "PowerPoint" number 3, 30.0% ranked "PowerPoint" number 4, 30.0% ranked "PowerPoint" number 5, and 28.6% ranked "PowerPoint" number 6 (Table 11). The mean ranking for "PowerPoint" six months after the in-service was 4.96 (Table 12). Immediately after the in-service training "PowerPoint" was ranked significantly more important than six months after the in-service training (p=0.001) (Table 12).

News Releases: Among participants who responded immediately after the in-service, 14.3% ranked "News Releases" number 1, 14.3% ranked "News Releases" number 2, 17.1% ranked "News Releases" number 3, 8.6% ranked "News Releases" number 4, 14.3% ranked "News Releases" number 5, and 28.6% ranked "News Releases" number 6 (Table 11). The mean ranking for "News Releases" immediately after the in-service was 3.43 (Table 12). Among participants who responded to the follow-up in-service, 32.0% ranked "News Releases" number 1, 32.0% ranked "News Releases" number 2, 16.0% ranked "News Releases" number 3, 16.0% ranked "News Releases" number 4, 0% ranked "News Releases" number 5, and 4.0% ranked "News Releases" number 6 (Table 11). The mean ranking for "News Releases" six months after the in-service was 2.32 (Table 12). Immediately after the in-service training "News Releases" was ranked significantly less important than six months after the in-service training (p=0.013) (Table 12).

Over all, immediately after the in-service training the mean ranking order for information formats from most important to least important was; "Content," "Handouts," "News Releases," "PowerPoint," "Fact Sheets," and "Brochures," respectively. Six months after in-service training, the mean ranking order for information formats from most important to least important was; "News Releases," "Content," "Fact Sheets," "Handouts," "PowerPoint," and ",Brochures" respectively.

Table 11. After/Follow-up instrument ranking frequencies of OCES Nutrition Web Site information formats by participants who attended the in-service training.

Characteristic	Immediately after in-service training												Six months after in-service training											
	1		2		3		4		5		6		1		2		3		4		5		6	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Content	19	55.5	5	14.7	6	17.6	3	8.8	0	0.0	1	2.9	9	34.6	2	7.7	7	26.9	6	23.1	1	3.8	1	3.8
Handouts	3	8.8	10	41.2	9	26.5	6	17.6	1	2.9	1	2.9	3	12.0	8	32.0	5	20.0	7	28.0	2	8.0	0	0.0
Brochures	0	0.0	2	6.1	2	6.1	8	24.4	16	48.5	5	15.2	0	0.0	0	0.0	2	8.0	2	8.0	9	36.0	12	48.0
Fact Sheets	3	8.8	5	14.7	2	5.9	8	23.5	5	14.7	11	32.4	5	20.0	6	24.0	5	20.0	7	28.0	2	8.0	0	0.0
PowerPoint	4	12.1	3	9.1	9	27.3	6	18.2	6	18.2	5	15.2	1	2.9	1	2.9	2	5.7	11	30.0	11	30.0	10	28.6
News Releases	5	14.3	5	14.3	6	17.1	3	8.6	5	14.3	10	28.6	8	32.0	8	32.0	4	16.0	4	16.0	0	0.0	1	4.0

[1] Web site information formats were ranked from 1 being the most important to 6 being the least important.

Table 12. After/Follow-up instrument mean[1] rankings of OCES Nutrition Web Site information formats by participants who attended the in-service training.

	Immediately after in-service training Mean ranking ± SD	Six months after in-service training Mean ranking ± SD
Content	2.08±1.35	2.65±1.47
Handouts	2.88±1.20	2.88±1.20
Brochures	4.72±1.10	5.24±.93
Fact Sheets	4.20±1.66[a]	2.80±1.29[b]
PowerPoint	3.60±1.73[a]	4.96±1.34[b]
News Releases	3.43±1.87[a]	2.32±1.31[b]

[1] Mean rankings were calculated based on participant rankings of information formats from 1 being the most important to 6 being the least important.

[a] Means in a row with different superscripts are significantly different, $p < 0.05$

After/Follow-up Question 6

Data for after/follow-up question 6: How will/do you use the OCES Nutrition Web Site information? Rank in order of importance. (number 1 being the most important, and 4 being the least): are presented in Tables 13 and 14.

Uses included "Education programs," "Individual handouts," "News releases," and "Other." Mean rankings were calculated for each use based on participant rankings from 1 being the most important and 4 being the least important (Table 14). Paired t-test analysis was used to compare mean rankings immediately after the in-service with mean rankings six months after the in-service.

Education Programs: Among participants who responded immediately after the in-service, 73.5% ranked "Education Programs" number 1, 23.5% ranked "Education Programs" number 2, 2.9% ranked "Education Programs" number 3, and 0% ranked "Education Programs" number 4 (Table 13). The mean ranking for "Education Programs" immediately after the in-service was 1.27 (Table 14). Among participants who responded to the follow-up questionnaire, 50.0% ranked "Education Programs" number 1, 38.5% ranked "Education Programs" number 2, 11.5% ranked "Education Programs" number 3, and 0% ranked "Education Programs" number 4 (Table 13). The mean ranking for "Education Programs" six months after the in-service was 1.62 (Table 14). Immediately after the in-service training, "Education Programs" was ranked significantly more important than six months after in-service training ($p=0.036$) (Table 14).

Individual Handouts: Among participants who responded immediately after the in-service, 15.2% ranked "Individual Handouts" number 1, 48.5% ranked "Individual Handouts" number 2, 36.4% ranked "Individual Handouts" number 3, and 0% ranked "Individual Handouts" number 4 (Table 13). The mean ranking for "Individual Handouts" immediately after the in-service was 2.19 (Table 14). Among participants who responded to the follow-up questionnaire, 23.1% ranked "Individual Handouts" number 1, 34.6% ranked "Individual Handouts" number 2, 42.3% ranked "Individual Handouts" number 3, and 0% ranked "Individual Handouts" number 4 (Table 13). The mean ranking for "Individual Handouts" six months after the in-service was 2.19 (Table 14). There was no significant difference in the mean ranking for "Individual Handouts" immediately after and six months after the in-service training.

News Releases: Among participants who responded immediately after the in-service, 8.8% ranked "News Releases" number 1, 29.4% ranked "News Releases" number 2, 58.8% ranked "News Releases" number 3, and 2.9% ranked "News Releases" number 4 (Table 13). The mean ranking for "News Releases" immediately after the in-service was 2.65 (Table 14). Among participants who responded to the follow-up questionnaire, 26.9% ranked "News Releases" number 1, 26.9% ranked "News Releases" number 2, 42.3% ranked "News Releases" number 3, and 3.8% ranked "News Releases" number 4 (Table 13). The mean ranking for "News Releases" six months after the in-service was 2.23 (Table 14). Immediately after the in-service training "News Releases" approached being ranked significantly less important than six months after the in-service training ($p=.061$) (Table 14).

Table 13. After/Follow-up instrument ranking[1] frequencies of uses of the OCES Nutrition Web Site information by participants who attended the in-service training.

uses	Immediately after in-service training								Six months after in-service training							
	1		2		3		4		1		2		3		4	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Education Programs	25	73.5	8	23.5	1	2.9	0	0.0	13	50.0	10	38.5	3	11.5	0	0.0
Individual Handouts	5	15.2	16	48.5	12	36.4	0	0.0	6	23.1	9	34.6	11	42.3	0	0.0
News Releases	3	8.8	10	29.4	20	58.8	1	2.9	7	26.9	7	26.9	11	42.3	1	3.8

[1] Web site uses were ranked from 1 being the most important to 4 being the least important.

Table 14. After/Follow-up instrument mean[1] rankings of uses of OCES Nutrition Web Site information by participants who attended the in-service training.

uses	Immediately after in-service training Mean ranking ± SD	Six months after in-service training Mean ranking ± SD
Education Programs	1.27±0.53[a]	1.62±0.70[b]
Individual Handouts	2.19±0.63	2.19±0.80
News Releases	2.65±0.69	2.23±0.19

[1] Mean rankings were calculated based on participant rankings of use of the web site information from 1 being the most important to 4 being the least important.

