# CREATING AND EXAMINING AN ONLINE ADVISING MODULE FOR GRADUATE STUDENTS: A USABILITY STUDY

by

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# ABSTRACT

Advisors are always examining best practices when serving students with technology. Online instruction has become a popular choice for students in higher education, and educators and other student personnel are looking to further accommodate their students by including academic services as part of a virtual environment.

This study examines the usefulness of an online advising module geared at graduate students. I conducted a usability study of an online advising module created for graduate students in the College of Education and Human Performance (CEDHP) at the University of Central Florida. The online advising module was presented to current graduate students in the CEDHP. They were asked to make observations and provide feedback about their interactions with the online advising module. The final part of the usability test included giving students a survey to rate their overall satisfaction with the module.

Results of the study showed that graduate students did benefit from viewing the online advising module. Participants reported an overall strong satisfaction rate with the module.

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# CHAPTER ONE: INTRODUCTION

As a master's student in the Technical Communication track of the English program at the University of Central Florida (UCF), I have studied methods to provide clear, concise information to an audience. In my professional career as a graduate student advisor in the College of Education and Human Performance (CEDHP) at UCF, I saw a need to communicate important non-academic program information to groups of students, both new and currently enrolled, about their programs. I found myself repeatedly answering questions about admissions procedures, graduation requirements, and how to locate forms, indicating to me that these questions were common for graduate students. It also told me that certain information was not easy to locate, even though the College—and our Graduate Affairs office specifically—has a website that is regularly maintained. I wanted to use technical communication skills to lay the groundwork for communicating answers to commonly asked questions about general program procedures and policies to graduate students who enrolled in the College of Education and Human Performance.

## Purpose

Through projects and assignments in my formal coursework, I was able to use technical communication practices in real-world situations. Course projects showed me the value of usability testing. Usability, or the level at which a product is usable, is defined by Nielsen ("Usability") by five components, including learnability, efficiency, memorability, errors, and satisfaction. Through my work, I found an opportunity to use my technical communication

knowledge to communicate advising information to graduate students. I determined the best way to do this would be to create an online advising module and measure its effectiveness through usability testing. I used design techniques learned in my program to provide the most impact and meaning in my online module. Some of these techniques include identifying the audience through user-centered design, writing content for websites, and incorporating effective use of visual aids and white space.

Students normally get their questions answered from a website maintained by the CEDHP or its personnel. Many students are unable to meet with advisors either in person or via a phone call between the hours of 8:00 a.m. and 5:00 p.m. Limited availability can be inconvenient for a majority of our graduate student population who are working professionals. Contacting the advising office during business hours may mean taking time off from work to get answers from an advisor. In addition, student personnel, while eager to assist, may not be available to address every inquiry in a given day or perhaps do not have sufficient information to share. Students may turn to self-advising or relying on their peers for guidance.

Not only does self-advising risk perpetuating misinformation, it discredits the use of an advising office that has dedicated staff for assisting students. Usually, students receive the correct advice, but students who are misadvised or fail to seek advice from designated providers risk spending additional time and money fixing their mistakes. In severe cases, students may miss out on job opportunities or even lose their current employment. CEDHP prepares teachers and counselors for positions that require professional certification. Students must meet time-sensitive, program-related requirements in order to graduate and be eligible for professional certifications. For example, a delayed internship could set students back several semesters if they miss application deadlines.

Advisors, faculty, and staff offer information that they believe is important for students to know and understand. However, all students are different. Asking the right questions is important to properly advise students. Students who do not know the questions to ask could delay their program progress or miss an opportunity to graduate. I wanted to find out whether students were easily able to find answers to their questions with an online resource about the college and their program. I also wanted to know whether providing an online information module jeopardized the role of the adviser. Is an online resource a good way to reach a large student population without exhausting our limited budget?

I decided to create an online module for graduate students. This resource contains the necessary information that students need to navigate their program requirements from admission to graduation. Did the students know that we had a dedicated space in our buildings for statistics tutoring or that we provide a student study space just for graduate students' use?

Usually, students would have to contact multiple offices and websites to complete all of their requirements. The proposed resource would minimize the amount of time students spend looking for information they need (but do not know that they need) in a convenient format that would be accessible through the CEDHP website. Students would have around-the-clock access to advising for frequently asked questions, as well as other important information they may not be aware of or understand as relevant to their academic program. Some examples of important information are where the student's program belongs in the structure of the CEDHP, how to request overrides into courses, scholarship information, graduation deadlines, required program-related forms, and other resources designed to promote student success.

I integrated knowledge I have learned in my program to create and design an online advising module for graduate students in the CEDHP. I measured the usefulness of the advising resource by conducting a usability study with currently enrolled students.

## Personal Experience

My experience as a graduate advisor introduced me to some of the communication challenges that graduate students have related to academic and non-academic requirements for their programs. Students spend months, maybe years, in their programs unaware of policies that could affect their progress. The consequences of misinformation (or lack of information altogether) become costly to students' most valuable resources—time and money.

Web pages containing information ranging from general graduate student information to program-specific information are available for students to explore. Many students are able to find the answers that they need. However, I found myself answering the same questions over and over. I began asking students if they were familiar with our website or had looked for their answers online. A lot of them answered that they had tried or that they thought it would be quicker to just call and ask instead of spending time looking.

It seems everything about the university is available online. I have found that students who do consult our website first for information have more productive face-to-face meetings. Students who have taken the time to look up basic information such as application deadlines and general program requirements are better prepared for meaningful visits. Planning ahead helps them to formulate additional questions about the program or graduate life. Checking our website first is time well spent. Having some background information prior to an advising appointment may prompt students to consider their personal situations and use their advising appointment to discuss more individualized needs in relation to the requirements of their program. Some

examples of student-specific program needs include transferring courses from another program or university, taking courses at another institution as a traveling scholar, or pursuing graduate certificates and additional credentials as part of their graduate experience.

## Significance

Other universities already use highly specialized online advising modules that have proven to yield higher student retention and create a sense of community among students. For example, Academic Advising at the University of North Carolina (UNC) at Chapel Hill College of Arts and Sciences offers a live online chat service ("Chat with an Advisor") where students can contact advisors without having to make an appointment or come to campus. While this service offers a more student-specific advising opportunity, the chat is available for only a limited time and only on weekdays. Students must also have a login username and password to use the service.

The University of Southern Maine (USM) also provides an online resource they call an advising network. This network hosts in-depth information for students and advisors. Students can find answers to frequently asked questions through a question-and-answer webpage. USM also provides quick-links information on topics such as academic advising and academic support. This website is thorough and does not restrict access to registered students, unlike the UNC Chapel Hill chat service.

Access to an online resource is helpful to our graduate students because many of them rely on online resources in their day-to-day lives. In addition, a portion of graduate students in the CEDHP are distance learners who may not come to campus frequently, who may not be familiar with campus resources, or both. This online resource must be must be quick, trusted, and

always available. Our office already promotes the fact that we cater to working professionals by offering evening courses and special evening and weekend programming.

Some questions I wanted to answer using an online module included

- How long did it take students to navigate the online advising module?
- Did students learn something new about the college?
- Did students find the online advising module easy to use?
- Did students like using an online advising module?

I knew that I could not create an online module as sophisticated as those available at USM and UNC Chapel Hill. Their websites were created by third-party companies with much larger budgets, more personnel, and lengthier timelines. There was not an allocated budget for this project, and resources were limited. Nonetheless, I decided that I could create an online module that would be helpful to graduate students, and despite the differences in the graduate programs offered, there were policies and resources available to students that were common among all graduate programs in the CEDHP. I wanted to offer this online module to students who were new to the college, but I also wanted to make sure the information would be relevant to current students. I realized that trying to create one presentation to fit the needs of every student would become too time consuming. Students would not benefit from too much information or information not relevant to their program. New students didn't need the nuances of graduation, and seasoned students did not need to know first-semester requirements.

Advisors are always examining best practices when serving students with technology. In Chapter Two, I include research from the technical communication field about designing and writing content for the web. Chapter Two also presents approaches to online advising. A review

of the literature about the topics of user-centered design and usability testing is included in Chapter Two as well as research from higher education journals about advising with technology.

# CHAPTER TWO: ADVISING WITH TECHNOLOGY

## Introduction

At the University of Central Florida (UCF), nearly 29,000 students were enrolled in at least one web- or video-based course in Fall 2012. That same semester, over 6,200 UCF students took online classes exclusively (UCF *Center for Distributed Learning*). Online instruction has become a popular choice for students in higher education, and educators and other student personnel are looking to further accommodate their students by including academic services as part of a virtual environment.

A study by Mandernach et al. found that the decision to take an online class owes more to practical constraints and choices rather than comfort level with the mode of instruction. The research suggests that students take online courses because online methods are convenient. Students in the study also reported that they value the convenience more than they value the face-to-face interaction with their instructors. (Mandernach et al. 4). As more students recognize the convenience of online services, they also want the convenience of online support services (Crawley). Implementing online resources allows for flexibility as well as affordability for students and the institutions that offer such resources. Tebeaux examines the many facets of online learning and asserts that accessibility and affordability are popular advantages for the movement towards online learning. She also asserts that teaching "by distance has the potential for increasing faculty/ student ratios without requiring additional classroom space and lecture type format" (385).

Student support services include program requirements that students are expected to know and understand. Student advising staff personnel assist students when they have questions, need advice, or need academic-related assistance. This assistance could include information related to their program requirements or university policies, procedures, and deadlines. Graduate students are expected to be resourceful individuals and they want to be (Crawly), yet they often find university policies, procedures, and program-related requirements not only hard to understand but also hard to find due to the numerous websites that are part of the university community. Polson (59) asserts that graduate students have different needs and therefore require dedicated/specialized services. She argues there is a perception in higher education that because graduate students have been through an undergraduate program and because they are more mature than their undergraduate counterparts, graduate students require less direction from their institutions regarding program requirements. Efforts to accommodate graduate students' success are further challenged by their varied demographics.

