CREATING AND USING INTERACTIVE PRESENTATIONS IN DISTANCE EDUCATION COURSES: A VIEW FROM THE INSTRUCTOR'S CHAIR

by

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CHAPTER 1

INTRODUCTION

For instructors teaching in distance education learning environments – either courses offered completely online or as a blended mix of face-to-face meetings and online activities – many choices are available to facilitate the creation of instructional materials. Some instructors approach the development of their online content by integrating newer technologies such as Second Life®, Glogster®, or mobile device gaming applications. For others, many of the "tried-and-true" technologies from the face-to-face classroom environment serve as the vehicles to create instructional materials. Included in these technologies are presentation programs such as Microsoft's PowerPoint® or Apple's Keynote® software.

Questions about the use of presentations created with these programs have arisen, however. There is an interest in knowing more about the impact this format has upon students and learning. Some have examined the effectiveness of PowerPoint®, specifically, as it relates to student engagement and achievement. Others have examined individual aspects related to the design of presentations, including the display of visual and textual information and its impact upon cognitive processing.

Newer developments in this research area are turning towards the examination of new features that can be added to presentation slides, such as embedded video, audio narration, and interactive hypermedia elements. These features are made possible by new functions available not only in standard presentation software packages but also in new hybrid programming tools in which interactive elements are overlaid onto a presentation
slide base. The resulting product is one that truly represents the characteristics of multimedia – the integration of multiple mediums into a single presentation.

**Statement of the Problem**

While researchers investigate the impact of interactive presentations on students and learning, the experiences of those creating these types of materials should not be forgotten. The time and effort needed to create interactive presentations is not trivial. Creating high-quality, effective presentations involves not only subject matter expertise (content knowledge) but also familiarity and skill with technology as well as with pedagogical strategies to facilitate learning from these instructional materials. Given the demands on today's teaching faculty, why would an instructor take on the task of creating and using these types of materials in their blended and/or online courses? In addition, what can be learned by exploring the processes by which instructors create interactive presentations?

**Purpose of the Study**

This study seeks to shed light on these questions using a case study research design. Instructors at a Midwestern metropolitan university were identified through the researcher's personal experiences and recommendations from departmental chairpersons, distance education coordinators, distance education program directors, and other instructional design support personnel. Individuals were interviewed to gather their recollections and reflections on their experiences in creating and using interactive presentations in their blended and/or online courses. Sample presentation files were collected and analyzed as data to assist in understanding. Lastly, observations of the placement of these presentation files and the associated descriptive information for the
use of these files in the instructor's course in the learning management system were examined. These multiple sources of evidence were analyzed to identify common themes. At the conclusion of this paper, resulting understandings are discussed and related to existing research where appropriate. Implications for instructors and for instructional design/instructional technology support staff are also highlighted, with suggestions for further research offered.

Definition of Terms

To ensure proper understanding, it is important to list and define key terms used in this study.

Instructor: Professional educator who teaches course(s) for university credit. These may be individuals who are full-time faculty with or without tenure status or adjunct faculty/instructors who teach part-time.

Interactive Presentation: An interactive presentation may be characterized as an audio voice-over slide presentation usually created with software applications such as Microsoft PowerPoint® and/or Apple's Keynote®. In addition, presentations incorporating voice-over narration plus other interactive elements such as self-assessment formative quizzes or elements requiring the viewer to manipulate objects on the slides, usually created with software such as Camtasia®, Adobe Captivate®, and/or Adobe Presenter®, are included in this definition. Excluded from this definition are lecture capture (recordings of live, in-class lectures saved for future use) or recordings from Web conferencing presentations created with such tools as Echo 360® or Adobe Connect®.

Distance Education: The phrase "distance education" serves as an overarching concept of instructional delivery mode. The definition from the North Central
Association's Higher Learning Commission (2013) describes distance education as "education that uses one or more … technologies … to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor, either synchronously or asynchronously" (para. 4). This definition is used as a broad, umbrella framework under which specific course definitions are situated.

**Blended Course:** The Midwestern metropolitan university's definition of a blended course is used for this study. It defines a blended course as any instructional offering for academic credit, professional credit or non-credit, during which interaction between instructors and students is a combination of distance education and traditional face-to-face activities in a planned, pedagogically valuable manner. The percent of instruction that occurs via distance delivery may vary from 50% to 99%. (L. Keel, personal communication, May 15, 2013)

**Online Courses:** For the purposes of this study, the Midwestern metropolitan university's definitions of online courses is adopted – "[An online course is] an instructional offering for academic credit, professional credit or non-credit, during which 100% of instruction and course materials are delivered via Web-based or Internet-based technologies" (L. Keel, personal communication, May 15, 2013).

**Central Research Question and Subquestions**

The central research question for this study is: How do instructors who create interactive presentations for their blended and/or online course(s) at a Midwestern metropolitan university describe their experiences?
Specific subquestions include:

- Why do instructors create interactive presentations for their blended and/or online course(s)?
- How do instructors use interactive presentations in their blended and/or online course(s)?
- How do instructors describe the processes by which they create interactive presentations?
- Where do instructors look for assistance when creating interactive presentations?

**Delimitations**

Yin (2014) describes the importance of defining the case and "bounding the case" (p. 33) in case study research design. For the purposes of this study, the following delimitations apply:

- Participating instructors are drawn from one metropolitan university in the Midwest. These instructors may differ in characteristics and experiences from each other and from other instructors at this or other high education institutions.
- Interviews with participants are completed within one academic semester. Experiences with creating instructional materials change over time. This study serves as a snapshot view of the instructors' experiences.

**Limitations**

Creswell (2007) describes the use of a purposeful sampling approach in qualitative research. Purposeful sampling involves the selection of "individuals and sites
for study because they can purposefully inform an understanding of the research problem and central phenomenon in the study” (p. 125). For this study, participants were selected because they could offer insights into experiences at a Midwestern metropolitan university as they related to the creation and use of interactive presentations for distance education courses. Results of this study may only be relevant to participants, other instructors, and instructional support staff at the university. Generalizations to other instructors in other educational environments or to other instructional technologies should not be drawn.

**Significance of the Study**

This study may be valuable for several reasons. The findings of this study may assist in shedding light on instructor decisions and possible motivations for creating and using interactive presentations. Others may use this exploration of experiences as a starting point for reflecting on their own experiences in using instructional technologies to support teaching and learning. The instructors interviewed as part of this study may benefit from reflecting on their own professional development. Their recollections and reflections may be useful in shaping professional growth decisions.

Capturing direct instructor insights through in-depth interviews, artifacts, and observations provides the opportunity to offer perspectives not fully represented in the current research literature associated with distance education and instructional technology. While much research has been completed on the impact of instructional materials and technologies on the student experience, instructor descriptions of the creation processes and use intentions are lacking.
From a personal perspective, I will use the insights gained from this study to inform the instructional design and consultation support I offer. With a better understanding of the needs, challenges, and experiences of instructors creating these types of materials, I may be able to more critically review the support resources and services offered by my institution for their usefulness and effectiveness. Forging stronger relationships with the instructors at my institution can also lead to further progress towards institutional strategic goals as well as instructional technology innovations in support of student learning.

**Organization of the Study**

This dissertation is comprised of six chapters. Chapter One serves as the introduction to the study, providing a brief overview of the topic and introducing broader details of the study to be conducted. A selected review of the literature on research pertinent to instructor use of interactive presentations is highlighted in Chapter Two. Chapter Three provides an in-depth description of the methodology used in this study. Profiles of participants and descriptions of their experiences – their individual cases – are presented in Chapter Four. Themes resulting from an analysis of the data across the cases are featured in Chapter Five. Discussion of the findings, conclusions and implications drawn from the research, and suggestions for future areas of research complete the study in Chapter Six.
CHAPTER 2

REVIEW OF SELECTED LITERATURE

Introduction

The integration and adoption of instructional technologies into higher education teaching and learning environments has long been under the study of researchers. That said, it is only within the past 10 years that PowerPoint® and the use of electronic slide presentations as a specific instructional technology have come under scrutiny. Inquiry into the effectiveness of and student preferences for PowerPoint® presentations dominates the literature in this area. Perspectives from the instructor point of view are rare, though attempts have been made to understand when and how faculty use PowerPoint® as an instructional technology. This chapter provides a selected review of the research literature on the use of PowerPoint® presentations, in particular those presentations that have been enhanced with voice-over narration and/or interactive elements and that have been used in distance education environments. This literature provides larger context for this study and helps situate the activities of individuals at a specific institution in this bigger picture.