[a] Means in a row with different subscripts are significantly different. $p < 0.05$

After/Follow-up Question 7

After/follow-up question 7: I am comfortable using the OCES Nutrition Web Site. Mean scores were calculated using a score assigned to each response; "Strongly agree"=1, "Agree"=2, "Disagree"=3, "Strongly disagree"=4. Paired t-test analysis was used to compare mean scores immediately after the in-service with mean scores six months after the in-service. Immediately after the in-service, 72.7% of participants responded "Strongly Agree," 27.3% responded "Agree," and 0% responded "Disagree" or "Strongly Disagree" (Table 15). The mean score among participants immediately after the in-service was 1.31 (Table 16). Of participants who responded to the follow-up questionnaire, 41.9% responded "Strongly Agree," 48.4% responded "Agree," 9.7% responded "Disagree," and 0% responded "Strongly Disagree" (Table 15). The mean score among participants six months after the in-service was 1.67 (Table 16). Immediately after the in-service training, participants were significantly more comfortable using the OCES Nutrition Web Site than six months after the in-service training ($p=0.009$) (Table 16).

Table 15. After/Follow-up instrument frequency responses of comfort with the OCES Nutrition Web Site by participants who attended the OCES Nutrition web site in-service training.

Question	Immediately after in-service training								Six months after in-service training							
	Strongly Agree		Agree		Disagree		Strongly Disagree		Strongly Agree		Agree		Disagree		Strongly Disagree	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
I am comfortable using the OCES Nutrition Web Site.	24	72.7	9	27.3	0	0.0	0	0.0	13	41.9	15	48.4	3	9.7	0	0.0

Table 16. After/Follow-up instrument means[1] of comfort with using the OCES Nutrition Web Site by participants who attend the in-service training.

Question	Immediately after in-service training	Six months after in-service training
	Mean ranking ± SD	Mean ranking ± SD
I am comfortable using the OCES Nutrition Web Site.	1.31±0.47[a]	1.67±0.66[b]

[1] Means were calculated using a score assigned to each response; Strongly agree=1, Agree=2, Disagree=3, Strongly disagree=4.

[a] Means in a row with different superscripts are significantly different. $p < 0.05$

Follow-up Instrument Analysis

Analysis of the "Follow-up" instrument also consisted of participants' responses to two questions which were not included in the "Before" or "After" instruments.

Follow-up Question 8

Of participants who responded to follow-up question 8: I would like more training on using the OCES Nutrition Web Site. Frequency responses were used to identify the number of participants who want further training. Six months after the in-service, 3.2% responded "Strongly Agree," 32.3% responded "Agree," 58.1% responded "Disagree," and 6.5% responded "Strongly Disagree." Overall, the majority of participants indicated that they did not want further training on the OCES Nutrition Web Site. However, 35.5% of participants did indicate they would like more training on the OCES Nutrition Web Site (Table 17).

Follow-up Question 9

Of participants who responded to follow-up question 9: I have shared the OCES Nutrition Web Site address with the following. Frequency responses were used to identify how many OCES County Extension Educators had shared the OCES Nutrition Web Site address with others. Six months after the in-service, 12 participants had shared the OCES Nutrition Web Site address with clients, 15 had shared the address with other OCES professionals, 11 has shared the address with other health professionals, and 12 had shared the address with friends or family (Table 18).

Table 17. Follow-up instrument frequency responses for more training on the OCES Nutrition Web Site by participants who attended the in-service training.

Question	Six months after in-service training							
	Strongly Agree		Agree		Disagree		Strongly Disagree	
	n	%	n	%	n	%	n	%
I would like more training on using OCES Nutrition Web Site.	1	3.2	10	32.3	18	58.1	2	6.5

Table 18. Follow-up frequency of participants who shared the OCES Nutrition Web Site address with others.

Question	Six months after in-service training			
	Clients	OCES Professionals	Other Health Professionals	Friends/ Family
	n	n	n	n
I have shared the OCES Nutrition Web Site address with the following.	12	15	11	12

Before, After, and Follow-up Instrument Analysis

Analysis of the "Before," "After," and "Follow-up" instruments was a comparison of participants' responses to two questions which were included in all three instruments.

Before, After, and Follow-up question: How often do you use the OCES Nutrition Web Site. Paired t-test analysis was used to compare participants' use of the OCES Nutrition Web Site before the in-service training, their expectant use immediately after the in-service, and their use six months after the in-service. Mean scores were calculated using a score assigned to each response; "Daily"=1, "2-3 days a week"=2, "1 day a week"=3, "<1day a week"=4, "Never"=5. Immediately before the in-service training, 0% responded "Daily," 10.5% responded "2-3 days a week," 31.5% responded "1 day a week," 36.9% responded "Less than 1 day a week," and 21.1% responded "Never." The mean score before the in-service training was 3.68 (Table 19). Immediately after in-service training, 14.7% responded "Daily," 53.9% responded "2-3 days a week," 23.5% responded "one day a week," 8.8% responded "Less than 1 day a week," and 0% responded "Never." The mean score immediately after the in-service was 2.23 (Table 19). Six months after in-service training, 3.2% responded "Daily," 19.4% responded "2-3 days a week," 32.3% responded "1 day a week," 32.3% responded "Less than 1 day a week," and 12.8% responded "Never." The mean score six months after the in-service, was 3.32 (Table 19). Participants' self-reported use of the OCES Nutrition Web Site was significantly less before the in-service training than immediately after the in-service training (P=0.0001). Participants' self-reported use of the OCES Nutrition Web Site was significantly more immediately after the in-service training than six months after the in-

service training (P=0.0001). However, participants' self-reported use of the OCES Nutrition Web Site was still significantly more six months after in-service training than before the in-service training (P=0.001)(Table 19).

Before, After, and Follow-up question: I am comfortable using the OCES Nutrition Web Site. Paired t-test analysis was used to compare participants' comfort level before, immediately after, and six months after in-service training on the OCES Nutrition Web Site. Mean scores were calculated using a score assigned to each response; "Strongly agree"=1, "Agree"=2, "Disagree"=3, "Strongly disagree"=4. Before in-service training, 7.6% of participants responded "Strongly Agree," 53.7% responded "Agree," 34.5% responded "Disagree," and 4.2% responded "Strongly Disagree." The mean score before the in-service training was 2.35 (Table 19). Immediately after in-service training, 70.5% of participants responded "Strongly Agree," 26.5% responded "Agree," 0% responded "Disagree," and 3.0% responded "Strongly Disagree." The mean score immediately after the in-service was 1.30. Six months after the in-service training, 41.9% responded "Strongly Agree," 48.4% responded "Agree," 9.7% responded "Disagree," and none responded "Strongly Disagree." The mean score six months after the in-service was 1.67. Participants' were significantly less comfortable using the OCES Nutrition Web Site before the in-service training than immediately after the in-service training (P=0.0001) (Table 19). Participants were significantly more comfortable using the OCES Nutrition Web Site immediately after the in-service training than six months after the in-service training (P=0.009). However, participants' were still significantly more

Table 19. Before, after, and follow-up questionnaire means.

Question	**Before** Mean ± SD	**After** Mean ± SD	**Follow-up** Mean ± SD
How often do you use the OCES Nutrition Web Site?[1]	3.68±0.95[a]	2.23±0.024[b]	3.32±1.05[c]
I am comfortable using the OCES Nutrition Web Site.[2]	2.35±0.69[a]	1.30±0.47[b]	1.67±0.66[c]

[1] Means were calculated using a score assigned to each response; Daily=1, 2-3 days a week=2, 1 day a week=3, <1 day a week=4, Never=5.

[2] Means were calculated using a score assigned to each response; Strongly agree=1, Agree=2, Disagree=3, and Strongly disagree=4.