Graduate program policies are revised frequently and can pose a challenge to programs and departments that strive to provide their students with the most up-to-date information. Inconsistent communication between advising offices and students can result in students' seeking other resources to guide them through the policies that govern academic programs. If students rely on advisors to give accurate and up-to-date information, it is vital that advisors are equipped to provide it. Faculty and staff may unintentionally pass incorrect advice because they are not aware of changes to policy. An online advising module for graduate students will help to eliminate misinformation. In addition, an online advising module will empower students with information that will lead to more productive face-to-face meetings with their advisors. In this chapter I discuss the advisor's role and the practice of online advising. I also explore

characteristics of the online graduate student and effective web design for advising online. Finally, I discuss user-centered design and research about the benefits of usability testing.

## The Role of the Advisor

The term "student personnel" in higher education practice first emerged in the 1930s to refer to staff members who provided supportive, non-instructional services to college or university students in a school setting and whose primary purpose was to contribute to students' emotional and physical well-being. Student services personnel also add to students' intellectual, cultural, and social development outside the context of formal instruction.

Since the emergence of student personnel staff, the role of the academic advisor has evolved and adapted to the changing needs of the advisee. Advisors are constantly shifting to meet the needs and expectations of students and higher education institutions. Terry O'Banion stated that student personnel positions were created for the purpose of regulating student behavior. He defined the purpose of academic advising as a way to "help the student choose a program of study which will serve him in the development of his total potential." O'Banion further asserted that advising was a vital part of the education process (10).

As institutions grew larger and staff was charged with more student initiatives, student advising staff lost its "watchdog reputation" and became seen as supporters of students in a positive manner (Cohen and Brawer). Today, advisors are not always university faculty, and they may or may not teach courses. Faculty still serve in advising roles; however, many advisors are full-time staff whose only focus is student advising. Non-faculty advisors may have received their training by obtaining advanced degrees in leadership programs or through on-the-job training and professional development.

Advisors attempt to define their practice in ways that add significance to the discipline. Building upon O'Banion's early advising model, Crockett explained that an advisor's responsibility is to facilitate information, assist with course and career planning, and act as an agent of referral to other campus agencies. Advisors represent the university as an informational resource. An advisor could be expected to have a working knowledge in many areas of the university, including those outside the realm of the advisor's expertise. These areas may include financial aid, international student services, student involvement opportunities, and other university procedures related to the student's success. The CEDHP model is a "one-stop shop" whose purpose is to address all student needs.

Students' expectations of advising have continued to evolve. The National Academic Advising Association published in 2004 what they believe to be the best definition of academic advising. They stated, "Academic advising, along with teaching, research, and service, is central to achieving the fundamental goals of higher education. Academic advising is an intentional educational process that requires concern for and consideration of students" (NACADA.com). Crawly, Mandernach et al., and O'Banion agree that students want to play an active role in their advising process. Engaging students online empowers them to assume more responsibility and have more productive advising sessions. Leonard forecasts the future of advising with technology for both advisors and students. For advisors, email will remain an effective tool. However, advisors will need to become versed in other methods of advising using technology. Gordon et al., Leonard, and Underwood claim that students expect their institutions and advising processes to stay current with technology. This means that students want institutions and advisors to meet them in the "digital realm" as a means of communication and advising opportunities (Gordon et al.; Leonard). Universities do have other automated student services in

place, such as degree audits, that students are already using as a part of their everyday tasks. But students expect to be able to find all their services online.

The advising process can be especially daunting to students in online programs who depend on email and web browsing as central outlets for accessing information about an institution, its policies, and degree program requirements. Kretovics states that while graduate students are usually more motivated and self-reliant, they are also more likely to experience isolation from their institution, especially those graduate students who are distance-learning students. Workman and Stenard suggest that this alienation and disconnect may be reconciled by providing services that clarify regulations, build self-esteem, improve campus identity, create opportunities for interpersonal contacts, and provide access to learning support services, ultimately increasing academic success (21). Polson supports Workman and Stenard's claims and further suggests that student services should be involved in graduate program advising and orientations as a way to strengthen the connection between graduate students and their institution.

## Advising Online

Institutions recognize that their websites are powerful tools and are spending more time developing sites that provide useful information and effectively communicate to their audiences (Crawly). Online services benefit students by making information available and accessible. Online services benefit institutions by keeping production costs low and reaching large numbers of students using minimal resources. Online services are also useful because advisors can use online tools to strengthen students' responsibility and their ownership of academic progress. At UCF, students already find support in online coursework through tutorials and dedicated help-desk staff, through online degree audits and other services such as financial aid and course

registration. However, students may have a hard time knowing when or how to use these resources. This part of the process is left to the student to determine.

Other program requirements include taking comprehensive exams, filing a petition or policy appeal, or applying for graduation. These pieces of the puzzle are seldom discussed outside of orientation programs. New student orientation is not the forum in which these procedures should be discussed; however, it is often one of the few times that programs can address all of their students at once. Graduate policies are close to meaningless at this time because students haven't even taken courses yet. They do not yet know the questions to ask.

Students usually seek advising assistance within the first few semesters of their program because they are at a new institution or have started graduate coursework. They have entered a new experience, a life change that drives them to reach out for guidance. For this reason, it is important that students secure a program connection early. Graduate students will be an active part of their college or university for at least two years. Upon graduation, these students will become alumni for their lifetimes. Because most graduate students are non-traditional, they do not have a close connection to campus or sense of community from their program right away. They may not know who can help or where to go with their questions. Students expect to find their answers online (Underwood). They use online services as part of the admission process. In this way, the institution has set the precedent that it is prepared to support students with technology. Students may turn to online resources for guidance and confirmation that they are on the path to completing their programs as expected.

Online advising websites can address student needs through elements such as multimedia applications, graphic design, and specialized writing. Online advising is also an opportunity to serve as professional development for students.

## Characteristics of the Graduate Student

The decision to attend graduate school may be made for several reasons: to begin a new career, to build expertise in a current career, to earn a promotion, or to pursue research interests in a specific field or discipline. It is a choice that brings depth of knowledge but also financial burdens and challenging time constraints. Students who choose to pursue a graduate education, whatever the reason, differ from the stereotypical undergraduate student who has left home for the first time. The graduate student may be juggling professional responsibilities, family responsibilities, and schoolwork at the same time. The decision to pursue an advanced degree is a thoughtful choice for graduate students and a decision that many students must fit into an already demanding lifestyle.

In my work as a graduate student advisor in the College of Education and Human Performance (CEDHP) at the University of Central Florida, I have experienced two types of graduate students: the resourceful student and the student in need of additional support. The resourceful student has exhausted all outlets of information before visiting an advising office. The student who needs more support will arrive to an advising office with expectations of being coached through every step of the program. Some students report that fear of technology and hard-to-find resources present roadblocks to their progress. As a result, students will miss deadlines and risk pushing their expected graduation date back. Others treat their schooling as an extension of their careers and view their professors and advisors as colleagues who are available to provide guidance and answers just as employees in a company would. Because of the diverse nature of graduate students, there are also gaps in their comfort level and abilities with technology.

When describing comfort levels with technology, graduate students can be divided into two categories: digital natives and digital immigrants. Most graduate students will fall into the

digital immigrant category, meaning this student was born or brought up before the widespread use of digital technology. Digital immigrants are described as being a minimum of 24 years old, being a commuter or distance-learning student, and possibly not attending classes on a full-time basis. This student may have a full-time job, family responsibilities, or both. Digital natives are described as being 23 years of age or younger and raised in a technologically saturated environment, meaning that much of their daily activities since birth have involved an interaction or understanding of technology for daily activities. The terms digital native and digital immigrant can also be used to describe undergraduate students. The graduate student population includes both types of students. Further, the graduate student population includes more of the digital immigrant characteristics than undergraduate populations. Today, more than 50% of all entering college students are nontraditional (Siegel), making nontraditional students the current "normal" type of student and forcing advisors to align their practices to best serve this population.

## Relation to Technical Communication

Advisors want to introduce and enforce a set of responsibilities and expectations of their students. Advisors also want to utilize technology to reach large numbers of students in a time of limited resources and repeated budget cuts.

Understanding the benefits of website design can help academic communities understand how students use the Internet for graduate advising. The CEDHP at UCF currently maintains a website that serves as the College's central information center. It serves a diverse population: current students (undergraduate and graduate), faculty and staff, potential students, and the general public. A recent reorganization in the Student Services division in the CEDHP has prompted a reorganization of the way advisors, faculty, and staff provide services to students enrolled in CEDHP programs. Prior to the reorganization, both undergraduate and graduate

student services were housed in the same office. The reorganization separated graduate student services physically and virtually. It was a new opportunity to focus on more services and resources dedicated to graduate student needs in the CEDHP.

Research supports the need for better design in academic advising websites. Boatright-Horowitz et al. examined whether access to an advising website would increase students' desire to use the site for advising purposes. They found that students scanned the site for academic resources and items of immediate importance but did not always notice all the information provided, including hyperlinks to additional related materials. The authors suggest that exposing students to information only via a website is not enough to encourage the students to further investigate or use that information. They suggest structuring a website to encourage students to "consciously attend to specific components" (334). Boatright-Horowitz et al. also note that in order to be effective, websites should explicitly direct students to the information that is most important. Some examples include making hyperlinks more prominent on the page and limiting the use of photographs and other graphics (334).

The National Academic Advising Association (NACADA) is a professional academic advising organization that has established standards and resources for advising students via online methods. NACADA is made up of professional and faculty advisors, administrators, students, and others with a primary interest in the practice of academic advising. With diverse backgrounds, perspectives, and experiences, NACADA members counsel in a variety of settings and work to promote quality academic advising within their institutions. NACADA's standards address critical issues and challenges for developing and maintaining advising programs, including regular evaluation and assessment. NACADA has developed standards related to what should be provided to students who rely on an online advising model. However, there are no

definite guidelines regarding website design to promote best practices in online advising. One way to ensure that an online advising module is effective is through user-centered design.

## User-Centered Design

User-centered design (UCD) is a concept that ensures a product is well matched to the needs of the user. Proper arrangement will establish a trusting relationship with its users (Crawley). In order to ensure that a website is developed with the user in mind, designers must employ methods to examine how users interact with websites.