Impact of PowerPoint® Presentations on Students

One of the earlier examinations of PowerPoint® in relation to the student experience was Adams' (2008) investigation of PowerPoint® in the college classroom. She was particularly interested in the “lived experiences” of students as they were shown PowerPoint® presentations in their classrooms. Using a hermeneutic phenomenological approach, Adams utilized her own recollections of her experiences as an audience member viewing PowerPoint® lectures as well as interviewed 14 students from the
University of Alberta. She concluded PowerPoint® provided curricular structure to guide a teacher through his/her presentation. However, it did not accommodate unexpected teaching situations that may arise in a classroom environment. It is a challenge to modify slides during a discussion to react to student questions or other “in the moment” situations. In addition, Adams contended, “PowerPoint® may impose … a certain dispositional style that may determine in a favorable or unfavorable manner how knowledge is internalized [and] understood” (p. 77).

The impact of the delivery method of instructional materials on student achievement was studied by Stephenson, Brown, and Griffin (2008). The researchers were interested in whether virtual lectures – defined as Web-based text content enhanced with navigational elements, video, and interactive self-assessments – and e-Lectures – defined as synchronized PowerPoint® slides plus voice and/or video of the lecturer – were as effective as traditional lectures delivered "live" in a classroom setting. To determine efficacy, scores on questions included in a paper-based assessment were used. Students in a human genetics course at Brunel University were divided into three groups and given access to course materials delivered via the three lecture styles (traditional, virtual, and e-Lecture). All groups "received identical subject material … but the content … was taught through different delivery styles" (p. 642). Analyzing the test questions by delivery style and question type as associated with Bloom's Taxonomy levels, the results showed e-Lectures were most effective for questions at the knowledge level. However, as compared to traditional lecture and virtual lectures, e-Lectures were least effective of the three delivery modes overall.

Lents and Cifuentes (2009) explored the idea of Web-based lectures and whether
they were more effective than traditional lectures in a required biology course for forensic science majors in the John Jay College of Criminal Justice at The City University of New York. Lents, the instructor of three sections of the course, created voice-over PowerPoint® presentations using TechSmith’s Camtasia® software. Student participants in two of the sections received the traditional lecture presentation of course information, while a third section of the course received the voice-over PowerPoint® presentations. Exam scores for all sections are compared, with those questions drawn specifically from material covered only by the video lectures receiving specific attention. Although no statistically significant results were discovered – students in the section receiving only the voice-over presentations “[fared] as well as their counterparts” (p. 43) – the authors conducted further explorations through informal discussions with the students and discovered preferences for the voice-over presentations. Students mentioned the abilities to pause the presentations, to consult other materials during the presentations, and to rewind and repeat the viewing of the presentations as advantages over the traditional in-class lecture. The authors also noted they may have “selected the course that most lends itself to this medium” (p. 45).

Savoy, Proctor, and Salvendy (2009) examined the use of PowerPoint®, with a specific focus upon how information should be presented to maximize retention. Four hypotheses were offered by the authors: PowerPoint® has a negative effect on the retention of verbalized (e.g., audio) information; information on the PowerPoint® slides has higher perceived importance than other information; more information is retained when PowerPoint® is not used than when it is; and students will prefer the use of PowerPoint® presentation over traditional lecture (p. 860). To determine whether these
hypotheses were supported, an experiment was performed where over 40 students enrolled in an engineering course at Purdue University were presented with two lectures offered in two different delivery modes: one using a traditional lecture approach where the instructor presented course material verbally with a chalkboard used to draw graphs and figures as they are needed; the other mode involved the use of basic PowerPoint® slides (no animations) and the instructor elaborating on slide content verbally. Quizzes structured to measure student recognition and recall of information through multiple-choice questions were given after lectures in each style were delivered. A questionnaire was used to gather data on student preferences for presentation delivery style. Using a between-subjects factorial design for analyzing the data, analysis of variances (ANOVAs) showed significant differences in quiz scores for information presented verbally without any visualization (traditional lecture) and information presented with visuals (PowerPoint® plus verbal presentation). The results “suggest that the presence of PowerPoint® negatively affected the recall of auditory information” (p. 864). Conducting further analysis, Savoy, Proctor, and Salvendy discovered recall of information presented visually during the traditional lectures and PowerPoint® presentations did not differ significantly. “There was no notable gain when using PowerPoint® to display graphic information” (p. 864). However, the researchers note the visuals used in all of the lectures were basic graphs and alphanumeric text; no animations or complex diagrams were used. PowerPoint® may be better able to accommodate more complex audio/visual materials than lecture alone.

Holbrook and Dupont (2009) created PowerPoint® lecture slides with voice-over narration for their biology courses at the University of Waterloo. In order to gain insight
into "how [students] used these materials and whether they reported that they missed more classes after these multimedia files became available" (para. 1), the authors made the enhanced lectures available as MPEG-4 (.mp4) video files accessed through iTunesU. Over 800 students were asked, via an online survey, to report their use of the materials as well as their perspectives on whether having access to these materials changed their class attendance behavior. Students reported using the files to "understand a concept not understood in class; to help with note taking; and to help if a class was missed" (para. 6). Only one-third of the students reported that their class attendance changed because of the availability of the podcasts.

In an effort to study the adoption of video-based distance learning, Geri (2011) used two economics courses at the Open University of Israel to examine persistence and academic achievement before and after video lectures were introduced as instructional materials. Four semesters' worth of exam scores for over 5,000 students were used as the basis for discovering the impact of the video lectures on academic achievement. While students indicated a preference for traditional, face-to-face lectures, those receiving the video lectures did show some academic improvement on exams when compared to their traditional lecture counterparts, though the difference was not significant.

Sharp and Schultz (2013) created videos lectures using Adobe Captivate® and voice-over narration for a course on C# programming at Tarleton State University. Their goal was to determine whether these instructional materials were effective in teaching programming languages in online and face-to-face learning environments. Two sections of the computer science course were used, with one section offered completely online and the other as a traditional, face-to-face course. Students in the online course received only
video lectures, while those in the face-to-face course received traditional lecture with the video lectures used as supplementary materials. Using a 15-question survey to gather feedback, 35 participants self-reported their preferences and opinions on the video lectures. The majority of the students (over 80%) rated the video lectures as useful, preferred over textbook readings, and helpful in getting to know their instructor. The researchers commented that while "the creation of videos [was] time consuming for the faculty member, … the high levels of reported usefulness and the fact that any students depended on the video more than their textbook to understand the concepts in the class, seem to indicate that the time was well spent" (p. 38).

These studies show the impact of PowerPoint® presentations on student achievement is mixed. For some disciplines and for assessing student learning at lower levels of Bloom's Taxonomy of cognitive domains, interactive presentations are as effective as traditional lecture presentations. For others, there are no significant differences between delivery modes. As for student preferences regarding the use of interactive presentations, most students found them to be helpful when it comes to organizing course content and reviewing concepts.

The majority of these studies were completed as comparisons between interactive presentations in online environments and presentation of the same material in face-to-face classroom settings. Questions remain as to effectiveness of interactive presentations in blended and completely online courses where these materials may be used as the sole mechanism for course content. In addition, few of the studies provided details as to how students were instructed to use the materials. In face-to-face environments, this instruction may not be needed since students are familiar with direct instruction in a
lecture environment; however, in distance education environments, explicit instruction on the use of interactive presentations may be a critical element in relation to the question of effectiveness. Instructors creating and using interactive presentations in distance education environments may need to be familiar with these studies and to reflect upon their own expectations for these materials when it comes to students.

**Interactive Presentations from the Instructor Perspective**

A few attempts at understanding the instructor perspective when creating and using interactive presentations have been made. Topics have ranged from identifying appropriate software applications to create these materials to the influence of PowerPoint® on information presentation decisions. In addition, instructor preferences in determining when to use interactive presentations have been studied.