[a] Means in a row with different superscripts are significantly different, $p < 0.05$

Discussion

In the current study OCES-FCS County Extension Educators who participated in the OCES Nutrition Web Site in-service were compared to OCES-FCS County Extension Educators who did not participate in the in-service. Before the in-service, a higher percentage of OCES-FCS County Extension Educators who did not participate in the in-service reported "Heavy use" of the web, had found the OCES Nutrition Web Site, reported "Heavy use" of the OCES Nutrition Web Site, and were more comfortable using the OCES Nutrition Web Site than those who attended the in-service. These data may indicate that participants in the comparison group chose not to attend the in-service because they were already using and felt comfortable using the web and the OCES Nutrition Web Site.

Before, immediately after, and six months after in-service training on the OCES Nutrition Web Site, use and comfort level in using the OCES Nutrition Web Site was evaluated by OCES FCS County Extension Educators who attended the in-service training. OCES-FCS County Extension Educators who attended the in-service training expected use and level of comfort with the OCES Nutrition Web Site was significantly less before the in-service training than immediately after the in-service training. OCES-FCS County Extension Educators' expected use and level of comfort regarding the OCES Nutrition Web Site was significantly more immediately after the in-service training than their reported use and level of comfort six months after the in-service training. However, OCES-FCS County Extension Educators reported use and level of comfort regarding the OCES Nutrition Web Site six months after the in-service training was still significantly

more than before the in-service training. These results indicate a need for the OCES Cooperative Extension Service State Nutrition Specialist to continue to provide OCES-FCS County Extension Educators with periodic training and support regarding the OCES Nutrition Web Site after initial in-service training.

Immediately after and six months after the in-service training OCES-FCS County Extension Educators' preferences regarding the OCES Nutrition Web Site were evaluated. OCES-FCS County Extension Educators ranked "Hot Topics" as an information section and "News releases" and "Fact sheets" as information formats as significantly less important immediately after the in-service training compared to six months after the in-service training. OCES-FCS County Extension Educators ranked "PowerPoint" presentations as an information format significantly more important immediately after the in-service training compared to six months after the in-service training. OCES-FCS County Extension Educators ranked "Educational Programs" as significantly more important as a use of the OCES-FCS Nutrition Web Site information immediately after the in-service training compared to six months after. near significant ($p=0.061$) increase in the ranking of "News Releases" as a uses for the OCES Nutrition Web Site information six months after the in-service compared to immediately after the in-service. These results indicate immediately after the in-service training, OCES-FCS County Extension Educators viewed the OCES Nutrition Web Site as a source of core nutrition information that could be used for county nutrition education programs; whereas six months after the in-service training OCES-FCS County Extension Educators began to view the OCES Nutrition Web Site as a source of information on current nutrition issues that could be used to address immediate consumer questions and news releases. These

results indicate a need for the OCES State Nutrition Specialist to apply more resources to current nutrition issues, news releases, and hot topics related to nutrition.

Many OCES-FCS County Extension Educators took time to write comments in the questionnaire margins indicating they weren't comfortable with the Internet and/or computers. These comments indicate a possible need for general computer and Internet training for OCES-FCS County Extension Educators. In addition, many OCES-FCS County Extension Educators wrote comments in the questionnaire margins regarding computer and technological problems. These comments indicate a need to investigate and improve the technological capabilities of OCES-FCS County offices.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary of Findings

The purpose of this study was to evaluate the OCES-FCS County Extension Educator's use and level of comfort regarding the OCES Nutrition Web Site. This study also evaluated OCES-FCS County Extension Educators' preferences regarding web site characteristics, information sections, and information formats on the OCES Nutrition Web Site.

The objectives of this study were: 1) To evaluate the use of the OCES Nutrition Web Site by OCES-FCS County Extension Educators before, immediately after, and six months after in-service training on the OCES Nutrition Web Site; 2) To evaluate OCES-FCS County Extension Educators' preferences regarding web site characteristics, information sections, and information formats on the OCES Nutrition Web Site immediately after, and six months after in-service training on the OCES Nutrition Web Site; and 3) To evaluate the OCES-FCS County Extension Educator's level of comfort in using the OCES Nutrition Web Site before, immediately after, and six months after in-service training on the OCES Nutrition Web Site.

OCES-FCS County Extension Educators voluntarily attended an in-service entitled "Navigating the OCES Nutrition Web Site." Participants received information packets to aid them during the in-service. Each packet included detailed descriptions of

each step needed to operate all features of the OCES Nutrition Web Site (Appendix C). Participants completed evaluation instruments before, immediately after and six months after in-service training.

Hypothesis one stated: There will be no change in self reported use of the OCES Nutrition Web Site by OCES-FCS County Extension Educators before, immediately after, and six months after in-service training. As reported in Table 19, participants' self reported use of the OCES Nutrition Web Site was significantly less before the in-service training compared to immediately after the in-service training. Participants' self-reported use of the OCES Nutrition Web Site was significantly more immediately after the in-service training compared to six months after in-service training. However, OCES-FCS County Extension Educators' self-reported use of the OCES Nutrition Web Site was still significantly more six months after the in-service training than before the in-service training. Therefore, the researcher rejected null hypothesis one.

Hypothesis two stated: There will be no change in OCES-FCS County Extension Educators' preferences regarding web site characteristics, information sections, and information formats on the OCES Nutrition Web Site immediately after and six months after in-service training on the OCES Nutrition Web Site.

Web site characteristics: As reported in Table 8, there were no significant changes in OCES-FCS County Extension Educators' preferences regarding web site characteristics from immediately after in-service training to six months after the in-service training. Immediately after and six months after the in-service training,

participants' ranking order of web site characteristics from most important to least important was "Content," "Navigation," "Links," "Speed," and "Graphics."

Information Sections: As reported in Table 10, "Hot Topics" was ranked significantly less important immediately after the in-service training compared to six months after the in-service training. There were no significant changes in the mean ranking for "Basics," "Lifecycle," "Special Issues," or "Health Promotion." Immediately after in-service training, participants' ranking order of web site information sections from most important to least important was "Special Issues," "Basics," "Hot Topics," "Health Promotion," and "Lifecycle." The mean ranking order for information sections six months after the in-service was "Hot Topics," "Special Issues," "Basics," "Health Promotion," and "Lifecycle."

Information Formats: As reported in Table 12, the mean ranking for "Fact Sheets" and "News Releases" was significantly more important immediately after in-service training compared to six months after in-service training. The mean ranking for "PowerPoint" was significantly more important immediately after in-service training compared to six months after the in-service training. There were no significant changes in the mean ranking for "Content" or "Brochures." Immediately after in-service training, participants' ranking order for web site information formats from most important to least important was "Content," "Handouts," "News Releases," "PowerPoint," "Fact Sheet," and "Brochures." Six months after in-service training, participants' ranking order for information formats from most important to least important was "News Releases," "Content," "Fact Sheets," "Handouts," "PowerPoint," and "Brochures."

Therefore, the researcher partially rejected null hypothesis two.

Hypothesis three stated: There will be no change in OCES-FCS County Extension Educator's self reported level of comfort regarding use of the OCES Nutrition Web Site before, immediately after, and six months after in-service training on the OCES Nutrition Web Site. As reported in Table 19, participants' self-reported level of comfort regarding use of the OCES Nutrition Web Site was significantly less before the in-service training compared to immediately after the in-service training. Participants' self-reported level of comfort regarding use of the OCES Nutrition Web Site was significantly more immediately after the in-service training compared to six months after the in-service training. However, OCES-FCS County Extension Educators self-reported level of comfort regarding use of the OCES Nutrition Web Site six months after in-service training was still significantly more than before the in-service training. Therefore, the researcher rejected null hypothesis three.

Conclusions

The Internet has potential to be a valuable tool for OCES-FCS County Extension Educators. Identifying OCES-FCS County Extension Educators' preferences regarding the OCES Nutrition Web Site will help the OCES State Nutrition Specialist determine what directions to take to enhance the effectiveness of the OCES Nutrition web site for OCES-FCS County Extension Educators. The results form this study indicate a need for the OCES State Nutrition Specialist to continue to provide OCES-FCS County Extension Educators with periodic training and support regarding the OCES Nutrition Web Site

after initial in-service training. The results also indicate a need for the OCES State Nutrition Specialist to apply more resources to current nutrition issues, news releases, and hot topics related to nutrition.