Following the principles of user-centered design allows product designers and testers to understand what users really want and need. Those principles include early interactions with users and tasks, measurement of product usage, and iterative design. Courage and Baxter emphasize that it is nearly impossible to find every possible user issue with merely one test phase. They suggest initial testing early in the design process and subsequent testing at later stages of a project. Researching user characteristics before designing a website improves the goals of the project (Courage and Baxter 4). Testers should consider who their users are and determine the specific functions users need when visiting the website. Testers should also consider the users' experience level with navigating the Internet and their expectations concerning the functionality of the website. Finally, how users will access the website should also be a consideration for testers in order to provide the greatest user success rate. Additional design techniques will benefit student users who look to websites for information about their programs.

Although it may seem simple, some design principles contribute to communication success for all types of websites. In "Building Blocks of Functional Design," White suggests that designers work with fundamental publishing techniques. These techniques include

- Know the audience
- Turn lookers into readers
- Use visual aids
- Exercise consistency
- Take advantage of repetition

White's suggestions would be beneficial to online advising resources in this study. He suggests that a designer should adjust text to "allow readers to find the specific questions that interest them most or apply to their situation" ("Building Blocks" 40). Applying this technique and using conversational language as also suggested by Dumas and Redish will contribute to users' understanding of information in the online advising module. Students visit the CEDHP's website for informational purposes. They do not want to spend a lot of time browsing; they want to access the information they need quickly and easily.

I have often had students tell me the information they are looking for is hard to find. Students are not sure what they are looking for, what the forms are called, or where the forms are located within the current website. Janice Redish states that content as conversation is important in usability because content written as conversational language is better understood by users. She asserts that web content is created "because we expect people to handle their needs themselves instead of calling" (Redish 295). Users who feel connected to the content of a website will stay longer and feel confident that their questions are answered. Redish claims that successful content comes from writers who can convey their message based on the needs of the content viewers and what they need from the material. Plain language is best to help users understand when thinking in terms of content as conversation (Redish 296). Using jargon and unfamiliar technical terms

will discourage the user and could result in an ineffective website. Users will leave without the information they need and will most likely not visit the website again.

The importance of identifying users is consistent in the research. More specifically, identifying the audience and how designers and developers want their audiences to interact with the product are the focus of much investigation. Technical communicators employ user-centered design as a way to ensure that they are reaching their target audience.

## Web Design

Designing websites with users in mind should be the priority when developing or redesigning student advising websites. Of course, user-centered design is (or should be) at the center of any project and should serve the user deliberately and consciously. In particular, institutional websites are meant to be useful to their target audiences, which can include students, faculty, and staff. Students look to university websites for information they need about their programs, requirements, deadlines, and other areas of concern to them. More and more, faculty and staff are finding that they, too, rely on website information as a vital resource for advising purposes, as they are increasingly wearing many hats, taking on tasks they are not necessarily trained to do. Dispersing appropriate and timely communications to students in a correct, concise, and engaging way becomes a challenge as higher education institutions are being held accountable to provide better education with fewer resources. Ideally, the websites of educational institutions should be informational, transactional, and relationship builders to a greater extent than ever (Kleemann 91).

University advising personnel are not usually also trained as web designers. Higher education websites may have been established out of chaos, which can make information hard to find (Crawley). Non-designers should consider elements that will engage, inform, and build

relationships with users. Organized and visually appealing websites create a positive experience and help to maintain a trusting relationship with the student. In "Serving Students Online: Enhancing Their Learning Experience," Shea suggests that individualizing a student's online experience contributes to establishing or further enhancing a strong relationship using technological tools. She emphasizes that how an institution puts its services online is very important, and she states that the delivery of an institution's services online is crucial to the message. Delivery will determine whether students believe that they will be supported or be on their own during their educational career.

Shea also advises best practices in websites geared for students in higher education institutions, "Services should be redesigned from the students' point of view, using language that is familiar to them, rather than the internal language of the institution" (17). Byrne agrees when he states that "plain language is reader-oriented," and discourages the use of terms that may not be familiar to the reader (89). Redish further supports the idea of plain language, but warns that writers should not feel the need to "dumb-down" their writing. Simply using larger words and more complicated language is just not necessary, especially for web content (233). Complicated language should not be confused with jargon, which is words or phrases specific to different industries. Using jargon can be appropriate and necessary for specialized audiences.

Shea suggests that higher education institutions use their website technology to track student progress and anticipate students' needs in advance of students' having to seek information out themselves. Anticipating students' needs and keeping students engaged will help increase student retention.

Many graduate students maintain a part-time enrollment status in their programs because of their other work- or family-related responsibilities. Convenience for users should be a top

consideration when designing advising websites. Making information and services available 24 hours a day and 7 days a week allows students to address their needs on their own schedules.

Kleemann, Shea, and Crawley agree that websites should anticipate the needs of users and organize information accordingly. By anticipating user needs, advisors are providing their students with information relevant to them and therefore "personalizing the user experience." As a result, students believe that their institution cares about them and is striving to offer support and meet their needs.

According to Janice Tovey, technology gives writers options to convey messages through online content. Content is not limited to simple paragraphs and indenting. She states that "the design process is not concentrated in the text, in each individual word or phrase, but focuses on the layout of and look of the page. Textual and graphical elements come together rhetorically in page design to produce a document that addresses readers' needs and a writer's purpose, providing a readable, interesting format for information" (71).

Tovey explains that design decisions can be treated like extensions of the original project instead of separate or individual post-design functions. Changes can be made at any stage in the process of a project: during the creative stages, while writing, or revising (Tovey). Selber, Johnson-Eilola, and Mehlenbacher also agree that the fluid nature of online instruction allows designers to easily make modifications.

In areas where content is purely text driven, designers should pay close attention to pictures and their captions. Nielsen ("Usability 101") states that web users enter websites as lookers and there is very little time to capture the users' attention. Selber, Johnson-Eilola, and Mehlenbacher support Nielsen and add that although Internet users are comfortable with online browsing, users in need of assistance will not spend much time searching. They further assert

that tutorial users expect some form of "hierarchal representation" and are not going to spend their time "surfing" for information. Crawley also agrees that presentation in online tutorials is important. However, she argues that content is most important in institutional websites. Content, she indicates, is what will encourage users to continue to visit a website.

Turning lookers into readers is key. White suggests using design techniques. He states that using images will help turn lookers into readers who will then stay longer on the page. Captions, White asserts are, "the most important reading-matter on the page" because browsers rely on captions to explain the images that have caught their attention on a webpage. ("Building Blocks" 40).

Another powerful design tool in web design is color. Richards and David discuss how incorporating color in websites may symbolize a primary element or characteristic of an organization. The authors state that "School sites invariably are based on colors affiliated with their athletic teams" (42). For example, the core colors of UCF's College of Education and Human Performance website are black and gold, also the designated colors of UCF. These colors are dominant in most of the University's other college and department websites, creating a cohesive element of the online experience for the user.

## Usability Testing

Researchers differ on when the best time to test occurs in developing web content. Krug and Redish agree that testing a website for usability can be done anytime. However, Krug asserts that the best work is done early, while Redish states that testing web material can be done at any time.

Barnum describes a test case of two teams of students—one team of undergraduate students and one team of graduate students—who tested certain areas of a university website.

Observations made by the students in Barnum's study allowed the university website developers to redesign their website to better serve its users. Testers found that users had concerns locating certain programs when they didn't know the exact name of the program, as well as problems with insider terminology used throughout the website. Users also wanted to be able to learn about other departments at the university without having to navigate from the specific department's website. Barnum concludes that it is rare for a single usability test to find every last issue within a website and further asserts that while usability testing is reliable, it should not be relied on as the only basis for information about a product's usability (169).

Krug suggests that almost all significant problems will be found with the first three users in a study. He further suggests that using only a few participants (three to four) will allow for a quick testing so the tester can work on assessing problems right away and get back to a second round of testing. This finding agrees with Courage and Baxter's claim that one test phase is not enough to find every possible user issue. Initially, participants will uncover the major flaws and allow future testing to be dedicated to additional issues that may have been overlooked the first time. Most important, any mistakes uncovered later in the process could be big issues that may have never been discovered.

## Student Preferences

Student preferences are also an important consideration in web design for higher education institutions. Hsu investigated three aspects of web design: color value, major navigation button placement, and navigation mode. Hsu found that students preferred darker colors in websites, but overall there was no consistent preference for color or button placement Students did, however, have a preference for nonlinear navigation. Hsu suggests that when creating educational websites for graduate students, instructors and web designers should

consider websites with darker color schemes for a better user experience (239). The author also suggests further research be conducted using animation and audio features to improve educational website design (241). Based on Hsu's conclusion that graduate students prefer a nonlinear navigation in relation to gathering knowledge, it can be assumed that the online advising resource created for the CEDHP would benefit from designing website navigation in this manner.

In line with Hsu's findings, van der Geest and Loorbach report that information and functions that are similar should be consistently presented throughout a website. Some examples include elements such as logos, page titles, headers, and navigation elements. The authors found further evidence in related studies by Ozok and Salvendy, who found consistency resulted in "less errors and improved performance by users," making the authors believe consistency in website placement and usage is desired by users (van der Geest and Loorbach 28).

While it is important to know what students prefer in website design, Steele and Thurmond argue that providing students with access to better quality and quantity of information does not mean they will understand it. They suggest that online advising should continue to rely on some human contact, whether by web conferencing or telephone use, and they further assert, "No one tool can be guaranteed to facilitate higher-level cognitive interactions, especially when advising loads are high" (Steele and Thurmond 94). The authors believe exchanges with students should involve communication tools that support different types of requests, such as email and frequently asked questions. They further suggest students needing more individualized attention can best be handled through web conferencing and telephone interaction. Advising offices should offer multiple outlets for students to gather information, because online resources cannot

be solely relied upon for advising purposes. In addition to online resources, email, phone communications, presentations, and face-to-face interaction should reinforce online information.

Students believe that graduate students' use of the Internet is an effective tool for knowledge (Lim, Plucker, and Bichelmeyer 17). Similar to results reported in Hsu's study, graduate students found the most satisfaction in having to locate and organize the information. The students in the study reported that they learned more on the topic of their project due to synthesizing and organizing the information they collected. Providing students with online advising components can empower their active participation in learning. Online resources can act as a springboard for additional research and allow students to seek answers to questions they may not have known to ask.

## Rhetorical Decisions

All decisions involved in creating a document or display are rhetorical. Decisions about a document intend to inform, persuade, connect, influence, and transmit knowledge and ideas to the reader. According to Selber, Johnson-Eilola, and Mehlenbacher, the primary goal of online support systems should focus on helping "users achieve goals as they negotiate the very real constraints of various time/space frames" (2).