Pace and Kelley (2006) reviewed software tools available to instructors interested in creating multimedia presentations for distance education courses. Included in the tools highlighted were Microsoft PowerPoint® and Camtasia Studio®, among others. The advantages to creating multimedia presentations with these tools were the ease of access most instructors have to this technology and the ability to create materials quickly. PowerPoint® software was readily available with the Microsoft Office® suite that most instructors have already installed on their computers. In addition, presentation creation and post-production editing with these tools did not require extensive professional multimedia expertise or equipment. These features may influence an instructor’s decision to create instructional materials with these tools.

Catherine Adams (2006) delved deeper into instructor use of PowerPoint® in higher education classrooms. With the goal of gaining insight into how PowerPoint®
shapes an instructor’s “habits of mind” in creating and delivering subject knowledge, Adams used McLuhan's (1988, as cited in Adams, 2006) 4 Laws of Media (enhance, reverse into, retrieve, and obsolesce) to analyze her own personal reflections and observations of PowerPoint® use. Twelve themes emerged from this analysis. The ability to "point more accurately, vividly, and rapidly to text and image" (p. 398), to convey importance of subject matter concepts (p. 399), to provide a snapshot of an instructor's perspectives on course concepts at a given time, and to serve as a springboard for further discussion were offered as positives in relation to the use of PowerPoint® slides. With positives come negatives, though. Adams commented on those features that may not be so positive for student and instructor. These included the loss of richness of a concept by simplifying its complexity for representation in a bulleted list, the obscuring of the processes by which an instructor has arrived at his/her perspective on a subject matter, and the inflexibility of the medium to accommodate situations where discussion and dialogue are occurring. Instructors creating and using PowerPoint® presentations may take these advantages and disadvantages into consideration when working with these materials. Their decisions may be reflected in the design of the materials themselves as well as in the placement and instruction for use accompanying these materials in blended and online courses.

Burke, James, and Ahmadi (2009) examined faculty use of PowerPoint® at the University of Tennessee at Chattanooga as a secondary element in a study on student perceptions of PowerPoint® use in business courses. Over 200 students from 14 courses within the business and management discipline completed a survey questionnaire to rate the perceived effectiveness of the presentations. The results of this survey showed
PowerPoint® presentations to be most effective in management, marketing, and economics disciplines. The researchers attributed this to the structure of knowledge within the disciplines themselves, noting the use of PowerPoint® to cut through a mass of content could best be applied to "disciplines rife with theory" (p. 249). Faculty members at the same institution were surveyed to gain an understanding of the prevalence of use of PowerPoint® as well as to identify those features of the tool used most often by these individuals. Their responses indicated moderate use of PowerPoint® – 41% of those surveyed used slides in the classroom (p. 248). In addition, the features most often used were specific slide background designs, colored fonts to emphasize content, and charts and graphics used to illustrate course concepts. The structure of disciplinary knowledge may influence the content presented by an instructor in an interactive presentation. It may also be helpful to understand an instructor's perspectives on font, color, and graphic choices and the influences thereupon.

Lastly, Gupta (2011) sought to "identify the reasons underlying the use or avoidance of presentation software by university faculty" (para. 10) by exploring the perceptions of computer science faculty at a bilingual university in Japan. Specifically, he conducted semi-structured interviews with five faculty members, asking them about the visual aids they used in teaching, conference presentations, and presentations to research committees. In addition, Gupta analyzed a PowerPoint® presentation file and a video recording of an in-class presentation using overhead transparencies to gain further insights into the features of each type of presentation delivery. Interviews with faculty revealed PowerPoint® not to be as preferred a delivery mode as overhead transparencies for several reasons, including the time-consuming and tedious process of preparing slides.
and animations and the lack of flexibility in changing prepared presentations to accommodate live lecture discussion and clarification needs. Overhead transparencies allowed for readily drawing linkages between concepts and structures as well as worked procedures. PowerPoint® was determined to be best "for summarizing completed work" (para. 30).

**Conclusion**

Although instructor experiences with creating and using PowerPoint® and interactive presentations are represented in the literature, their accounts are few and far between. In addition, the experiences profiled relate to the use of PowerPoint® in face-to-face classroom settings. The creation and use of interactive presentations in distance education learning environments from an instructor's perspective has not yet been fully captured. Interviewing instructors at a Midwestern metropolitan university about their experiences can fulfill this need.
CHAPTER 3

METHODOLOGY

Introduction

The research design and methodology for this study is described in this chapter. A qualitative case study approach is used to gain a better understanding of the experiences of instructors who create and use interactive presentations in their distance education courses. The central research question and more specific subquestions will be reviewed. The characteristics of the case study research design used in this study will be described. Details as to the specific sampling strategy, data collection and analysis procedures will be discussed. Validity and credibility issues and the ethical considerations associated with qualitative research are also addressed.

Review of Central Research Question and Subquestions

In order to learn more about why an instructor would create interactive presentations as well as how they go about that creation and subsequent use in distance education teaching and learning activities, research is needed. Information gathered through interviews with instructors, an examination of sample presentations, and a review of these materials as they are situated within course structures provides details of experiences not easily captured through other means.

The central research question guiding this qualitative research study may be stated as: "How do instructors who create interactive presentations for their blended and/or online course(s) at a Midwestern metropolitan university describe their experiences?"

Subquestions demonstrating more specific interests include:
• Why do instructors create interactive presentations for their blended and/or online course(s)?
• How do instructors use interactive presentations in their blended and/or online course(s)?
• How do instructors describe the processes by which they create interactive presentations?
• Where do instructors look for assistance when creating interactive presentations?

Selection of Methodology

Several authors have attempted to describe approaches best suited to research in educational environments. Creswell (2008) describes a qualitative approach as being best suited when the primary purpose is to explore a problem in order to gain a detailed understanding of the phenomenon of interest (p. 51). Stake (2010) discusses the use of a qualitative design, specifically a case study approach, when the goal of the research is not to test hypotheses or to make generalizations but to discover, interpret, and/or understand an event, activity or experience.

The central research question in this study is best addressed through a qualitative case study design because this type of inquiry allows the perspectives and recollections of individual instructors to be captured in their own words. In addition, artifacts produced by these individuals reflect decisions made throughout the processes of creation and use. The use of other inquiry methods would not provide as robust a description of experiences from which understanding could be gained.
Case Study Research Design Characteristics

Merriam (2009) defines a case study as "an in-depth description and analysis of a bounded system" (p. 40). This study acknowledges two types of boundaries – temporal and contextual – guiding the selection of the case as well as the data collection and analysis procedures. The temporal boundary results from the research being conducted within a specific timeframe – a traditional, 16-week semester. The contextual boundary is established by the setting for this study. The research takes place at a Midwestern metropolitan university and, more specifically, within the distance education learning environment that has developed there.

Additionally, Yin (2014) provides further specifications for case study research designs. He identifies four basic types of designs: holistic single-case, embedded single-case, holistic multiple-case, and embedded multiple-case. The embedded single-case design is selected for this study. A characteristic of this design is that it allows the researcher to analyze not only the broader case but also its subunits. While gaining an understanding of the creation and use of interactive presentations, I was also able to examine the details of individual experiences for each instructor. A graphic representation of the embedded single-case design for this study is presented in Figure 1.
Figure 1. Embedded single-case design. This case study design allows for analysis not only at the broad case level but also at a sub-unit level. For this particular study, sub-units represent individual instructor experiences.

Sampling Schemes and Sizes

According to Onwuegbuzie and Collins (2007), sampling schemes are "specific strategies used to select units" (p. 283) for a study. Sampling schemes closely relate to the purposes/goals outlined for any given study. For quantitative research, many identify the goals of the research to be statistically generalizable – being able to make comparisons and direct inferences from the results of the data analyses of the particular study's representative sample to a larger population. Qualitative research, on the other hand, tends to focus less on generalization and more on gaining in-depth insights into or generating descriptions of specific phenomena, events, or lived experiences of individuals. Because of this focus, a purposeful sampling scheme is often used to "[select] individuals and sites for study because they can purposefully inform an understanding of the research problem and central phenomenon in the study" (Creswell,
2007, p. 125).