Recommendations

Research is needed to identify specific barriers to OCES-FCS County Extension Educators' use of the Internet and other computer technologies. Identifying these barriers would aid in planning more useful and appropriate education curricula. OCES county offices are maintained by the respective counties therefore, office equipment is different in each county. More research is needed to determine the technological capabilities of OCES-FCS county offices including the number of computers with Internet capabilities in each office and whether or not OCES-FCS County Extension Educators have exclusive access to those computers. In order for the Internet and other computer technologies to be effective, all offices must have adequate computer and Internet access, and OCES-FCS County Extension Educators need to be comfortable with the technology. Continued in-service training and support could help County Extension Educators overcome their fear of computer and Internet technologies.

A survey of OCES-FCSCounty Extension Educators who are actively using the OCES Nutrition Web Site would be useful in further determining the direction of the OCES Nutrition Web Site

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APPENDIX A

Oklahoma State University
Institutional Review Board

Protocol Expires: 9/20/01

Date : Thursday, September 21, 2000 IRB Application No HE0115

Proposal Title: EVALUATION OF THE OKLAHOMA COOPERATIVE EXTENSION SERVICE NUTRITION WEB PAGE BY OKLAHOMA COIOPERATIVE EXTENSION SERVICE COUNTY EDUCATORS

Principal Investigator(s) :

Amber Carson
419 HES
Stillwater, OK 74078

Janice Hermann
425 HES
Stillwater, OK 74078

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s) : Approved

Signature : Carol Olson

Carol Olson, Director of University Research Compliance

Thursday, September 21, 2000
Date

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modifications to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office MUST be notified in writing when a project is complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

APPENDIX B

Oklahoma Cooperative Extension Service Nutrition Web Site In Service	Before

For each question please fill in the space or circle the answer(s) that applies to you.

1) Do you have access to a computer with web capabilities at work? (circle one)

Yes No

2) Do you use the web to gather information? (circle one)

Yes No

3) If Yes to number 2, how often do you use the web to gather information? (circle one)

Daily 2-3 days per week Once a week

Less than once a week Never

4) Thinking of your favorite web sites, rank these characteristics in order of importance. (number 1 being the most important, and 6 being the least important)

___Navigation ___Content ___Speed

___Links ___Graphics

___Other_____

5) Have you located the OCES Nutrition Web Site? (circle one)

Yes No

6) If yes to number 5, how often do you use the OCES Nutrition Web Site: (circle one)

Daily 2-3 days per week Once a week

Less than once a week Never

7) I am comfortable using the OCES Nutrition Web Site to find nutrition information. (circle one)

Strongly Agree Agree Disagree Strongly Disagree

Oklahoma Cooperative Extension Service
Nutrition Web Site In Service

After

For each question fill in the space or circle the answer(s) that applies to you.

1) The OCES Nutrition Web Site In service will be helpful to me. (circle one)

Strongly Agree Agree Disagree Strongly Disagree

2) How often will you use the OCES Nutrition Web Site? (circle one)

Daily 2-3 days per week Once a week

Less than once a week Never

3) What characteristics do you like about the OCES Nutrition Web Site? Rank the characteristics in order of importance. (number 1 being the most important, and 6 being the least important)

___Navigation ___Content ___Speed

___Links ___Graphics

___Other_____

4) What sections of the OCES Nutrition Web Site will you use the most? Rank the sections in order of importance. (number 1 being the most important, and 5 being the least important)

___Basics ___Lifecycle ___Special issues

___Health Promotion ___Hot Topics

5) What forms of information from the OCES Nutrition Web Site will you use the most? Rank the forms in order of importance. (number 1 being the most important, and 6 being the least important)

___Content ___Handouts ___Brochures

___Fact Sheets ___Power Point ___News Releases

6) How will you use the OCES Nutrition Web Site information? Rank in order of importance. (number 1 being the most important, and 4 being the least important)

___Education programs ___Individual handouts ___News releases

___Other_____

Oklahoma Cooperative Extension Service Nutrition Web Site In Service	After

7) I am comfortable using the OCES Nutrition Web Site to find nutrition information. (circle one)

Strongly Agree Agree Disagree Strongly Disagree

8) What other information would you like on the OCES Nutrition Web Site?

_____

_____

_____

_____

Oklahoma Cooperative Extension Service Nutrition Web Site In Service	Follow up

For each question fill in the space or circle the answer(s) that applies to you.

1) The OCES Nutrition Web Site In service was helpful to me. (circle one)

Strongly Agree Agree Disagree Strongly Disagree

2) How often do you use the OCES Nutrition Web Site? (circle one)

Daily 2-3 days per week Once a week

Less than once a week Never

3) What characteristics do you like about the OCES Nutrition Web Site? Rank the characteristics in order of importance. (number 1 being the most important, and 6 being the least important)

___Navigation ___Content ___Speed

___Links ___Graphics

___Other_____

4) What sections of the OCES Nutrition Web Site do you use the most? Rank the sections in order of importance. (number 1 being the most important, and 5 being the least important)

___Basics ___Lifecycle ___Special issues

___Health Promotion ___Hot Topics

5) What forms of information from the OCES Nutrition Web Site do you use the most? Rank the forms in order of importance. (number 1 being the most important, and 6 being the least important)

___Content ___Handouts ___Brochures

___Fact Sheets ___Power Point ___News Releases

6) How do you use the OCES Nutrition Web Site information? Rank in order of importance. (number 1 being the most important, and 4 being the least important)

___Education programs ___Individual handouts ___News releases

___Other_____

7) I am comfortable using the OCES Nutrition Web Site to find nutrition information. (circle one)

Strongly Agree Agree Disagree Strongly Disagree

8) I would like more training on using the OCES Nutrition Web Site. (circle one)

Strongly Agree Agree Disagree Strongly Disagree

9) I have shared the OCES Nutrition Web Site address with:(estimate the number of people in each category that apply)

___Clients ___OCES professionals ___Other health professionals

___Friends/family ___Other_____

10) What other information would you like on the OCES Nutrition Web Site?

_____

_____

_____

_____

APPENDIX C

To begin:

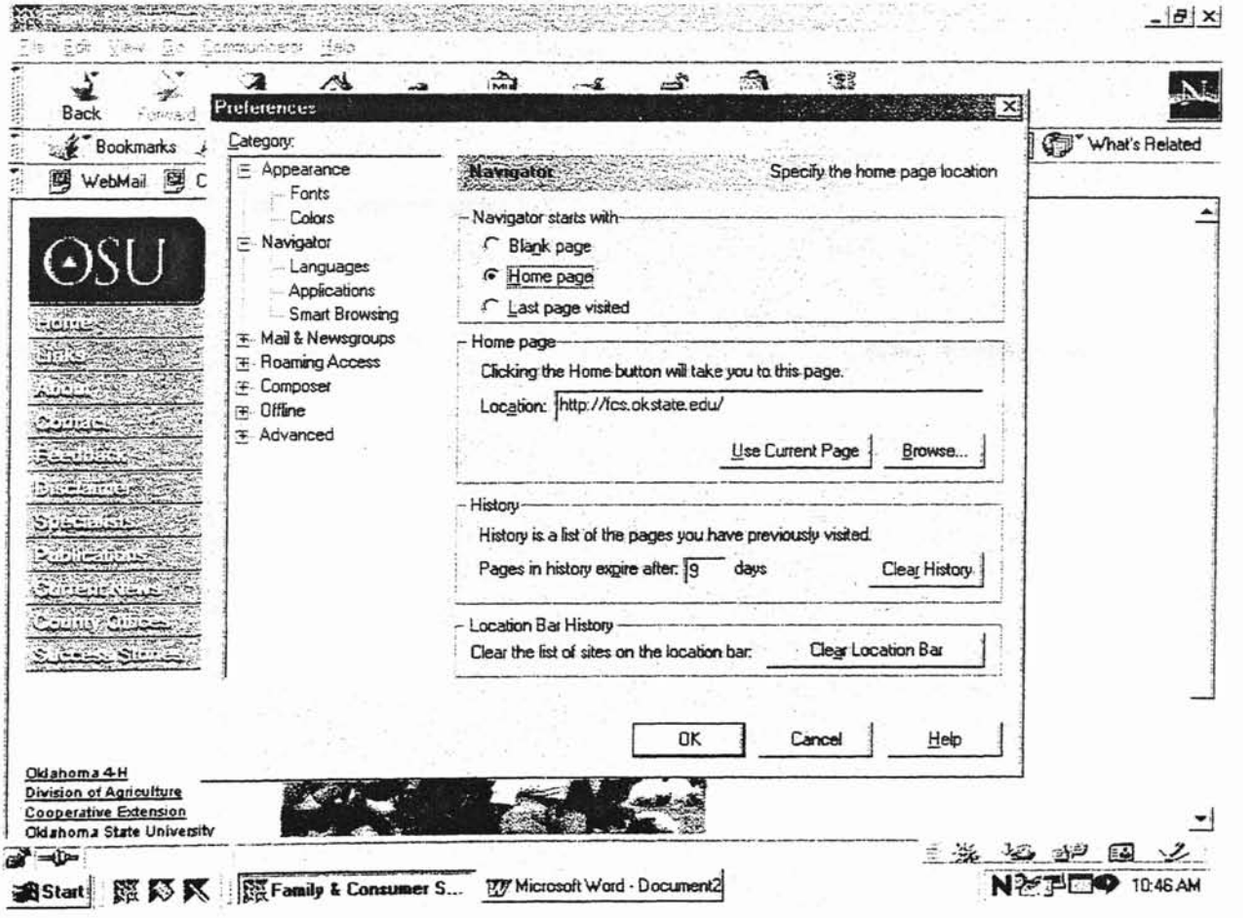
1) Open your web server (Netscape, Internet explorer).
2) Type in the web address http://fcs.okstate.edu/

To make the FCS page your "home page":

- ❖ Doing this will bring up the FCS web page when you open your server, or click the "home" button.

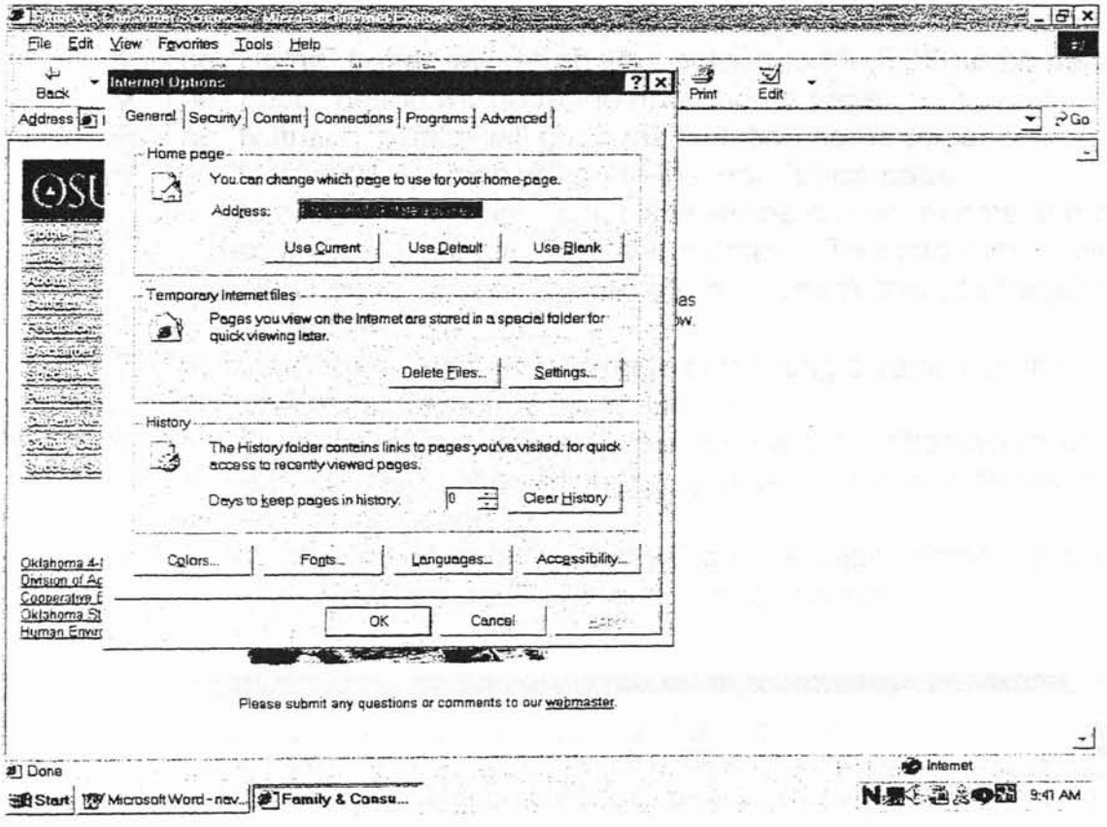
In Netscape

1) Click on the "edit" button at the top left of the tool bar.
2) Select "preferences"
3) In the "home page" box, click the "use current page" box.
4) Click "OK" button



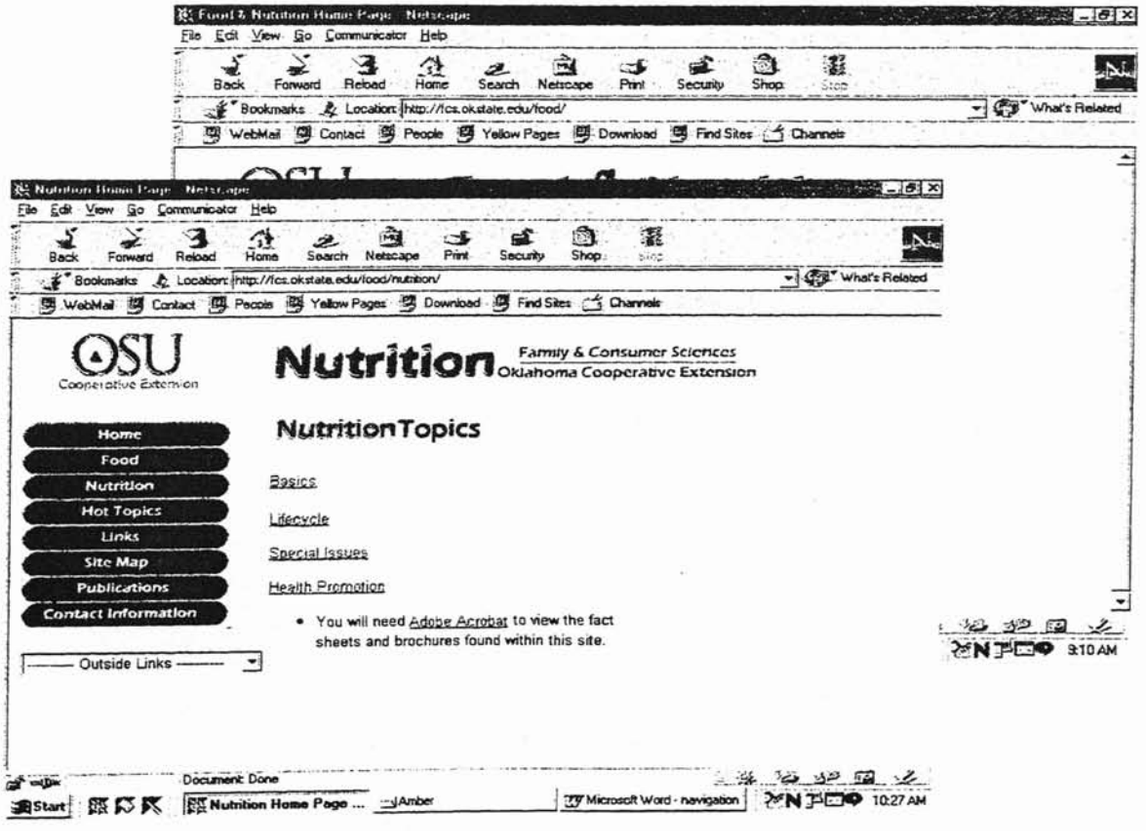
In Internet Explorer

1) Click on the "Tools" button at the top of the screen.
2) Click on the "Internet Options" selection.
3) Select "Use Current page" button.
4) Click "OK" button.