Kumpf states that technology has allowed visual elements to have equal weight as text when it comes to design as rhetoric. Kostelnick and Tovey also agree on visual elements as rhetorical tools. The supra-textual element of a document or presentation provides an impression that helps the user decide whether to investigate further. This element is what engages and effectively communicates to an audience.

Kumpf; Kostelnick; and Gill and Whedbee concur that first impressions of a document determine the tone and expectations for the entire document. Students who view the online

module for the CEDHP will expect professionalism, authority, and information relevant to their needs. Because these students have previously attended college, they will have an understanding of the college culture, even if they did not attend UCF. Students could be interested in general details of the college, things that may affect them and their program directly.

The online module carries a theme entitled "What You Need to Know About Your …" This theme implies that the included information is important to students' graduate programs. Further, the theme suggests that the information included there is necessary to student success.

## Conclusion

Every advisor's goal is to provide a path to success for students' academic careers. Advisors who can acknowledge when and how to incorporate technology into their advising practices will have the most success with their students. Recognizing the impact of the use of technology to achieve student success will help with retention and budget concerns—both worries of higher education institutions today. Advising virtually has benefits that go beyond convenience. It has the potential to reach a global audience and provide a cost-effective resource for student recruitment and retention. Web-based advising establishes consistent and accessible meeting logistics that respect the time of both students and advisors. Students who have frequent questions or need more personalized attention can rely on advising websites to be accessible at all times for general information, and they can later follow-up with an advisor with their more specific needs.

Students consider advising an essential service (Crawly). Face-to-face interaction and advising is still a relevant and preferred method of communication for many graduate students. However, an online advising resource is necessary in order to provide busy graduate students access to important program-related information. Crawley states that both students and

institutions stand to benefit from placing student services online. Students appreciate convenient access to information, while institutions can effectively communicate with large populations in a cost-effective manner.

As part of the research for this thesis, I conducted a usability study on an online advising module I created for the College of Education and Human Performance at UCF. The usability study examined whether an online advising module benefited graduate students. I measured student satisfaction using a survey and counted the number of mistakes students made while viewing the module to gauge whether students found it helpful.

In Chapter Three, I include a step-by-step account of my usability study to determine whether students increased their knowledge of the CEDHP, their graduate program requirements, or both.

# CHAPTER THREE: USABILITY TESTING

This chapter discusses the importance of usability testing and the methods I used to understand how graduate students benefited from an online advising module. This study examined whether an online advising module was helpful to graduate students in the CEDHP. The module includes basic information about the college, its resources for graduate students, and university policies that affect graduate student programs.

The purpose of this online module is to provide a resource that graduate students can access at any time. The module is a PowerPoint presentation entitled Graduate Student Orientation College of Education and Human Performance 2013-2014. The theme of the module is "What You Need to Know About Your…" The module is divided into sections that include information about how to contact college offices, advising tools for graduate students, campus resources, online resources, annual events, and policies applicable to graduate programs in the CEDHP.

My study is important because students who rely on online resources as part of the success of their program must be confident they can access dependable information related to their academic achievement. A successful online resource contributes to student retention and tuition dollars. If an online resource is available to support students and strengthen advising sessions, students are more apt to stay enrolled in their program and continue to take courses (Crawley).

Usability testing is important because it serves as a good reminder that all users do not think the same way (Krug). It also demonstrates for designers that users do not have the same type of knowledge about websites they use. The online advising module was created using a PowerPoint presentation template. Though it is a familiar program for many students, they may view the online advising module in different ways. Some users may watch each slide in succession, from the first to the last slide. Some users may be interested in only certain parts of the module, and other users may choose to watch the module in an order different from the one presented to them. It is important that as a designer I considered that the online advising module could be viewed in more than one way. Users think differently about how to complete a process and may not use online resources in the same way (Krug).

Usability testing functions as a way to measure whether a system satisfies its purpose. It is important to understand that usability does more than test the usefulness of a product or website. (Usability.gov). Usability uncovers the many facets of a user's thought process. It allows designers to plan for, to accommodate, and to understand their users at a more personal level. It assures designers that their information is accurately represented in ways that makes it easy for users to understand. Usability shows designers how users think about a process and what affects users' decisions about how to use a product. Usability can assist in determining user expectations, satisfaction, and efficiency.

Web developers and designers rely on usability testing as a way to determine the usefulness of a website. Creators of websites who include a usability test gain an outside view and assessment of the effectiveness of the site. All too often, developers and designers can become too familiar with their own work. It may be hard for them to determine whether what

they view as useful truly works for a particular website. Feedback from a neutral audience with a different viewpoint allows developers and designers to focus on improving the user's experience.

Andrews et al. and Krug agree that users should be involved in all stages of the development of a website. Including users early and often will help establish a user-centered design. Designers can have a hard time including their users until later in the project, when it may be too late to implement changes. Designers struggle with this because they want to maintain freedom of their creative process. Designers may feel that including user feedback throughout the design process could prolong a project. Designers worry that their creativity may be stifled due to incorporating user feedback throughout the design process (Andrews et al. 126). While these concerns exist for designers, including users early in a project can be beneficial. Designers should plan to allow for flexibility in anticipation of user feedback throughout a project. Designers who include users from the beginning of a project should anticipate such challenges and allow for additional resources if necessary.

Usability studies help focus on issues that impact the user's experience. The most successful projects conduct at least one usability study early in the design process in order to allow designers and developers to make changes along the way. If usability tests are steadily performed throughout a project, there is more opportunity to identify problems that might otherwise not have been found until the final stages of a project or after the release of the finished product. In this way, usability testing can save time and money while increasing productivity. A user who is involved from the beginning of a project can identify issues early in the project. As a result, the number of problems identified in the final product is reduced.

The online module created for this study needed to be useful to graduate students in order to provide a convenient and reliable method of student information. Therefore, I used usability

testing as a way to measure how much time participants spent viewing the online advising module and whether they learned new information about their college and program.

## Planning the Study

I designed the online module that was used in the study based on my experience working with graduate students. Much of the content included in the online module was centered on questions students frequently asked. Also included was information about policies and procedures that were consistently misunderstood by students. I constructed the online module by using design techniques I learned in my coursework and through my research. I tested early, as suggested by Krug, so that I could uncover as many issues as possible within the content of the online module. I selected participants and conducted the study in the Graduate Affairs Office located on the UCF campus.

## Participants and Background

It is a good practice to think of other audiences who might access information about a product or website (Krug). The online advising module used for this study is intended for a primary audience of active students in CEDHP graduate programs. When determining the target users of this web advising module, different populations were identified, but not all were included as participants tested for this study. Other populations who may make use of this module include university faculty and staff, prospective graduate students from outside the CEDHP, and interested parties in the community.

The primary audience in this study was currently active graduate students from the CEDHP enrolled in a graduate program. A total of eight student volunteers participated in the study. To select the participants, an email was sent to 123 students asking if they were willing to

participate in a usability study for an online advising module about the CEDHP. Those who agreed to participate in the study were asked to volunteer about an hour of their time. As an incentive to join the study, they were offered a restaurant gift card valued at five dollars for their involvement. More female than male students were expected to participate, as the College's demographic breakdown of active student enrollment was overwhelmingly female. Email addresses came from an internal student database. The primary purpose of this database is to communicate with students who have contacted the office for advising purposes. These students were targeted because they had shown an interest in learning more about their programs and the College through advising, they had taken the time to attend an advising session either by phone or face-to-face, and they were currently enrolled in a graduate program. Selected participants represented a range of graduate programs offered in the CEDHP (See Table 1). Two participants were doctoral level students, one student was enrolled in an Educational Specialist program, four participants were master's level students, and one student was enrolled in a graduate certificate program. All student participants were at different stages in their programs, from newly admitted to close to graduation. Included in this sample were practitioner (counselor and teacher preparation) programs and research-focused programs. In addition, each of the represented programs required an online application for admission. It was assumed that each of the participants had experience navigating a university website, because each of them had to complete an online application to be admitted to his/her program. Table 1 shows a breakdown of participant information.

Table 1

Participant Information

| Participant | Gender | Age Range | Degree Type | New to Institution | Online Learner |
|---|---|---|---|---|---|
| **1** | Male | 22-35 | PhD | Yes | No |
| **2** | Female | 22-35 | MEd | No | Yes |
| **3** | Male | 22-35 | MA | Yes | Yes |
| **4** | Female | 50-65 | Grad Cert | No | Yes |
| **5** | Female | 36-45 | MAT | Yes | No |
| **6** | Male | 22-35 | EdS | Yes | No |
| **7** | Male | 36-45 | EdD | No | No |
| **8** | Female | 22-35 | MA | Yes | Yes |

Nielsen (*Designing*) asserts that testing with five users will usually discover about 80% of the user issues in a usability test. However, Barnum argues that depending on the project, more participants may be needed in a study. She asserts that a product with a large user base can benefit from more than only five participants. Perhaps a usability test for a product for a specialized audience would be successful with only five participants. However, a website that is available to an unlimited amount of users could stand a few additional participants. Users can differ in the way they think about a product or task. Using the traditional five participants to test a website meant for a large audience may not uncover all the issues that exist. When dealing with millions of potential users, it is not guaranteed that the small number of participants chosen will represent the way all potential users may think.

Although they did not participate, back-up participants were selected for the study. Information about alternate participants is displayed in Table 2. Neal suggests broadening a test group to up to 15 participants, in order to account for no-shows and to ensure as many types of potential users are represented. Dumas and Redish also agree that testers should select back-up participants that are available to join a study on short notice. They claim that by not recruiting flexible back-up test subjects, testers risk not having enough participants to complete a study. Other setbacks, such as extending a study, can also occur. Flexibility is important in any usability test, but it is more important to anticipate and plan for challenges in order to keep testing schedules on track. Above all, suggestions made by Neal and Dumas and Redish are helpful to testers when recruiting participants for a study.