I employed a maximum variation purposeful sampling strategy. According to Creswell (2008), maximum variation sampling is a strategy "in which the researcher samples cases or individuals that differ on some characteristic or trait" (p. 214). For the purposes of this study, my goal was to gather a diverse set of perspectives from individuals who had varied experience in teaching distance education courses. This diversity would assist me in "capturing the core experiences and central, shared dimensions of a … phenomenon" (Patton, 2002, as cited in Merriam, 2009, p. 79).

Having chosen a purposeful sampling scheme, further decisions as to how many participants to include in the study were made. I turned to the qualitative methodology research for guidance. Guest, Bunce, and Johnson (2006) investigated the determination of a specific number of participants with their research on perceptions and self-reported behaviors for women in Nigeria and Ghana. Their use of semi-structured, open-ended interviews allowed for the creation of thematic codebooks. These codebooks were monitored for the addition/modification of themes as data from additional interviews were analyzed. Their statistical analyses of rounds of theme-code development and additions of interviews showed the majority of codes (97%) were identified after twelve interviews (p. 73). In this study, I proposed conducting semi-structured, open-ended interviews with instructors who had experience creating and using interactive presentations. A minimum sample size of 12 would allow me to obtain an appropriate level of saturation to gain the insights I sought. In the end, 14 individuals agreed to participate in my study.
Participant Selection

Participants targeted for selection in this study were instructors at a Midwestern metropolitan university who had created and used interactive presentations in their distance education courses. They were initially identified through personal interactions and recommendations from departmental chairpersons, distance education coordinators, distance education program directors, and other instructional design support personnel. Participants represented a variety of subject disciplines. Teaching experience also varied, particularly as it related to teaching in online or blended modes. While most had taught face-to-face courses at the university for more than two years, several were just beginning to teach online.

Data Collection

After obtaining Institutional Review Board (IRB) approval from both the home campus of my doctoral program and the Midwestern metropolitan university site where the research was conducted and where I'm an employee (see Appendix A), e-mail messages were sent to identified participants, inviting them to participate in the study. The text of the message provided a description of the research, including an overview of the study's purposes as well as the procedures for collecting data and participant rights and responsibilities (see Appendix B).

Appointments for interviews with individuals agreeing to participate were then arranged. The majority of the interviews took place in the offices of the participants, though approximately one-third took place in other locations such as conference rooms and group study rooms at the library due to participant preferences and scheduling needs. One instructor participated via telephone as he lived out-of-state. All interviews were
completed within a five-week period between early February and mid-March 2014.

After being presented with informed consent documents (see Appendix C), semi-structured, open-ended interviews were conducted with each participant. This method allowed participants to describe in their own words their experiences and recollections. An interview guide containing questions and question prompts was used to collect data (see Appendix D). Each interview lasted approximately one hour and was audio recorded using a Sony ICD-PX333 Digital Voice Recorder. I also attempted to take written notes during the interview to record my own initial impressions. Following each interview, I transferred the .mp3 audio recording to my Macintosh laptop computer. Each interview was then transcribed using NCH Software's Express Scribe® software (http://www.nch.com.au/scribe/index.html) and saved in both word-processed text format and Portable Document Format (.pdf) for further processing during analysis. All digital audio and transcription files were backed up to a secured portable hard drive and SugarSync®, a secured online cloud storage service.

Requests for sample presentation files as well as access to course sites in the university's Blackboard® learning management system were included in interviews with participants. Interactive presentation file samples served as further documentation and evidence of the choices these instructors made throughout their creation and use process. They provided a connection between instructor intent and end-user experience, giving me the opportunity to experience how a student enrolled in their distance education course might access and use these materials.

Creswell (2008) describes observation as "the process of gathering open-ended, first-hand information by observing people and places at a research site" (p. 221). Given
that the primary research site for this study is an online learning environment, viewing the participants' course sites in the learning management system allowed me to observe where the materials were placed and how learners were instructed to view and/or use the presentations. This provided further depth to participant descriptions of presentation use.

**Data Analysis**

As with most qualitative research, this study included interpretation and aggregation. Direct interpretation (Creswell, 2007) was used to draw meaning from individual instructor self-reports of experiences in creating and using interactive presentations. I examined interview transcripts to identify direct quotes and descriptions to aid in responding to the study's research questions.

MAXQDA software was used to analyze the transcribed interviews. Each word-processed version of the interview transcript was loaded into the software for initial review. As I read through each transcript, I tagged segments of text with words and phrases representing elements I believed would provide insight into the specific details of an individual's experience as well as to respond to the study's overarching research questions. The memo feature of the software was used as I created and applied tags to capture my interpretations and descriptions of the themes I was identifying. Continuously reviewing thematic tags and comparing them across interview data allowed me to aggregate these codes for a broader cross-case analysis.

At the completion of the transcript coding process and having an understanding of each participant's experience, I then turned to reviewing the sample presentation files and their placement in the Blackboard® course sites. I created a table in a word-processed document (see Appendix E) for capturing details and ensuring I examined this data in a
systematic way. I began by accessing the course site, looking for the area where the instructor had told me I could find the presentations. Notes were made as to the text used to name the area as well as any folders or instructions included with the links to the presentations. I also noted the navigational path for accessing the presentations.

Arriving at the presentation itself, I downloaded and opened the file or clicked on the link to start the presentation. Notes were taken as to design choices – fonts, background colors, themes, animations, etc. – as well as on the audio included with the presentation. Observations on how the text of the content was presented in general and in comparison with the narration were noted. Lastly, I reflected upon the process I had completed to use the presentation, imagining the experience from a student's perspective.

Reviewing codes, themes, and field notes from participant interviews as well as a review of sample presentation files situated in the learning management system sites, I interpreted the data to develop an understanding of why instructors at a Midwestern metropolitan university create and use interactive presentations in their distance education courses. Descriptions of individual cases as well as discussion of themes arising from cross-case analysis presented in the following chapters express this interpretation and understanding.

**Validation**

Yin (2014) describes several tests a researcher may use to establish the quality of social science research. Creswell (2007) outlines validation strategies to establish credibility and trustworthiness in qualitative research. From both authors, this study employs the following tests and verification strategies: construct validity/triangulation, thick description, member checking, and researcher bias.
Construct Validity/Triangulation

Yin (2014) encourages the use of multiple sources of evidence as a way to support construct validity. Creswell (2007) refers to the use of multiple and different sources of evidence to corroborate discoveries as triangulation. This study involved collecting data from a variety of sources. While interviews yielded detailed descriptions of experiences, sample interactive presentations files and researcher observations of the use of these materials within online learning management systems or snapshot descriptions added further dimension and supporting perspectives.

Thick Description

Thick description refers to a detailed accounting of not only the participants' recollections and perspectives but also the setting in which these experiences have taken place (Creswell, 2007). In the following chapters, I use thick description to paint the picture of the experiences of instructors at a Midwestern metropolitan university as they create and use interactive presentations. This allows the reader to make connections with the insights discovered.

Member Checking

Member checking, according to Creswell (2007), involves asking participants to review preliminary interpretations and analyses for accuracy. Participants have the opportunity to confirm or clarify whether these interpretations are truly representative of their experiences. For this study, each instructor was asked to review a draft of the write-up for his/her individual case. I was particularly interested in whether I had appropriately captured their experiences in relation to six areas:
• Educational background and teaching experience (both in general and with
distance education specifically);
• Why s/he chose to use interactive presentations (voice-over presentations or
videos created with PowerPoint®, Adobe Presenter®, Camtasia®, etc.);
• How s/he envisioned his/her students in his/her distance education courses
using the presentations;
• A rough description of his/her process for creating the presentations and then
making them available to his/her students; and
• Descriptions of any support resources s/he may have used/consulted during
his/her creation process.

Ten of the 14 participants provided feedback, with the majority positively
affirming the accounts of their experiences. Two participants requested modification in
the areas of why they chose to use interactive presentations. After reviewing the audio
recordings and transcripts from their respective interview sessions and further interaction
with these participants, clarification of intent was achieved, and their cases were altered
to reflect a more accurate description.

**Researcher Bias**

Creswell (2007) encourages a clear delineation of researcher biases and
perspectives that may influence the interpretation and analyses of qualitative data. In an
effort to acknowledge my own experiences as a distance education doctoral student, a
former librarian, a university instructor, and an instructional design professional, I submit
the following biases may influence my perceptions of the participants and their
experiences in creating and using interactive presentations:
• I currently serve as an instructional design and faculty support person who is responsible for offering guidance on the use of instructional technologies and pedagogical strategies. I am also responsible for designing and developing training and professional development activities related to the integration of instructional technology into curricula.