Navigating the Oklahoma Cooperative Extension FCS Nutrition Web Page.

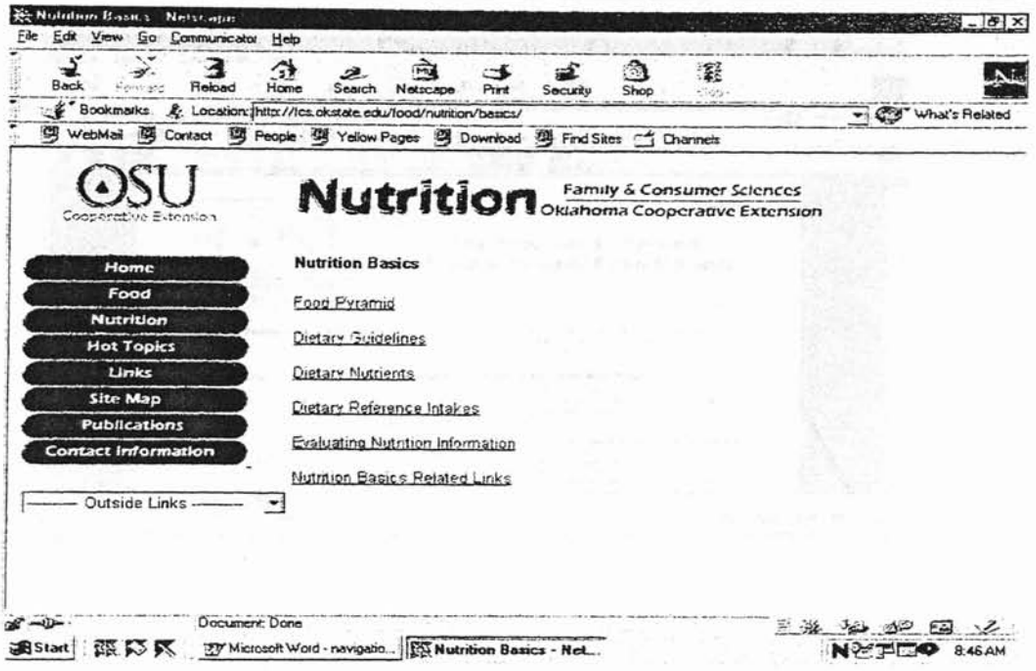
1) Select "Food and Nutrition". This will bring you to the food and nutrition home page.
   (a) On this page, you will find a list of options at the left side of the screen. These include; "Home", "Food", "Nutrition", "Hot Topics", "Links", "Site Map", "Publications", and "Contact Information".
      - ❖ The "Home" button will return your screen to the FCS home page.
      - ❖ The "Food" button will go to the Food home page.
      - ❖ The "Nutrition" button will go to the Nutrition home page.
      - ❖ The "Hot Topics" button will go to the Hot Topics page.
        - ❖ Information in the Hot Topics site will be current events and new discoveries relating to food and nutrition. This information will change often. It could be beneficial to check this site frequently to look for new information.
      - ❖ The "Links" button will go to a page containing a variety of Internet links to sites related to food and nutrition.
      - ❖ The "Site Map" button will go to the Food and Nutrition site map.
      - ❖ The "Publications" button will bring up a list of links to different news releases and fact sheets.
      - ❖ The "Contact Information" button will go to a page containing contact information for Barbara Brown and Janice Hermann.



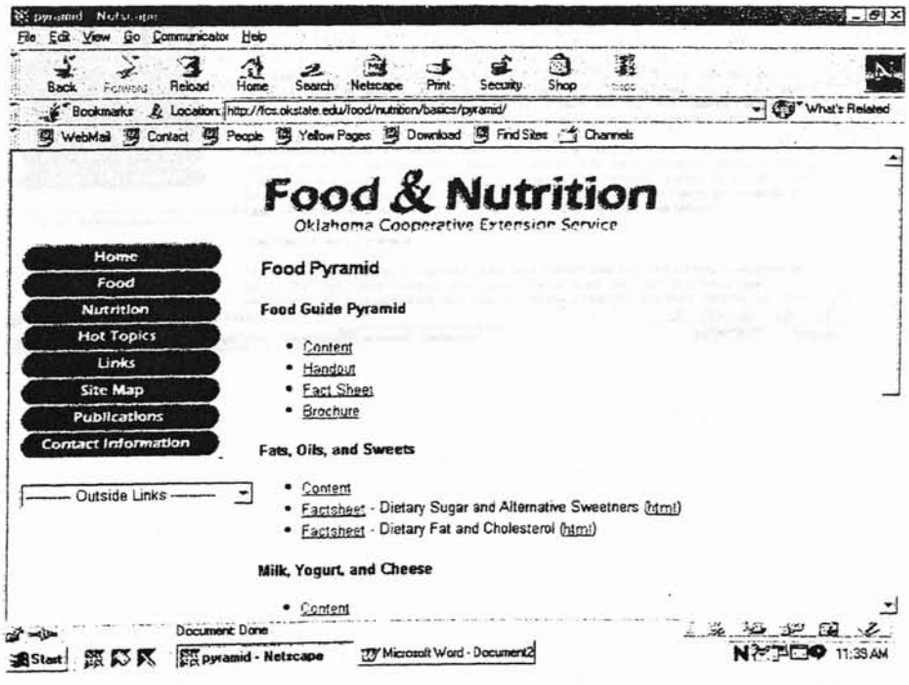
2) Select the "Nutrition" button located on the left side of the screen. This will bring you to the "Nutrition" home page.
   a) Listed here are the four major categories of nutrition information. This includes; "Basics", "Lifecycle", "Special Issues", and "Health Promotion"

3) Select the category in which your information is located. If you aren't sure what category your information is in, refer to the "Site Map (Instructions for use will be included with this instruction packet).

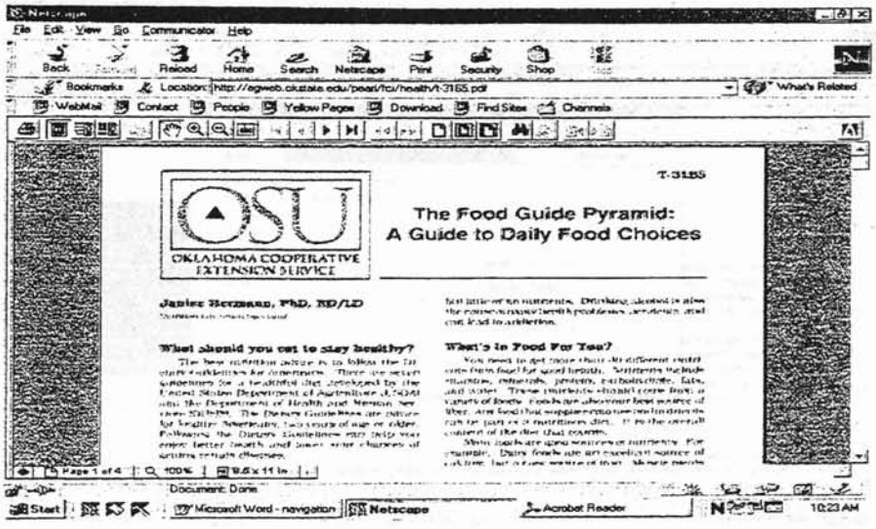
4) Each category contains a list of several more specific topics. You can use the site map to help you learn what topics are under each category.