Table 2

Alternate Participant Information

| Participant | Gender | Age Range | Degree Type | New to Institution | Online Learner |
|---|---|---|---|---|---|
| **9** | Female | 22-35 | MA | No | Yes |
| **10** | Female | 22-35 | MAT | No | Yes |

When recruiting for usability studies, testers should find users who fit their audience population. Usability testing for websites usually can recruit participants easily because most testers today are so familiar with the web that it may not matter how participants are chosen or how they are tested (Krug). However, there are some situations where testing may require a specialized audience. Some examples include testing for a business with dedicated terminology

or skills, testing when an audience is divided between clearly defined groups, or testing when a website will be used exclusively by one type of user. Testers should make sure they choose participants familiar with any product or company jargon prior to performing a usability test. Testers should also ensure their participants fit the audience profile as a user of a product. Participants may not necessarily have knowledge of what is being tested, but they should be familiar enough to perform the tasks asked of them. Choosing appropriate participants for a study will allow testers to better equip products for the best user experience.

## Methods of Usability Study

Study participants were given a brief overview of the usability testing process. I presented each participant with a testing script that included an agenda of the appointment. Each participant was asked to sign consent form. The form stipulated that participants agreed to participate in the usability study, their responses and comments would be recorded, and their personal information would not be shared or published in the results. .

The next part of the test was to ask participants demographic-based questions such as name, age, and graduate program. Then, I described to the participants that they were participating in a usability test of an online advising module for graduate students in the CEDHP. I explained that I would record the participants as they viewed the module to observe their behavior and comments as I asked them to complete a series of tasks. I then showed the participant the equipment we used and asked the participants if they had any questions or needed additional clarification before we began testing.

I began the test by asking the participant to find the graduate affairs page on the CEDHP's website. Once on the graduate affairs page, I asked the participant where he/she would look for an online advising module. Participants were asked to then locate and open the online

advising module. From this point, I looked for evidence of the following components to measure the usefulness of the online module by observing the participants' actions and behaviors while viewing the online advising module:

- Efficiency
- Accuracy
- Memory
- Satisfaction

Efficiency represented how quickly students could view the entire module with minimal errors. I used a stopwatch to time each participant while viewing the module. I began the timer as the participant began the introductory slide of the module. I stopped the timer when the participant indicated to me that he/she had completed viewing the module. Accuracy referred to the number of mistakes students made when trying to complete a given task. An example of a task was to click on hyperlinks within the module. The complete list of tasks is described in Appendix A. I counted each time participants indicated they could not complete a given task. I also counted errors participants made within the module. For example, when participants would move on to the next slide before all the information was displayed. Memory indicated what and how much information the user remembered from the online module. Could the participants remember which department their program belonged to or could participants remember important program policies listed in the module? Satisfaction suggested how the user felt once a task was completed. Did the student find the task easy? Was it hard or frustrating? Did the student feel that he/she could perform the task again independently?

In developing tasks for users, Flowers suggests that any directions given to test subjects should not be too specific but should reflect actual users' goals. For example, do not instruct the

user to press the “on” button on the PC tower of the computer and click the Internet icon to access the web. Instead, ask the user to turn on the computer and access the Internet (Flowers 18). I instructed participants in my study to follow a list of tasks (Appendix A) presented to them in as efficient and timely a manner as possible. They were asked to locate specific items and I recorded how many mouse clicks each participant made to complete the task. Once I explained the task, I asked the student if he/she understood it. If the student indicated that he/she did not understand the task, I repeated the instructions. Participants were also asked to rate their experience answering the questions on a Likert Scale ranging from 1 to 5, with 1 being difficult and 5 being easy.

Participants were encouraged to give honest feedback regarding the usability of the online module and to participate in the posttest survey. Participants were assured the goal of this study was not to evaluate their abilities to use a computer or the Internet, and the focus of the study was to assess the ease of use of the advising module they had been asked to test.

## Testing Environment

Testing was performed in the Graduate Affairs Office in the CEDHP. Office space in the Graduate Affairs Office in the College of Education and Human Performance was arranged to include

- A desk
- Two chairs
- A PC computer station with Internet access to the CEDHP website

The computer included a tower, screen, keyboard, mouse, and mouse pad. The computer faced away from the entry door to the testing space. The room had overhead lighting. Background noise was allowed as part of the testing environment, although outside noise was

minimal during most of the testing sessions. There were no notices posted that testing was in progress. I did not want to create a "lab" environment where the participants were protected from outside distractions. Warning the participants and non-participants that testing was in progress could change the behavior of the participants. I wanted participants to access the online module as they would on their own time, in a comparable environment that would include background noise.

Before a participant entered the testing area, the computer station was powered on and the College of Education and Human Performance website was open and displayed as the starting page. All equipment was checked prior to testing to ensure that once the testing began, everything was in working order. Every effort was made to ensure a pleasant and comfortable experience for all participants. When participants arrived to the testing site, they checked-in with the front-desk receptionist and were instructed to have a seat in the waiting area. A staff member greeted participants in the waiting area and escorted them to the testing room. When participants entered the room, they were greeted and instructed to sit at the computer station. Participants were given a few minutes to familiarize themselves with the room and testing station.

Once the participants were familiarized with the room, I began the test by reading from the script. A full version of the testing script is in Appendix A. The script instructed the participants to open the online advising module. Once the advising module was opened, I continued to read additional instructions that prompted the participants to further explore and examine the module.

## Tasks

The participants were asked to review the module in parts. Each section of the module was addressed. At the beginning of a section within the module, the participant was asked to

review the slides for that section and encouraged to voice out loud any positive or negative comments about the slides. I observed the participants as they viewed the slides and wrote down any comments they made. Once the participants indicated they had completed viewing the slides for a section, I would ask questions about what they had just viewed. Table 3 shows an example of the instructions and questions for the Advising Tools section of the module.

Table 3

Advising Tools Instructions and Tasks

| Tasks and Questions |
| --- |
| 1. Please advance to the Advising Tools slide. This is our second section. It is about advising tools. Please click through the next two slides and let me know when you are finished.<br>2. Now that you have looked at the slides about advising tools, can you tell me if you learned any new information about the college by looking at these slides? If so, what information?<br>a. Can you tell me when you must complete your Program of Study?<br>b. What do you think of the graphics on this slide? |

## Conclusion

There is much literature attesting to the benefits of usability testing. As Flowers suggests, usability testing is a good way to critically analyze products. In doing so, it helps testers promote an unbiased view as well as humanize their outlook of the product being tested (17).

While it is a detailed and effective method for technical communicators, usability testing is also an effective method for professionals in other industries. Usability testing can involve teams of testers and users, large budgets, and extensive methods. It can also be just as effective

as a smaller study, such as this one, with only one tester and fewer than 10 participants. Following the proper techniques to employ a usability study will ensure that a product will be more useful to its consumers. Usability testing gives an in-depth look at how users view a product and allows testers to continually evaluate how to best accommodate users. In Chapter Four, I will discuss feedback I received from the participants in this study and include data collected from the usability test.

# CHAPTER FOUR: FINDINGS

In this chapter, I discuss the findings of my usability study. First, I describe how I organized the data that were collected. I discuss participant feedback for sections of the online advising module. Then, I address the data collected from my observations of the usability data as well as results of the posttest survey. Finally, I summarize the meaning of these results.

A total of eight participants contributed feedback on the online module. Data collected from testing included

- Participant feedback
- Viewing time
- Number of errors
- Results from a posttest survey

Upon completion of testing with the participants, I organized the data into spreadsheets to determine the number of errors participants made during the usability test and the time spent viewing the online advising module by each participant. I also reviewed data regarding student satisfaction.

Participant feedback included oral comments and observations from the participants in the study regarding how they interpreted the content and suggested additional information they thought should be included in the module. I kept track of participant errors by writing the word error next to tasks on the script I used for each participant. I also recorded in my notes responses from the participants who would say, “oops” or something similar as errors. I also included how

many times participants made mistakes following the instructions presented to them during the usability test. The posttest survey measured the participants' overall satisfaction with the online advising module.

In summarizing participant feedback, I focused on the comments most frequently made about the online advising module first. These areas had obvious user issues that required the most attention. I also considered comments or observations made by only one participant or feedback about something mentioned only one time. Dumas and Redish believe that it is important to consider all feedback, even if something is mentioned by one participant, only one time. They explain this is because usability studies are usually limited to a small number of participants. One user could represent a larger group of users of the product. For this reason, it is important to consider all feedback. In this chapter, I discuss the participant feedback and how I used this feedback to modify the online advising module to better fit the needs of the users.

## Online Advising Module

The online advising module includes five sections. Each section aims to inform users about the CEDHP. The module includes sections about

- Design of the College
- Advising Tools
- College Resources
- Online Resources
- Program Policies

Some of the sections consist of only one slide while others have more than one slide. The theme of the online advising module is "What You Need to Know About Your…." The intention is to let users know that the sections included in the module are important to their experience as a

graduate student in the CEDHP. Using the word "your" as part of the theme is intended to create an individual connection to the user and establish a personalized feel to the module (Redish).

## User Feedback

The participants in the usability study were asked to give feedback on the online advising module. In this section, I discuss the parts of the module that were frequently commented on by the participants as being unclear, needing modifications, or both.

### Location of CEDHP Buildings

The location of the CEDHP's buildings was briefly mentioned in the online advising module. Participants 4, 5, and 7 commented that they wanted to know where the buildings are located on campus and what they housed. Participant 5 stated, "Most of my classes are in the Teaching Academy. I know professors' offices are in the main Education building, but I don't know what the other buildings have in them or where they all are."

### Program Listings

Participants were interested in seeing their programs' names in the online advising module. Feedback from the participants indicated that it was not clear to students which programs were included in Secondary Education. Participants 2 and 7 determined that the slide about the departments and programs was better suited as three separate slides. Participant 2, who is enrolled in the Reading Education MEd, pointed out that not all the programs were included in the program designation slide. She could not find her own program listed in the breakdown of departments that house the graduate programs. Participant 7 also indicated that he did not see his

program listed. Figure 1 shows a revised slide for the CEDHP's Child, Family, and Community Sciences department.