• I have an established background in distance education in higher education environments. My previous and current experiences as a distance education student and as a former instructor of courses delivered via blended and online modes have given me insights into effective educational practices in online and hybrid courses.

• I firmly believe it is critical for today's college instructors to understand the role of technology in teaching and learning and to select tools that are best suited to supporting overarching objectives. As Donald Norman (2002) describes in his book, *The Design of Everyday Things*, instructors should focus on the perceived affordances of a tool in relation to the learning environment when considering its use.

• I believe in lifelong learning and in the need for reflection – not only on professional development but also on our own personal growth.

• With my background as an academic librarian, I believe my university has a responsibility for supporting instructors with meaningful resources and services that meet their needs in effective and efficient ways. This can only be known by talking to those served by these resources.

• I am a technology explorer. I enjoy investigating new tools and exploring
new uses for existing technologies. I purposefully seek to understand and to develop competency in the features and functions of software applications and electronic devices. I "read the manuals" and attempt to examine technologies from multiple perspectives.

**Ethical Considerations**

A variety of measures were used to ensure ethical considerations were addressed and participant privacy was protected. Institutional Review Board (IRB) approval was sought from the home campus of the researcher's doctoral program as well as from the Midwestern metropolitan university serving as the research site and as the place of employment for the researcher (see Appendix A).

Participants were protected through such means as communications and informed consent letters outlining the purpose of the research along with descriptions of data collection and usage intentions. Individuals were reminded in written documentation as well as verbally that participation in the study was completely voluntary, and they are free to withdraw at any time during the study (see Appendices B and C). Participant names were replaced with pseudonyms in the coding, storing, and reporting of data. Recordings of the interviews were transcribed and then erased, with transcriptions stored in secured office space and on secured electronic devices for up to three years after the completion of the study.

**Summary**

Using an embedded single-case case study research design, the experiences of 14 instructors at a Midwestern metropolitan university in regards to the creation and use of interactive presentations were captured through semi-structured interviews, an
examination of sample presentation files, and the researcher's observation of the use of these files in learning management system course sites. Analyzing and interpreting these multiple sources of data provided further insights into my colleagues' teaching strategies in distance education environments as well as into their reflections on their processes and support needs in the use of instructional technologies.
CHAPTER 4
SINGLE CASES

Context and Setting for the Research

This study was conducted at a metropolitan university in the Midwest during the spring 2014 semester. Midwestern Metropolitan University (MMU), as it will be referred to in this work, is a public university founded in 1908. Throughout its history, MMU has had strong ties with the urban community in which it is seated, garnering recognition not only for its civic and community engagement activities but also for its commitment to serving military and veteran students. Classified as a Doctoral/Research Institution by the Carnegie Foundation for the Advancement of Teaching in 2011, MMU features over 200 majors and programs across the bachelor's, master's and doctoral degree levels.

Information obtained from MMU's institutional research office shows over 15,000 students are enrolled at the institution. Of those, over one-third have taken a distance education course, either completely online or blended where online is mixed with face-to-face sessions. Distance education courses now account for over 5% of the total credit hour production at Midwestern Metropolitan University, equating to approximately 37,000 student credit hours in a single academic year. Enrollment at MMU is projected to grow by 5% over the next 5 years, with distance education factoring heavily into that growth.

MMU currently employs over 450 full-time tenure- and non-tenure-track faculty. The faculty are nearly evenly split between males and females, with females accounting for 43% of the population. As for the racial and ethnic profile of faculty, 79% of the
population identified themselves as White/Caucasian, followed by Asian/Pacific Islander (7.5%) and African American (5%) ethnicities.

Fourteen instructors – five females and nine males – agreed to participate in this research study. They represented a diverse range of subject disciplines. Six were from the public affairs and community services college; three came from the College of Arts & Sciences; and one was drawn from the library. The following colleges were also represented: Business Administration; Communication, Fine Arts, and Media; Education; and Information Science & Technology. Combined, they have over 300 years of teaching experience, with over half having at least 20 years in the profession.

This chapter features their stories, highlighting their experiences in creating and using interactive presentations in their distance education courses. To protect the anonymity of the participants, fictitious names have been assigned to each individual.

Each case provides a brief profile of an individual participant, focusing upon six specific elements of his/her story:

- his/her educational credentials,
- his/her experience in teaching in general as well as in distance education environments,
- why s/he created interactive presentations,
- how these materials were used in his/her distance education course(s),
- the processes utilized to produce the presentations, and
- the support resources consulted during creation and use.

Following this chapter, a cross-case analysis, in which themes identified in individual cases are abstracted for broader understanding, will be presented.
Individual Cases

Professor Red

Professor Red is an instructor in the public affairs and community services college at Midwestern Metropolitan University (MMU). He holds a Bachelor's Degree in Education – K-12 Physical Education as well as a Master's in Exercise Physiology and a Master's in Executive Fire Service Leadership.

Professor Red's teaching experience dates back to the late 1980s when he taught physical education, health, and weight training in the local public school system. While working as a professional firefighter, Red began teaching for MMU around 2007. He started out with classes in the Fire Protection Technology program. He continues to add to his experience being a full-time instructor, developing curriculum and teaching introductory and advanced courses in MMU's Emergency Management and Fire Service Management programs.

Red's first encounters with online courses were not as an instructor. His Master's in Fire Service Leadership was a completely online degree program. He brought his experience as a distance student into teaching when his MMU programs made decisions to move into offering online degree options. During the spring and summer of 2013, Red transformed content from his face-to-face classes for use in a distance setting. Fall 2013 found Red teaching two sections of an introductory emergency management course completely online. Since then, Red's course workload has grown to now include three sections of the introductory course – two offered completely online and one offered face-to-face. Red is also responsible for coordinating the adjunct instructors teaching online courses for the Fire Service Management program.
In trying to gain an understanding of why an instructor would choose to create interactive presentations, I asked the participants to talk about their experiences with voice-over presentations and where they might have seen or experienced them. With Red's discussion of his experience as a student in an online Master's degree program, I had expected him to refer to this as one environment in which he had encountered voice-over PowerPoint®. Interestingly enough, Red's Master's program did not use these types of interactive presentations. In his words, "the format was discussion boards … projects … submissions of weekly papers, [and] research topics."

When asked then to reflect upon why he chose to create narrated PowerPoint® presentations if he hadn't seen them used in his own online classes, Red responded that he "just assumed that's the way you did it." He had had conversations with others teaching online courses in the Emergency Management program, talking with them about how they delivered content and developed activities for their students. Red recalled student engagement in online courses was of primary concern among his colleagues. They sought ways to make connections with students and to encourage interest in the profession. Using voice-over presentations for their lectures became one way to accomplish this goal. Red agreed and began preparations for creating his own.

As we continued to talk, Red mentioned previous experience with the software was a factor in the decision to create interactive presentations for his own courses. Knowing how to use PowerPoint® already, he described just needing to learn a little bit about the audio recording functions rather than learning a completely new application. Red also thought these narrated presentations were his most effective tool for delivering course content outside of the textbook, believing he could highlight important concepts
and provide examples or personal experiences to enhance what the textbook had to say. He referred to the presentations as his lectures, reflecting the notion that the presentations represented an activity an instructor would perform in a face-to-face classroom setting.

Building upon the idea of the presentations expanding upon what the textbook offers, Red revealed more insights into how he envisioned students using these materials. Red sees the PowerPoints® as supplemental to the course readings. Using the text as an outline of and sequencing for the major topics, the interactive presentations include examples of current events and images to illustrate how course concepts relate to real-world situations. Red uses the audio track to offer further explanations of the ideas presented in text on the slides. His experiences as a firefighter and first responder lend authenticity to these explanations, and while the presentations are not required, per se, he does tell his students if they don't listen to the PowerPoints®, they will be "missing a lot of the content that will prepare [them] to be able to do this job sometime in the future when someone's going to expect [them] to be a decision-maker."