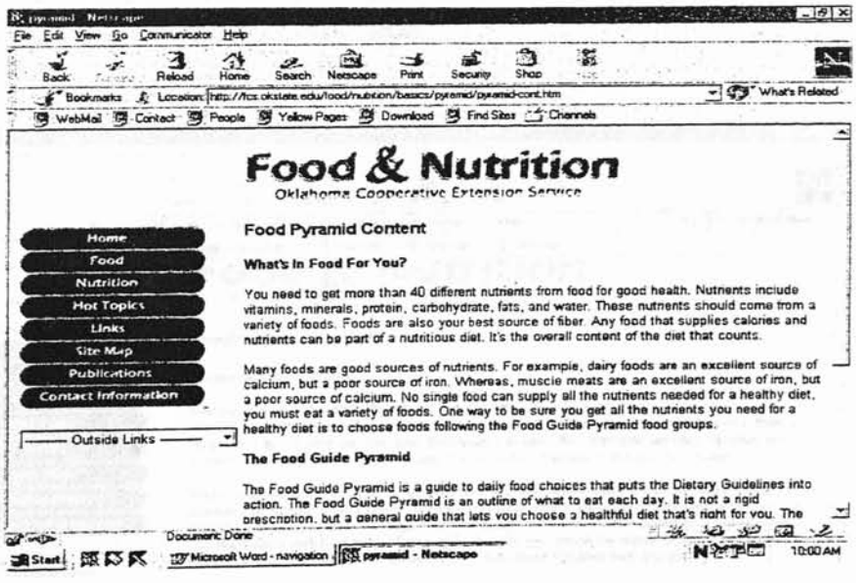
5) After selecting your topic, a screen will appear containing a list of the different sections within your selected topic and the different forms of information available for that section. These forms of information are; "content", "handout", "fact sheet", and "brochure". Every section contains "content", but other forms of information may vary for each section.



6) Click on the form of information that you wish to view. This will bring up the page containing the text, picture, or brochure that you wish to view or print out. NOTE: Selecting fact sheets or brochures will open Adobe Reader.

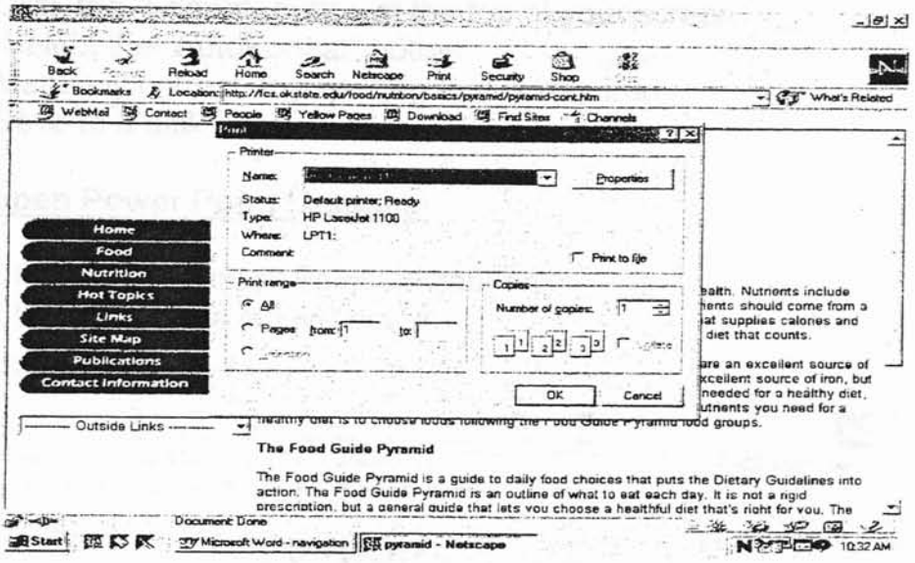


7) To return to the section list, click the "back" button at the top left of your screen.



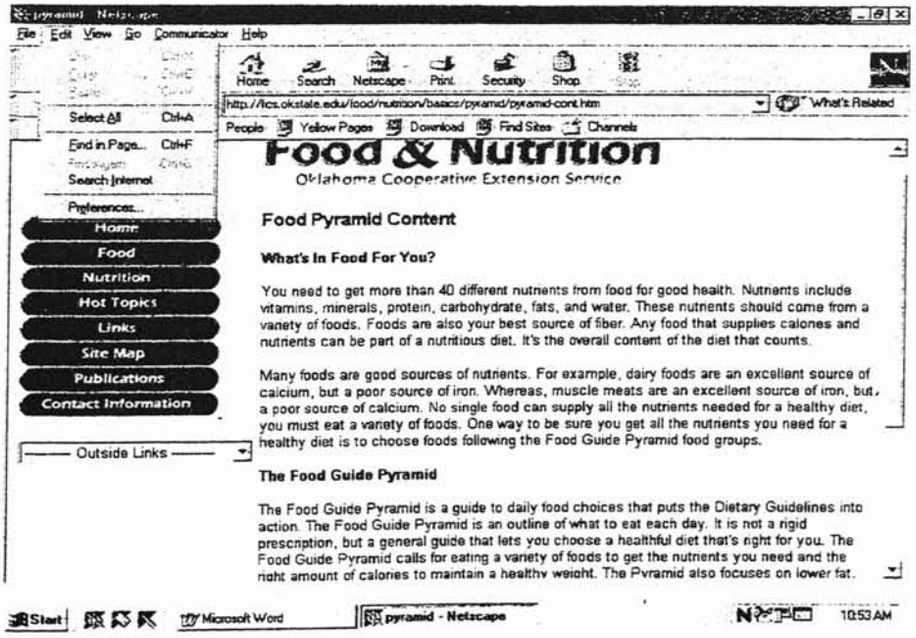
To print your selections:

1) Click on the "print" button at the top center of your screen.
2) Click "ok".



To edit information for class over-heads, or handouts:

1) Click on the "Edit" button at the top left of your screen.
2) Click on the "select all" button in that menu.
3) Click on the "Edit" button again.
4) Click on the "copy" button.

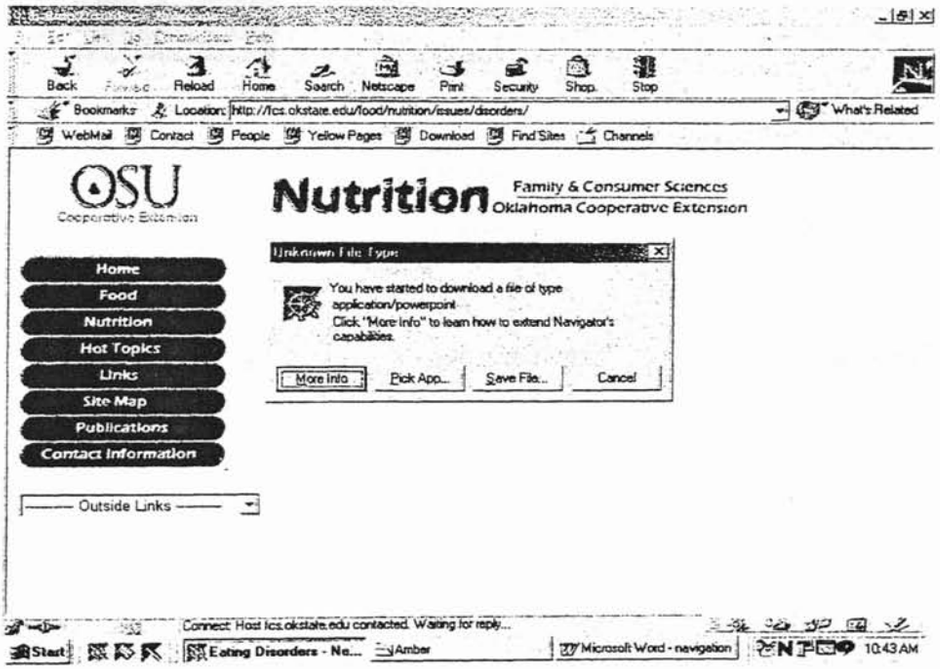


5) Open Microsoft Word.