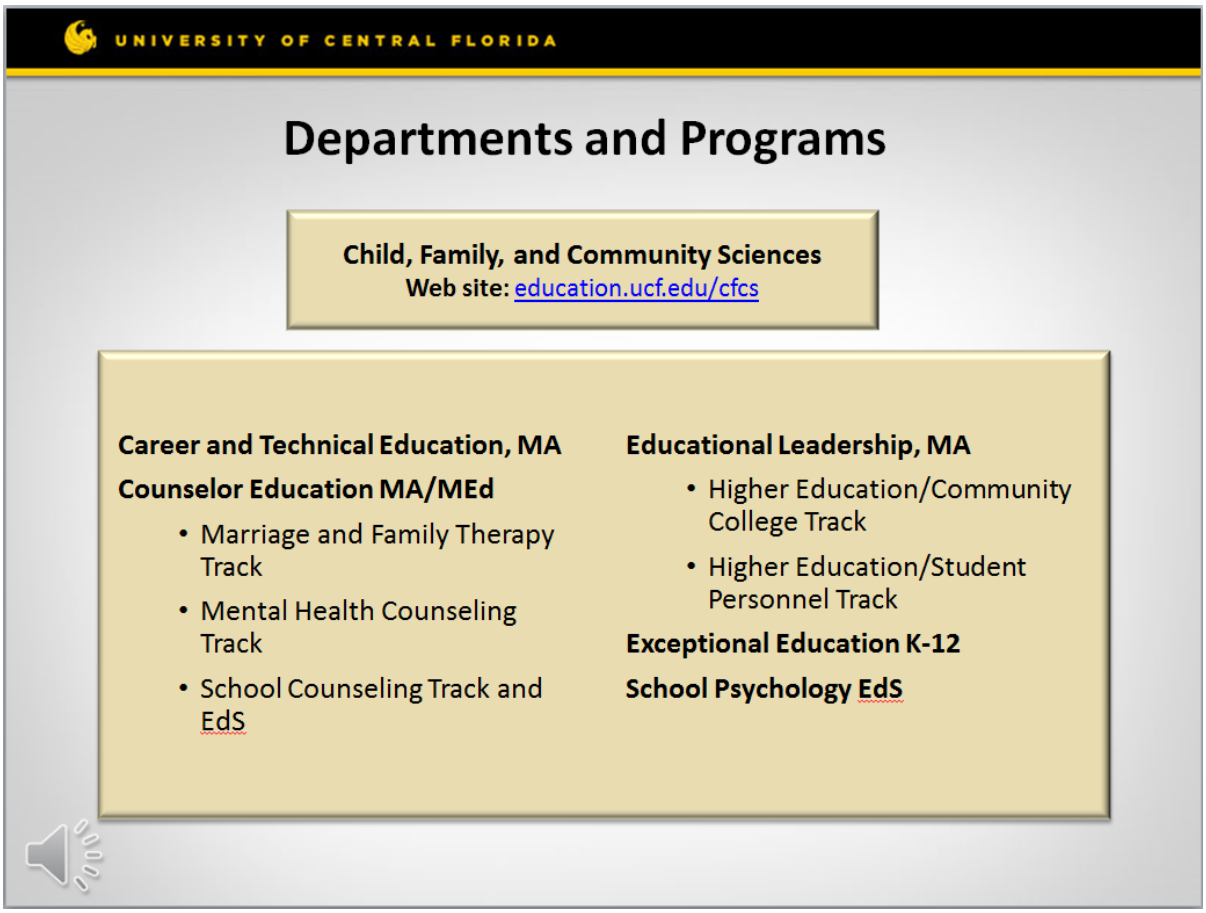



Figure 1: Departments and Programs Slide

Program of Study and GPS Report

A common observation made by all of the participants indicated that the Program of Study slide and the Graduate Plan of Study (GPS) Report slide were boring. Participant 1 suggested more color be added to the slide. Comments from Participant 7 mentioned the image of the Program of Study was sloppy and indicated that his Program of Study "looks nothing like

the example on this slide." Figure 2 shows the slide with the Program of Study template included in the module. Finding a good representative template of the Program of Study was a challenge, because different programs have different templates. While the documents for each program are similar, they do not look exactly the same. Recognizing that programs used different templates uncovered a challenge in trying to convey meaning through visual aids.

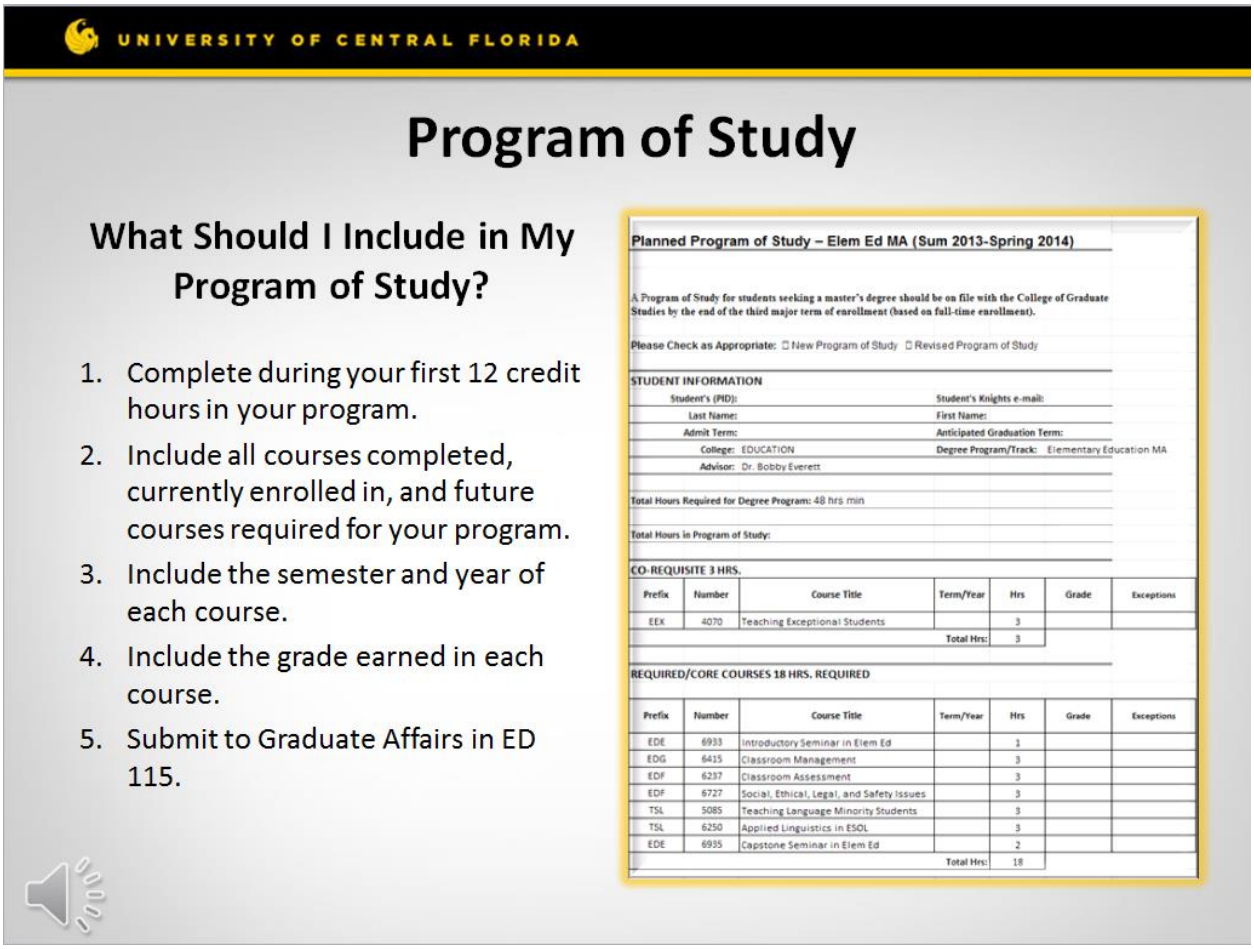


Figure 2: Program of Study Slide

Additional feedback from participants indicated that they knew what the program of study was, but it was not clear exactly what information was required for the document. Also on this slide, bulleted items were changed to numbered lists after participants reviewed the module.

Participants reported that the text on the Program of Study slide did not indicate steps as a bulleted list. Redish suggests that numbered lists will help users see how many steps are necessary for a task. Using numbered lists will also ensure that users complete all of the steps required for a task in the correct order.

### College Resources

Participants indicated the language in the resources section of the module was not clear. On the "What You Need to Know About Your…" slide, Participant 3 indicated that the term "Campus Resources" sounded like it included all resources on the UCF campus. Participants wanted language that was more specific to the CEDHP. Changing the term to "College Resources" signifies that resources in the online advising module were limited to those provided by the CEDHP. Also on this slide, the term "College Organization" led participants to believe this section of the online advising module was about student organizations.

Many of the participants were not familiar with the dedicated graduate student resources that the CEDHP provides to them. Only Participant 2 was familiar with all three resources: the Curriculum Materials Center, the Kysilka Graduate Student Study, and the Computing and Statistical Technology Lab in Education. The College Resources section needed to be explained further to include more detailed information about each resource because only one participant in the study indicated she was familiar with the CEDHP's academic resources.

### Graduate Program Policies

Several participants reported that the slide about graduate policies was hard to read. Participant 4 suggested the graduate program policies slide be reorganized instead of listing them

in a bulleted format. Redish supports using meaningful words, as hyperlinks are beneficial to users. She asserts that using the phrase "Click here" is not necessary for the web and explains that users are scanners and look for action language. Participant 6 suggested that the link to the full list of policies be replaced with clearer language. Concise language helps users who do not take time to read all the content of the page. It also helps avoid additional clutter and jargon on the page. Participants also wanted a way to view the full listing of graduate program policies, because not all graduate policies were listed on the page.

### Other Comments/Observations

Some of the participant feedback was not related to a specific section of the module sections. For example, Participant 6 indicated he would have been more interested in viewing the online module before entering the program. He indicated that the information included was more helpful before admission and not after having been enrolled in his program and "in the system." Participant 8 was not concerned with learning about the hierarchy of administration and departments within the College. She indicated that if she wanted to know, she would, "find out when I needed to. If I needed to meet with a department chair about one of my classes or something. Otherwise, I have no reason to know this information." The feedback from Participant 8 is a good example of not considering what the user wants but what the designer thinks is important for the user to know.

## Usability Task Data

As part of the usability test, I measured two tasks given to the participants.

1. Time spent viewing the online advising module

2. Number of errors made by participants

At the conclusion of the test I asked all participants to complete a survey related to their overall satisfaction with the module.