For Red, the process of creating interactive presentations began with slides he had created for his face-to-face courses. These slides were based upon a combination of presentation files made available by the publisher of the textbook used in the course and slides Red created from his personal knowledge and experience. Slides from the publisher were used as an organizational framework, giving Red a structure that could be modified to better align with specific learning objectives emphasized in the Emergency Management and Fire Service Management programs' curricula.

After tweaking the content and text of the slides, Red added graphics and images to illustrate concepts as well as to lend visual interest. The next step was to record the
audio narration. When asked about his approach to recording the audio portion – whether he used a script or notes and what he thought of as he narrated his presentation – Red responded that he didn't use a script and, at first, he approached it as if he "was going to speak about this slide as if I'm in front of 30 students, and I'm giving a lecture." To his surprise, he found this approach not to be effective because there was no audience interaction, and he felt "the voice-over came out awkward … or … disjointed." Since then, he's shifted to more of a mental model where he's developed a picture of what he wants to say and the points to be covered to ensure he's matching up with the concepts presented in the text.

When it came to the recording process itself, Red's "studio" was his campus office. He had a Windows® desktop computer with two monitors. He also used a headset microphone when recording the voice-over. Using Microsoft Office 2013®, Red opened his PowerPoint® presentation, navigated to the appropriate slide, and then used the Insert >> Audio >> Record Audio function to record the narration. Slide-by-slide narration had been the most efficient way for Red to create his interactive presentations because it allowed him to easily modify a portion of the presentation rather than re-recording the whole slideshow. When he was satisfied with the recordings, he saved the presentation as a regular PowerPoint® (.pptx) file and posted it to his course site in MMU's Blackboard® learning management system.

As Red described his process for creating interactive presentations, I asked if he had had any issues when recording and whether he had sought assistance from anyone or consulted any resources to support his efforts. While he did not have any technical issues during the recording sessions, he did comment that he had talked with his colleagues
about creating these types of materials before he got started. Red had also reviewed some of these files from colleagues as well as watched demonstrations given by MMU's instructional design and technology support team in preparation for creating his own interactive presentations.

**Professor Carl**

Professor Carl teaches in the gerontology program at MMU. He holds a bachelor's degree in music as well as a master's degree and a Ph.D. in gerontology.

Carl's formal teaching experience, as he refers to it, started as he was finishing his master's degree in 2008. At that time, he began teaching an introductory gerontology course for MMU. Additional teaching opportunities came as Carl completed his Ph.D., when he not only taught additional classes but he also integrated coursework in instructional design, teamwork and facilitation, and training and development into his program of study. Lastly, Carl's work in directing a community-based volunteer agency has given him experience in presenting and coordinating workshops and other training activities.

Carl's experience with distance education began with his PhD program when he completed two fully online courses as a student. Upon graduation, Carl became a full-time instructor and advisor at MMU and has had the opportunity to teach the introductory gerontology course as an online course since the Fall 2013 semester. More online offerings of upper-level gerontology courses are in Carl's future as he continues to coordinate and collaborate with his colleagues.

When asked why he chose to create interactive presentations for his distance education courses, Carl first referred to his work with his community-based agency, his
background in music, and his "propensity for technology." These experiences provided opportunities to create tutorials and visual guides using technologies such as videotaping, audio recording, screen capture, and the like. In Carl's words, "it wasn't that much of a stretch to think about [interactive presentations]" for his lectures. PowerPoint® was selected because it was a technology with which he and his students were already familiar.

Carl also talked about the opportunity these types of materials provided when it came to course concepts. While students could refer to the textbook for a general discussion of core concepts, Carl felt the text was lacking the "real world piece." The voice-over narration gave Carl "the opportunity to kind of give [the students] some of my personal experiences. I have a lot of stories to share and some insights." These presentations also gave students chances to hear Carl's voice, allowing them to get a sense of who he was as a person.

Carl's interactive presentations were a mix of "how-to" tutorials and lectures. The "how-to" tutorials addressed class management topics such as suggestions for time management, how to post to the class discussion board or complete a quiz, and how to submit assignments in the appropriate file format. Lecture presentations were organized by chapter, with students expected to review these materials after they had read the assigned readings for the week. As mentioned before, the lectures were intended to enhance material from the textbook – to "give [the students] some of [Carl's] personal experience … and … [to bring] the real world piece to it that's not in the text."

The process Carl used to create his interactive presentations varied by topic. For most of the lectures, he had slides already created for use in the face-to-face version of
the course. The how-to tutorials were essentially created on the fly when the need was identified. In both cases, Carl started by using either his Windows® desktop computer or Windows® laptop running Microsoft Office 2010®. In PowerPoint®, he began the crafting of the text on the slides. Slides featured statements formatted in bulleted lists and mirroring words/phrases from the textbook. He also added images and other graphics, commenting that he used these as well as color, hyperlinks, and animation to make the slides as interesting as possible. The how-to tutorials incorporated more screenshots and arrows to signal areas of importance. With the text set, Carl used a headset microphone and the Record Audio feature of PowerPoint® to narrate each of the slides, interjecting personal experiences and bringing in current events as supportive examples of the concepts being featured.

The finished product would then be saved as a PowerPoint® file and then converted to a Flash® video (.swf) file using a product called iSpring® (http://www.ispringsolutions.com/). When asked why Carl used this conversion tool, he commented on the importance of being careful when he designed his course so that his students could access the materials without having specialized software or having to spend too much time "trying to figure out how to use PowerPoint®." The converted video files were loaded into Blackboard® and embedded on a page, with the video set to play automatically.

The primary challenges Carl faced when creating his interactive presentations related to the quality of the audio and exploring file output formats. Carl's background in music provided critical insight into changing the sampling rate to make the narration crisper and clearer. As for the final output format, Carl used the Web and other Internet-
based resources to investigate possible solutions that would meet a wide range of needs.

He considered using Adobe Connect® and Adobe Presenter® as well as Camtasia® before settling on iSpring® to create files that would not have to be downloaded and opened in any other program besides a Web browser.

**Professor Alice**

Professor Alice is a librarian and instructor at MMU. After earning a Bachelor's in American Studies in 1987 and a Master's in Library Science in 1992, she just recently completed her Ph.D. in Library Science.

In regards to teaching experience, Alice's first forays into teaching came as a graduate student. She held a graduate assistantship in library school that included the responsibility for teaching a credit-bearing course in library research. The one-credit-hour course was designed to help students navigate library resources as well as to evaluate and use information appropriately. As a professional librarian, teaching information literacy concepts and the use of library resources continue to make up the bulk of Alice's instructional activities. These usually involve "teaching in pieces," meaning she conducts an instructional session at the request of instructors of discipline-based for-credit courses. Often, these requests result in a 50-minute instructional session held during a single class period for courses such as English, Psychology, or Education. There are times when Alice will teach multiple information literacy sessions for a course, particularly for graduate courses where research and the use of information resources play heavily into the curricula. These are typically a series of instructional activities spread out over a few class periods.
For the past eight or nine years, Alice has also served as an instructor in the school library and library science programs at MMU. These programs are situated in the education college. Courses in both programs are offered as hybrid or blended classes, mixing once-a-month weekend class sessions with online-in-between activities. Alice teaches at least one course each year in addition to the instructional sessions she offers as a librarian. In addition, Alice experienced what distance education felt like as a student during the time she was completing her Ph.D. Part of her coursework for that program was online, involving synchronous interaction with a cohort of other Ph.D. candidates via Web conferencing software on the weekends.

When asked about her experiences with interactive presentations, Alice talked about presentations she's crafted for both of her instructional roles, though those created as part of her work as a librarian dominated the conversation. These presentations are often created at the request of instructors for whom Alice has provided information literacy instruction. Topics of these presentations usually relate to specific aspects of locating and using information, with the presentations serving as visual walk-throughs of navigating library databases or locating information within specific disciplines based upon how information in that discipline is organized. For example, Alice recently collaborated with a psychology professor to complete a series of interactive presentations on the organization of legal materials and the court systems to support the professor's legal psychology and forensic psychology courses. Alice felt an interactive presentation worked well for some of these topics because it was a way to create materials that were not only easily updatable by the instructor – PowerPoint® is an application with which most instructors are familiar – but also more engaging and customized to the MMU
environment for students. She believes students today expect a more visual and polished look to the resources offered by the library and other support services.