6) Open the file that you wish to put this information in. You may wish to create a new Word document.
7) Click the "Edit" button at the top left of your screen.
8) Click on the "paste" button in this menu.
9) Click the "Format" button at the top of your screen.
10) Select the "AutoFormat" button.
11) Manually correct any spacing that is required.
12) Save to a disk.

To open Power Point Lessons:

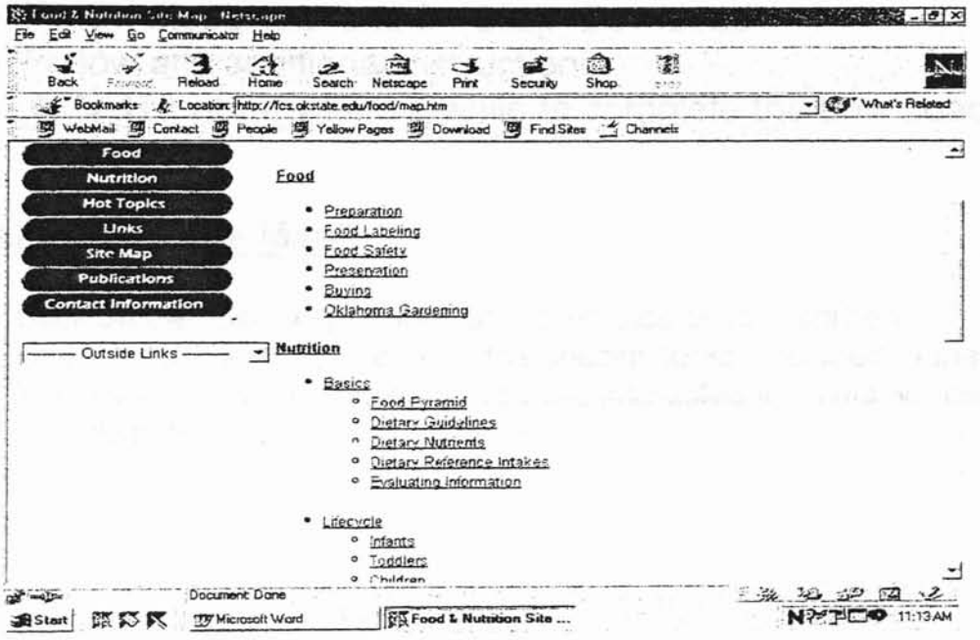
1) Click on the "Power Point Lesson" link.
2) Click on the "Save File" button



3) Save to disk.

Using the "Site Map"

1) Click on the "Site Map" button at the left side of your screen.
2) Under each category is a list of the specific topics included in that category.
3) You may click on the topic that you are interested in. This will take you directly to that page.



To Download Adobe Acrobat Reader

1) Click on the "Adobe Acrobat" link located on the Nutrition Home Page.
2) Click on "Adobe Acrobat Reader".
3) Click on "Download now".
4) Click on "Get Acrobat Reader". (located at the bottom of the page)
5) Follow steps 1, 2, and 3. Click "Download".
6) Follow any additional instructions.
   - ❖ NOTE: It may take a while to complete the download. Be patient.

Using the "Site Map"

4) Click on the "Site Map" button at the left side of your screen.
5) Under each category is a list of the specific topics included in that category.
6) You may click on the topic that you are interested in. This will take you directly to that page.

Expanded Site Map

Basics

- **Food Pyramid**
- **Food Guide Pyramid**
  - Content
  - Hand out
  - Fact sheet
  - Brochure
  - Power Point Lesson
- **Fat, Oil, and Sweets**
  - Content
  - Fact sheet
  - Fact sheet
- **Milk, Yogurt, and Cheese**
  - Content
  - Fact sheet
  - Fact sheet
- **Meat, Poultry, Fish, Dry beans, Eggs, and Nuts**
  - Content
  - Fact sheet
- **Vegetables**
  - Content
- **Fruits**
  - Content
- **Bread, Cereal, Rice, and Pasta**
  - Content
  - Fact sheet
- **Dietary Guidelines**
- **Dietary Guidelines to Stay Healthy**
  - Content
  - Brochure
  - Fact sheet X 4

- **Dietary Nutrients**
  - **Carbohydrates and Sugars**
    - Content
    - Fact sheet
  - **Protein**
    - Content
    - Fact sheet
  - **Fat and Cholesterol**
    - Content
    - Fact sheet
  - **Vitamins**
    - Content
    - Fact sheet
  - **Minerals**
    - Content
    - Fact sheet
  - **Fiber**
    - Content
    - Fact sheet
  - **Water**
    - Content
  - **Dietary Supplements**
    - Content
    - Fact sheet
- **Dietary Reference Intakes**
  - **Dietary Reference Intakes**
    - Content
- **Evaluating Information**
  - **Evaluating Nutrition Information**
    - Content
    - Fact sheet

Lifecycle

- **Infants**
  - **Infants**
    - Content
- **Toddlers**

- **Toddlers**
  - Content

- **Children**
  - **Children**
    - Content
    - Fact sheet

- **Teens**
  - **Teens**
    - Content

- **Pregnancy**
  - **Pregnancy**
    - Content

- **Breast-feeding**
  - **Breast-feeding**
    - Content

- **Adults over 50**
  - **Adults Over 50**
    - Content
    - Fact sheet X 4

Special Issues

- **Eating Habits**
  - **Eating Out**
    - Content
  - **Healthy Snacking**
    - Content

- **Fad Diets**
  - **High Protein/Low Carbohydrate diets**
    - Content
  - **"Magic Food" diets**
    - Content

- **Eating Disorders**
  - **Eating Disorders**
    - Content

- **Nutrition for Fitness**
  - **Nutrition for Fitness**
    - Content
- **Vegetarian Diets**
  - **Vegetarian Diets**
    - Content
- **Popular Concerns**
  - **Antioxidents**
    - Content
  - **Phytochemicals**
    - Content
  - **Herbal Remedies**
    - Content
  - **Breakfast**
    - Content
  - **Childhood Obesity**
    - Content

Health Promotion

- **Healthy Guidelines**
  - **Dietary Guidelines to Stay Healthy**
    - Content
- **Disease States**
  - **Osteoporosis**
    - Content
    - Fact Sheet X2
  - **High Blood Pressure**
    - Content
    - Fact Sheet X2
  - **Heart Disease**
    - Content
    - Fact Sheet X2
  - **Diabetes**
    - Content
    - Fact Sheet X2
  - **Cancer**

- Content

- **Weight Management**
  - **Weight Management**
    - Content

- **Food Allergies and Intolerances**
  - **Food Allergies and Intolerances**
    - Content
    - Fact Sheet

- **Drug-Nutrient Interactions**
  - **Drug-Nutrient Interactions**
    - Content

Hot Topics

- Nutrition
- Foods and Food Safety
- Hot Topic Archives

Related Links

- Related Links
  - Commodity Groups
  - Cooperative Extension
  - Disaster Preparedness
  - Food Companies
  - Food Resources
  - Food Safety
  - Gardening
  - Government Links
  - Nutrition
  - Organizations
  - Oklahoma
  - Print / Magazine

Publications

- News Releases and Fact Sheets
  - News Releases
  - Fact Sheets

Contact Us

- Barbara Brown
- Janice Hermann

VITA 2

Amber Renee Carson

Candidate for the Degree of

Master of Science

Thesis: EVALUATION OF THE OKLAHOMA COOPERATIVE EXTENSION NUTRITION WEB SITE

Major Field: Nutritional Sciences

Biographical

Personal Data: Born in Boise City, Oklahoma, December 19, 1975, the daughter of Mickey Cobb and Theresa Stafford.

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Professional Experience: Completed Dietetic Internship at St. Johns Medical Center in March 2001; passed the registration examination for Registered Dietitians in August 2001; Graduate Research Assistant for Oklahoma State University, Department of Nutritional Science 2001-2002.

Professional Organizations: American Dietetic Association.