## Participant Viewing Time

Participants were timed while viewing the online advising module. I also counted the errors participants made when following the tasks. One of the questions I wanted to answer in this study was how long students spent viewing and navigating through the online advising module. I recorded the time that each participant spent viewing the module from the first slide to the last slide. Table 4 represents the time spent viewing the module by each participant.

Table 4

Participant Viewing Time

| Participant | Time in minutes |
|---|---|
| 1 | 34.58 |
| 2 | 33.77 |
| 3 | 35.70 |
| 4 | 31.43 |
| 5 | 22.17 |
| 6 | 60.38 |
| 7 | 37.27 |
| 8 | 26.65 |

## Number of Errors

The number of errors was recorded for each participant. Table 5 presents the number of errors made by each participant while viewing the online advising module. Participants were able to follow tasks asked of them while viewing the online module. No errors occurred with the tasks of the module. The findings showed that most of the errors made by participants were associated with the slide animation. Participants would click on a slide more times than necessary. It was unclear to participants how many clicks were needed for each slide to display all of the information. As a result, participants would advance to the next slide prematurely or begin the

audio on the slide before all the slide information was displayed on the computer screen. Advancing to a new slide prematurely was a consistent frustration among participants.

Table 5

Number of Participant Errors

| Participant number | Number of errors |
|---|---|
| 1 | 8 |
| 2 | 8 |
| 3 | 3 |
| 4 | 5 |
| 5 | 3 |
| 6 | 12 |
| 7 | 3 |
| 8 | 2 |

## Posttest Survey

Participants were given a Likert Scale–type survey to determine their satisfaction with the online advising module. This survey was given to the participants after they completed the usability tasks. The participants were asked to rate their satisfaction for five questions. Participants rated each question (1-5) as one of the following options: Strongly Agree (1), Agree (2), Neither Agree or Disagree (3), Disagree (4), or Strongly Disagree (5). Table 6 indicates the

participants' responses to the posttest survey. The posttest survey as given to the participants is also included in Appendix B.

Table 6

Posttest Survey Results

| Participant # | Question 1 | Question 2 | Question 3 | Question 4 | Question 5 | Question 6 | Question 7 | Question 8 |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 2 |
| 2 | 2 | 1 | 2 | 3 | 1 | 1 | 1 | 1 |
| 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 4 | 4 | 1 | 2 | 1 | 1 | 1 | 1 | 2 |
| 5 | 3 | 1 | 4 | 2 | 2 | 1 | 2 | 1 |
| 6 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 |
| 7 | 2 | 2 | 3 | 1 | 1 | 1 | 1 | 1 |
| 8 | 2 | 1 | 3 | 1 | 1 | 1 | 1 | 1 |

## Discussion

All of the participants completed the survey. Overall results of the survey indicated that participants liked the online advising module. Participants also reported that they learned something new about their college/program and that they would recommend the module to a friend. Table 6 displays the responses from each participant.

Question 1 asked whether participants were able to easily find the online advising module on the CEDHP website. One participant disagreed, one participant indicated not applicable. The remaining six participants agreed the module was easily to find on the CEDHP website.

Questions 2 asked if the module was well organized. Participants agreed or strongly agreed that the module was well organized.

Question 3 asked if participants preferred online advising. One participant indicated she disagreed to this question. Two participants responded with not applicable. The remaining five participants indicated they did prefer online advising.

Question 4 asked if participants learned new information about the CEDHP. Participants agreed or strongly agreed they learned new information. One participant indicated that this question was not applicable.

Question 5 asked if the online advising module helped participants understand the student resources available to them. Participants agreed or strongly agreed that they were aware if resources in the CEDHP available to them.

Question 6 asked if participants knew how to contact the Graduate Affairs office. Participants agreed or strongly agreed that they knew how to contact the Graduate Affairs office.

Question 7 asked if participants would recommend the online advising module to another student. Participants agreed or strongly agreed that they would recommend the online advising module to another student.

Question 8 asked if participants were satisfied with their experience with the online advising module. Participants agreed or strongly agreed that they would recommend the online advising module to another student.

## Limitations

The usability study I conducted included only graduate students currently enrolled in programs at the time of this study. Other populations such as potential students, students with disabilities, undergraduate students attending graduate-level courses, and non-degree seeking students were not included in this study. These students, although with specific needs, could also benefit from an online resource geared at advising graduate students.

## Conclusion

The amount of time that participants spent viewing the module was consistent. Most of the participants needed about a half hour to view the entire module and provide feedback. Also consistent in the findings were errors made by the participants. Again, most participants were unsure of the animation included in the slides and advanced to other slides too early. Feedback from the participants was beneficial in uncovering elements of the online module that students did not find helpful. The final version of the online module was shaped by the participant feedback and my observations made during the testing. The participants' feedback helped to identify information they felt was most important to graduate students in the CEDHP.

Overall, participants liked the online advising module. Many of them found some type of information within the module that was new or useful.

# CHAPTER FIVE: CONCLUSION

Advising is an integral practice in higher education. However, the pursuit to move advising to an online format has introduced new challenges. Technical communication can play a role in higher education because it can help institutions save time and money. Technical communicators can contribute to student advising by developing online advising modules for academic programs and student groups that will provide important information to large populations within the university. This contribution allows universities to serve more students with fewer resources. Further, employing user-centered design allows designers and advisors to identify the information that is most needed by graduate students in a manner that suits students most appropriately.

The findings of this study showed that participants did benefit from an online advising module. Participants in the study provided positive feedback and reported that they would likely recommend an online advising resource to another student. This feedback suggests that students viewed the module as a trusted resource. Crawley (2012) has stated that a feeling of connection is important to online learners, and students who have access to an accurate online advising module can use it to feel connected and supported;  Using principles of technical communication, I developed a way to provide detailed information to students about important resources that they may not have known about or taken the time to investigate themselves. For example, instead of just providing a slide about our statistics lab, I offered more information to include what students could expect to gain from such a resource, what software they had access

to, and which faculty members offered assistance. Byrne (20080 and Redish (2012) suggest using plain language when writing online content. Using conversational tone made the delivery of the information more informal and accessible (Redish 2012). Conversational language as online text will help establish a connection between the student and the institution, supporting Crawley's (2012) claim that establishing a connection to students is essential for online learners to feel supported and valued.

My goal for the online advising module was for students to feel confident that they received accurate information through a convenient, online format. I wanted to include information similar to what students would receive during a face-to-face meeting with an advisor. A study by Beile and Boote (2005) examined an online tutorial for a university library that measured whether student learning outcomes were significantly different in an online format versus a face- to-face format. The study showed there was little difference in learning outcomes. Beile and Boote's study supports the argument that an online advising module would be a good resource for graduate students. Further, an online advising module would be an effective communication tool for higher education institutions. Technical communicators can also use these findings to collaborate with higher education institutions in order to further advance and streamline communication methods for universities. Academic advisors can also benefit from technical communication skills and employ their own usability studies to test online advising modules as a way to better communicate with their students.

Usability studies provide a good way to understand how graduate students interact with an online advising module. When conducting research for this study, I found that there were no examples of usability studies directly related to academic advisement modules. The majority of research was related to university library websites and transfer students. While these studies were

helpful, there was little information specifically about using online advising modules for graduate students that did not involve a library website. This lack of information surprised me, because students rely so much on technology as part of their daily lives. Further, higher education institutions offer many student services via the Internet, and it would seem logical that research to determine the effectiveness of online advising modules could have been performed before now to draw conclusions about the use of these modules.

## Relevance to Technical Communicators

This thesis examined the usability of an online advising module I created for the CEDHP. The study supports the claims made by Nielsen ("Usability 101") and Barnum that most of the major flaws in online content can be determined with only a few users. This study also supports the research reports of Dumas and Redish, Nielsen and Loranger, and Krug (2000) that state that designing and writing content for online formats serves as an effective communication tool. Finally, this usability study supports research that user-centered design is a worthwhile investment of time and resources to determine effective communication strategies.

Higher education institutions demonstrate a need for technical communicators' expertise. As the demand for better and more advanced Internet resources for graduate students increases, higher education institutions would benefit from training advisors to apply technical communication concepts in their communications to students. An example could include implementing user-centered design strategies to recruit and retain students. Advisors are not usually designers of websites, yet many of them are responsible for creating content and updating information that students rely on for information. Other universities can benefit from this study by employing a usability study to determine whether students are benefiting from online resources provided by the institution.

Students and advisors have many ways to communicate electronically: email, web pages, and instant messaging, among others. Not all students will prefer the same type of communication. I created this tutorial as an advising tool for students who are looking for more detailed information about the College of Education and Human Performance. An orientation format was not appropriate here because the students who view this tutorial are currently active in their programs and do not need an introduction. In addition, a frequently asked question (FAQ) page would also not be a preferred choice as it would contain too much text, does not allow for visual elements, and does not present individual ideas as a PowerPoint slide can.

PowerPoint is a familiar presentation platform for students as well as an approved format for presentations at UCF. In addition, since users' technological abilities may range from novice to expert, PowerPoint is a good choice due to its easy navigation. For these reasons, I chose to use PowerPoint as the format for the online advising module. Students on campus are guaranteed accessibility to the online advising module. The downside to using PowerPoint as the platform for the module is that students who do not visit campus regularly or who are distance learners may not have access to PowerPoint software.

I did consider other platforms. Prezi and PDF documents are two alternative presentation formats. Prezi is presentation software that enables designers to use more creative means as a way to present work, ideas, or processes. However, not all students may be familiar or have access to the software because it is a newer format. In addition, Prezi does not align with the simple navigation that is most beneficial to users. The PDF format allows more flexibility for visual appearance such as opening directly into slideshow mode and automatic looping. While these features are useful, the PowerPoint format remains a better choice because of its

widespread use and simple navigation, and, importantly, students are accustomed to using it, as it is the platform already in use at our office .