Alice envisions the presentations she's created as secondary resources for students to use in support of their discipline-based coursework. The files are made available, along with other tutorials and guides, through the library's Web-based Research Guides. Instructors, given the 24x7 availability of the materials, do have the option of linking to the presentations from their Blackboard® course sites and/or assigning students to review the materials before Alice visits their classes or before they complete specific assignments requiring featured skills and tools. While many were created initially to serve the needs of specific instructors and courses, some have more universal themes and can be used with broader audiences.

Achieving that polished look Alice spoke about earlier took effort and support from others in the library. For the legal research and court systems presentations, Alice and the collaborating professor began the creation process with the idea the presentation would actually be a recording of an interview-style conversation between Alice and the professor. They developed a script highlighting the objectives and specific points of content to be covered in their discussion. Alice, recognizing individuals may have learning style preferences for more visual content and the need for graphics and images to enhance explanations of the concepts presented, "took the scripts and made these PowerPoints®." Selecting a geometric-patterned theme for a background and using Microsoft Office 2013® on a Windows® desktop computer, slides were created to capture key elements and screenshots. After several rounds of editing and review of both the slides and the script, Alice and the professor enlisted the assistance of the MMU library's
Media Room to record the audio narration. The Media Room at the library provides equipment, software, and individualized assistance to students, faculty, and staff members interested in creating multimedia materials. Using the WhisperRoom® sound booth and microphones connected to a Macintosh desktop computer running Audacity® software, Alice and the professor went about recording their script. Staff in the Media Room provided further assistance by "[adjusting our] voices to match" in balance and timbre, splicing the audio track to remove mistakes, and then "matching [the tracks] to the slides" in PowerPoint®. The final product, a .pptx file, was then posted to Alice's Dropbox® cloud storage account and linked to a Research Guide on the library's Web site as well as in the professor's Blackboard® course site.

Alice's other interactive presentations have been more of a solo effort. She used her Windows® desktop computer, PowerPoint 2013®, and other screencasting software such as QuickTime® to create tutorials for locating materials in the physical collections of the library. She has also created presentations on searching the library's online catalog and crafting a search strategy. Posting these PowerPoint® files and QuickTime® videos to the library's Dropbox® account and featuring them on the Research Guides site, Alice has alerted her colleagues and the library liaisons in her subject areas to their availability.

As we were talking about her process for creating interactive presentations, I was interested in learning more about the resources Alice consulted. The Media Room in the library was a bit of a surprise in regards to who suggested its use. The room is a new resource offered to campus only within the last year or so and is not widely known yet to faculty and staff outside of the library. However, Alice described the collaborating professor as being the one to suggest using this resource for their work together.
Alice also talked at some length about her efforts in designing the look and feel of the legal research presentations. Microsoft's template Web site was consulted for the background and color scheme on these. After locating a template incorporating geometric shapes that could be used to feature differing elements of the same concept, Alice remembered reading literature about font choices and settled on a serif font to enhance readability. Lastly, resources for visuals were explored. Many of the graphics and images used in the presentations came from Microsoft's clip art collections. Google's image search and images from the federal government were also used. As Alice commented, "being a good copyright librarian, I checked the licenses" and ensured the visuals used in the presentations met Fair Use guidelines.

Professor Zeke

Professor Zeke is a senior faculty member at MMU. He holds a bachelor's degree in music education (BME) and a Specialist in Education in Psychology degree (EdS) from Western Michigan University, a Master of Arts degree in counseling and a Ph.D. in counseling psychology from Michigan State University, a Doctor of Science degree in health services research and administration from the University of Pittsburgh, and a Juris Doctor degree from Creighton University. In addition, Zeke has completed two postdoctoral programs in the area of psychology and received certification from a law enforcement center in Florida.

Zeke's higher education teaching career began with his doctoral studies at Michigan State University. There, he was an assistant instructor who supervised graduate students in the Interpersonal Process Recall (IPR) project. After three professorships and a stint as Dean of Student Development, Zeke arrived at MMU in the mid-1970s as Dean
of Graduate Studies and a fully tenured professor in the psychology department. Zeke's teaching responsibilities are currently focused upon ethical and legal topics as they relate to psychology, teaching at least two courses each semester. Approximately five years ago, Zeke shifted his courses to blended delivery mode, requiring students to meet in an on-campus class session once per week to discuss the readings and lecture materials made available online through the Blackboard® learning management system.

Throughout Zeke's years of teaching and research, using technology and multimedia to support teaching and learning activities have been common threads. As a graduate student, video recordings were used as part of learning counseling processes. Arriving at MMU, Zeke was involved in producing television shows and was among the early adopters of personal computers and Web resources on campus. He continues to integrate multimedia into his current distance education courses through the use of digitized clips from films and documentaries, YouTube® videos, and interactive presentations.

Zeke and I delved further into his reasons for using multimedia and interactive presentations in his courses. He reflected upon the study of systematic desensitization he completed early-on in his graduate studies. In that study, he "found that use of video was more effective at accomplishing our objectives … We found that video tapes were better for using as stimuli than audio only." Over the years, Zeke has built upon this research through experience in playing and recording music and applying his knowledge of radio, television, and video to teaching. Today, Zeke turns to these resources when creating instructional materials to support student learning. Such is the case with the interactive presentations he has created recently. He noticed students were coming to his classes
without as strong a foundation in some concepts as he would have liked. He also noted students were not as familiar with using library resources and understanding how information is organized within the discipline. Interactive presentations with good visuals and audio narration, Zeke felt, could be used to help students acquire knowledge and skill and fill gaps not addressed elsewhere.

In talking about the creation process, Zeke's comments mirrored those offered by Professor Alice. He described how Professor Alice took the lead in creating the PowerPoint® slides based upon the conceptual ideas he proposed. He and Alice spent the summer of 2013 crafting and reviewing scripts and presentation slides on the topics of legal research and the court systems. When it came time to record the audio narration, Zeke had high hopes for using the resources in the Media Room in MMU's library. Unfortunately, he came out of the experience a bit disappointed. Zeke had been used to recording in environments with more sophisticated equipment and sound engineers who could "do magic … and even make me sound good sometimes." Because of differences in tone and timbre between Zeke's deeper bass voice and Alice's alto voice, it was a bit of a struggle to get "the kind of audio recording necessary." Despite these challenges, the interactive presentations were completed, and Zeke makes them available to his students through links in Blackboard®.

**Professor Derek**

Public administration and political science have been part of Professor Derek's life for over 30 years now. His educational credentials include an undergraduate degree in political science, two Master's degrees – one in public administration and one in counseling – and, lastly, a Ph.D. in public administration.
Derek is the first to admit that he didn't "really consider [himself] the 'teaching type'" when he first began his professional journey. It was during his time as an Infantry Officer in the military where he encountered his first teaching experiences. Derek had the opportunity to participate in and lead organizational development training activities, which then sparked his interest in exploring interpersonal communication and human relations topics and the possibility of teaching in these areas. Through his Ph.D. work, he gained more experience and began to learn about his own teaching style preferences.

Now, nearing his 20th year at MMU, Derek's approach to teaching includes not only subject matter expertise but also a focus on the interpersonal and intrapersonal dimensions connecting student with teacher.

This focus carries into Derek's experiences with distance education. His program is one of the first programs at MMU to offer a completely online degree program where all courses are offered as distance education courses. For over 10 years, Derek has been involved in the evolution of distance education offerings, starting with synchronous satellite transmissions and weekend cohort meetings across the Midwest to today's asynchronous, learning management system- and YouTube®-supported courses.

Derek described the decision to create voice-over PowerPoint® presentations as one associated with his experiences in teaching in distance education environments and with his desire to connect with his students. He began to notice, during his early years of teaching online courses, teaching with primarily text based materials and activities – articles and discussion boards – was creating a more automated, transactional experience for his students. Students were also not presented with opportunities to gain deeper insight into Derek's experiences and perspectives on course concepts. He became
concerned that "you [felt] like you're just doing this technocratic exercise" where the
"only judgment [the students] have of [you] is … some really succinct analysis of
everything." Interactive presentations became a way Derek could address this concern –
he could offer a more personalized approach to teaching the course material, lending his
voice and interpretation to the concepts under consideration.