## Recommendations for Further Research

The online advising module examined in this study was tested on students currently enrolled in graduate programs in the College of Education and Human Performance (CEDHP) at UCF. This module could serve as a helpful resource to other audiences within the university community. As mentioned in Chapter Four, my usability study was limited to one population within the university community. Current students reported that they learned something new about the CEDHP through this online advising module, and there are other populations on a university campus that could benefit from an online advising module. These audiences include prospective students, undergraduate students, students with disabilities, faculty and staff, and students from other colleges and programs at UCF. The findings of this study demonstrated that participants benefited from the online advising module. Following the procedures of this study, it can be assumed that other student populations could also benefit from an online advising module. In order to serve these different populations, designers should employ user-centered design to determine specific needs for each group. Additional research and testing would be needed for these groups to determine whether one resource is most beneficial to all groups.

Online advising modules could be useful for specific procedures graduate students must complete while enrolled in their programs. These processes include entering candidacy (for thesis and doctoral students) and applying for graduation. At UCF, graduate students are required to follow specific guidelines to document milestones in their program. Milestones such as entering candidacy and applying for graduation are presented in different formats (electronic and hard copy), require different forms or processes, and are not always student centered. While it is

important that students know how to complete these tasks, they do not necessarily need to learn the tasks or processes. In most cases, students are only going to complete these tasks one time. An online advising module would be helpful for programs and colleges that want students to follow specific program procedures in addition to university procedures.

While the online advising module benefited graduate students, expanding the online advising module could further benefit students in the advising process. Further research on the following components is suggested to determine whether students would find the online advising module more beneficial.

- Include a survey at the end of the module to continue to evaluate user needs and preferences. Add interactive areas to the module such as the campus map.
- Allow students to see more areas of the campus than just the CEDHP's buildings to help students have a better frame of reference of where there are located on campus.
- Link the campus map to other offices on campus that offer student services, for example, parking services to purchase a parking permit and the visitor center to schedule a campus tour.
- Add narration to supplement the visual and text elements of the module. Offer another way to get the message to students.

Other ways to broaden an online advising module could be to include multimedia components. Interviews with students and program faculty and virtual tours of the student resources housed in the college buildings could also be included in the content of the module. However, although multimedia would be interesting to incorporate, Nielsen and Loranger assert that users visit the web and stay on pages for content, not necessarily for imagery. Video can be

helpful, but one study found that users who watched an instructional video on a website actually did not prefer the video format because it was more difficult to pause and "rewind" the parts of the videos that they needed to repeat. When it comes to performing tasks, users benefit most from simple navigation and language (Nielsen and Loranger; Dumas and Redish).

A final suggestion for future research would be the broadening of the process of evaluation and feedback. This study incorporated a survey to ascertain students' evaluation of the helpfulness of the module. A further study could make changes to the module based on student feedback and then could test another group of students to ascertain whether the changes resulted in a more effective module as measured by response times and students' perceptions of the module's helpfulness compared with the student responses in the original study. This process could be executed iteratively, yielding an improved module that would be more precisely tailored to the needs of the target population.

## Conclusion

Advising online has benefits that go beyond convenience. It has the potential to reach a global audience and provide a cost-effective resource for student retention and success. Academic advisors are surpassing simple measures in online advising so that all students benefit from the convenience of a virtual medium. Online advising has become more than electronic forms and other printed material displayed on a website. As Underwood  mentioned, institutions are expected to provide services using technology that matches students' high-tech demands. The arrival of web-based video, instant messaging, and collaboration tools has already dramatically changed the methods by which advisors communicate with their students. Technical communicators have the opportunity to provide universities with a competitive edge with user-centered technologies, including online advising modules. An online advising module establishes

reliable access to information that respects the time of both students and advisors. Furthermore, an online advising module gives students exposure to online communication that will be important for their future professional careers.

Because technology changes so quickly, advising with web tools will continue to evolve. Usability testing is a good way to determine whether an online advising module is truly useful. Designers, advisors, and students should participate in testing online advising modules to ensure that user needs and expectations are met by higher education institutions.

Higher education institutions must remain current and demonstrate their impact in order to stay competitive in the marketplace. By offering a convenient method for advising, institutions not only recognize the importance of equipping their students for success, but also recognize the benefit of making their students feel connected, supported, and valued. Students have many options when it comes to choosing an institution. Colleges and universities that can connect with their students and understand the value of their students will attract and retain more students.

# APPENDIX A: SURVEY QUESTIONS AND TEST SCRIPT

## Testing Script

### Part I: Introduction

Thank you for agreeing to participate in this usability study. The goal of this study is to provide graduate students with an online advising module that will serve as an easy and helpful resource to answer questions about academic requirements while enrolled in a graduate program.

Your experience today, including your comments and observations will be recorded and used to better understand graduate students' needs and how they search for information.

Today's study has four parts:

1. Signing the waiver of participation
2. I will ask you some questions about yourself, your graduate career, and your familiarity with our current website.
3. I will ask you to complete some tasks using our website and presentation.
4. I will ask for your general feedback on the presentation.

I appreciate your participation today. The goal of this project is to test the usefulness of an online presentation for graduate students. Your computer skills are not being examined. Please try to voice your thoughts out loud as we move through the tasks and share any frustrations you encounter. This will help me identify how we can create a more helpful resource for you. I will ask each question aloud.

Once we have completed the tasks, I will ask you a few more questions about your overall experience.

### Part II: Questions and Tasks

<u>Intro Questions</u>

1. What level of degree are you working toward?
2. In what graduate program are you enrolled?
3. How often do you visit the UCF College of Education website?
4. How often do you refer to the Graduate Affairs page of the UCF College of Education website?
5. For what purpose do you visit the website?
6. If you do not visit the UCF College of Education website, can you please tell me why?
7. If you are not able to find what you need from the UCF College of Education Graduate Affairs website, how do you find answers to your questions?
8. Have you used an online advising module before?

<u>Tasks</u>

3. From the main page of the College of Education's website, please find the Graduate Affairs page.

4. In the Graduate Affairs page, please show me where you would look for an online advising module.
5. Please find the online advising module.

6. Please open the module.

7. What does the Introduction slide/Title slide tell you about this module?

8. Please go to the Contact Us slide.

9. What do you notice first about the Contact Us slide?

10. Please go to the Program Agenda slide.

11. Looking at this slide, can you tell me what this module is about?

12. Please advance to the College Design slide. The next five slides contain general information about the CEDHP. Please click through the next five slides and let me know when you have finished.

13. Now that you have looked at the slides about the CEDHP, can you tell me if you learned any new information about the college by looking at these slides? If so, what information?
    a. Did you use the audio while viewing the slides?
    b. How did you know there was an audio component?
    c. Can you tell me the name of one of the College Deans?

14. Please advance to the Advising Tools slide. This is our second section. It is about advising tools. Please click through the next two slides and let me know when you are finished.

15. Now that you have looked at the slides about advising tools, can you tell me if learned any new information about the college by looking at these slides? If so, what information?
    c. Can you tell me when you must complete your Program of Study?
    d. What do you think of the graphics on this slide?

16. Please advance to the College Resources slide. This section is about resources within the college dedicated to student success. Please review the next three slides and let me know when you are finished.

17. Now that you have looked at the slides about student resources, can you tell me if learned any new information about the college by looking at these slides? If so, what information?

    a. Have you used any of these resources?
    b. Is there information not included here about these resources that would be helpful to you?
    c. What do you think of the graphics on this slide?

18. We have 2 sections left including this one. This section is about online resources. Please click through the next two slides and let me know when you are finished.

19. Now that you have looked at the slides about online resources, can you tell me if learned any new information about the college by looking at these slides? If so, what information?
    a. Have you used these resources? If yes, for what reason? If not, why?
    b. What do you think about the graphics on this slide?
    c. Without clicking on the links on this page, where do you think they take you?

20. Please advance to Program Policies slide. This is our last section. This section is about graduate program policies. Please review the next 2 slides and let me know when you are finished.

21. Now that you have looked at the slides about graduate program policies, can you tell me if learned any new information by looking at these slides? If so, what information?

    a. Does this information about graduate program policies help you in determining courses for your program?
    b. Were you aware of these program policies?
    c. What do you think about the layout of this slide?

This concludes questions about the online module. Next, I will ask you some questions about the online module.

**Part III: Exit Questions**

1. What did you like most?

2. What did you like least?
3. Were you able to find out new information about the CEDHP through the online module?
4. Was this module helpful to you?
5. Did you feel this module was organized?
6. Did you find this module was hard to navigate?
7. Do you have questions about graduate program related information that was not addressed in this session?

**Part IV: Conclusion/Follow-up**

This concludes the usability test. I will now ask you to complete a brief survey about your experience. Once you complete the survey, you may leave the testing area.

Again, thank you for your time and assistance today. I appreciate your feedback and welcome your suggestions. Your help today has helped me to determine how to better serve graduate students like you through an online advising module.

# APPENDIX B: STUDENT SATISFACTION SURVEY TABLE FORMAT

**Student Satisfaction Survey**

| | Strongly Agree | Agree | N/A | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| 1. It was easy to find the online module on the CEDHP's website. | 1 | 2 | 3 | 4 | 5 |
| 2. The module was well organized. | 1 | 2 | 3 | 4 | 5 |
| 3. I prefer online advising. | 1 | 2 | 3 | 4 | 5 |
| 4. I learned new information about the CEDHP. | 1 | 2 | 3 | 4 | 5 |
| 5. The module helped me understand student resources available to me. | 1 | 2 | 3 | 4 | 5 |
| 6. I know how to contact the Graduate Affairs office. | 1 | 2 | 3 | 4 | 5 |
| 7. I would recommend this module to another student for advising purposes. | 1 | 2 | 3 | 4 | 5 |
| 8. I am satisfied with my experience. | 1 | 2 | 3 | 4 | 5 |

# APPENDIX C: IRB LETTER

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

# Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**
**FWA00000351, IRB00001138**

To: **Leah Mitchell**

Date: **March 24, 2014**

Dear Researcher:

On 3/24/2014, the IRB approved the following activity as human participant research that is exempt from regulation:

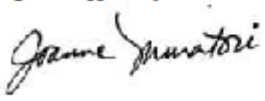
| | |
|---|---|
| Type of Review: | Exempt Determination |
| Project Title: | Creating and Examining An Online Advising Module for Graduate Students: A Usability Study |
| Investigator: | Leah Mitchell |
| IRB Number: | SBE-14-10104 |
| Funding Agency: | |
| Grant Title: | |
| Research ID: | N/A |

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 03/24/2014 03:47:30 PM EST



IRB Coordinator

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