Derek uses interactive presentations for his lecture materials. He sees these as
important elements in his online classes. As he puts it, "to me, the lectures are what
matter" because discussion boards can "create distortion" and other unintended effects.
With the voice-over presentations, Derek can present basic ideas in the text of the slide
and then expand upon them in the narration. He also comments on the importance of
using these materials to spark interest in the course, course concepts, and the profession.
He purposefully tries to make the presentations "interesting so that [the students] go, 'Oh,
I wonder what he meant? I better go look that up'." He claims his "job is to get you
excited enough to go read the book yourself."

To create these thought-provoking presentations, Derek has a fairly straight-
forward process that he uses for both the interactive presentations used in his distance
education courses as well as for the presentations he uses in his face-to-face lectures. The
textbook is the foundation for the presentations. Derek will read the chapter from the
textbook and take notes on the ideas and pieces he finds important. From those notes,
he'll begin to draft a lecture using speech-to-text conversion software, dictating ideas and
examples to incorporate into the presentation. He may or may not start out with publisher
PowerPoint® slides; that's dependent upon the textbook selected for the course. After
reviewing his notes, he opens the slide deck in the most recent version of PowerPoint® on
his Macintosh laptop. Adjustments to the slides may then be made -- tweaking bullet points, adding images, etc. He'll then record the audio narration for individual slides, pointing out basic ideas and commenting "on my own [ideas] based on … my view of the whole situation." The presentation is then saved as a PowerPoint® file and posted to the appropriate course site in Blackboard®.

Although Derek did not consult specific resources when assembling his interactive presentations, he did discuss the research on computer-mediated communication he conducted during those first years when the online degree program was forming. He also read the literature on best practices in teaching online and incorporated ideas from these sources into his efforts. Conversations with colleagues about the technologies they are using to support their online courses have been informative and useful in helping Derek further refine his instructional materials according to his teaching style preferences.

Professor Alordayne

Professor Alordayne is an associate professor in the College of Arts and Sciences at MMU. With a bachelor's, master's, and Ph.D. in sociology as well as a master's in counseling education, Alordayne specializes in topics associated with marriage and family, gender differences, and quantitative research methodologies.

Alordayne traces her teaching experience back to her time as a Ph.D. candidate. She was a graduate teaching assistant responsible for teaching family courses and "University College" courses. These courses were tailored to undergraduate students who had not yet declared a major. For the past 14 years, Alordayne has been teaching
undergraduate and graduate courses at MMU. Of late, she has been responsible for teaching the Senior Thesis course for their bachelor's degree programs.

Professor Alordayne's experiences with distance education have been twofold. In an administrative role, Alordayne leads her department's initiative into offering online courses and participates in campus-wide conversations regarding distance education at MMU. As an instructor, Alordayne has been teaching blended and online courses for the past four or five years, transforming several of her face-to-face courses into online offerings to support their fully online degree programs.

When the call to develop more upper-level online courses went out, Alordayne responded by reviewing her courses and choosing to adapt a course that would work "really well because it [had] units that hold together really well." In addition, she had already created PowerPoint® slides for the "live" version of the class and would only need to change them a little to make them suitable for online. Alordayne realized, however, "that just posting lectures was a lot like a correspondence course." She was truly interested in wanting her students to hear her voice, emphasizing the ideas she felt were important for students to learn, and sharing her perspectives on the concepts presented in the course. Text on the screen is okay, but as Alordayne describes it, "without the voice supplementing it, it's inadequate." Thus, interactive presentations were developed and integrated into her online courses.

Alordayne uses interactive presentations for lectures and for content beyond the curriculum. The lectures cover basic concepts and ideas presented in the text used in the course. In her narration, Alordayne "brings it alive" by incorporating personal examples and expanding upon the basic text. She comments these examples are "far more
appropriately and impressively presented by a voice than if I had made a slide about [the content]." Alordayne expects students to listen to the lectures in conjunction with reading the articles and viewing other materials assigned in the course.

Interactive presentations for co-curricular and supplementary activities such as using MMU's library resources or writing fundamentals have also been developed. These came about as Alordayne realized her students needed more supports in these areas. With her face-to-face courses, she had brought her students to the library for instruction in how to search for information. She had also reviewed, in the classroom setting, how to diagram a research article and basic reference citation. Moving into online, Alordayne realized she "needed to use something to address [those areas]," and interactive presentations offered a path to meeting those needs. For these co-curricular and supplemental materials, she directs students to these presentations on an as-needed basis.

Alordayne's process of creating interactive presentations begins with the presentation slides. Because she uses a reader, Alordayne creates her slides from scratch, crafting the text first. Graphics are added as they make sense – supplementing the text to "keep it interesting for students." Creating the presentation using her Windows® desktop computer or her laptop and the most recent version of PowerPoint®, Alordayne adds audio narration to each slide, using a headset microphone of good quality to capture her voice. She tries not to "put too much on the slides" and does "divide things up" so the students don't have to listen to an extensive recording for a single slide. Her audio recording is also conversational, as Alordayne describes it, and not done in a "broadcaster's voice" because she feels it's important students understand she's a human being. In the end, the presentation file is saved "in the most current version and saved
down [to the previous version of PowerPoint®].” Both files – a .pptx and a .ppt file – are posted in her Blackboard® site, along with a PDF version of the presentation for students to use for notes.

Throughout our conversation on the creation process, Alordayne reiterated the importance of having someone available to assist, even if that assistance is just serving as a sounding board. Having someone within her department who had explored and used a variety of technologies in online courses was of tremendous benefit to Alordayne. She could have that colleague show her examples as well as walk her through steps for improving the presentations. Other sources of support came from discussions with other faculty and staff outside of her department. She also attended several training sessions presented by staff from the campus' central computing instructional design and support unit.

Professor Edward

Professor Edward is one of MMU's award-winning instructors in the Fine Arts and Communication college. He holds a bachelor's degree in philosophy and two master's degrees in the areas of art and cultural studies.

When asked to describe his background with teaching, Professor Edward commented he "[came] late to teaching," only entering into the profession in the late 1990s. His first experiences came while he was working on a doctoral degree. Professor Edward worked as a teaching assistant to a professor who gave him opportunities to do more than "grunt work" and who served as an inspiration to him. In fact, he recalls going into the second day of class and just watching her teach, realizing "Oh my God, she's
showing me how to teach this. It's such a good story … I can't believe other people wouldn't be turned on by it."

A few years later, with this experience firmly in mind, Professor Edward began teaching art history for another institution. He was now in a position to try to replicate what he'd seen and to bring something new to the table – PowerPoint®. Professor Edward described the move into incorporating PowerPoint® into his teaching as being one of necessity. To meet the objectives for his courses, a robust slide library was required. Unfortunately, due to geography and availability, Professor Edward did not have access to such resources. Instead, he had access to digital images. PowerPoint® allowed Edward to assemble images and text in ways that would tell the story of an art piece or an architectural design while also giving detailed visuals.

Edward brought his skill with PowerPoint® and expertise in art history and architectural design to MMU in 2010. His initial teaching load consisted of introductory survey classes taught once a week in a large lecture hall. During the 2012-2013 academic year, Edward began developing distance education versions of his courses. He currently teaches two online courses and two face-to-face courses per semester.

As mentioned earlier, Professor Edward's introduction to PowerPoint® came because of the need to present materials not immediately available to him. Interactive presentations came into the picture when Edward decided to move into distance delivery mode. As he reflected upon why he chose voice-over PowerPoint® as the medium for his lectures, he commented, "I wanted to make the class seductive. I wanted to draw in [the students]" through storytelling. These lectures are intended to get students to go beyond "taking [only] an intellectual interest … in the material." This is an important element in
his face-to-face classes, and he wanted to continue it in his online ventures. In telling the story of the artwork or architectural detail, Edward believes he is expanding and enhancing the information found in the text used in the class.

Edward begins crafting his interactive presentations by first creating his own sets of slides and outlines of the concepts to be taught. His slides usually consist of several images, representing differing perspectives on a work or design. The text included with the images serves several purposes. First, Edward uses it as a prompt for the audio narration, reminding him of important elements to be highlighted. Secondly, the text on the screen is formatted to assist students in taking notes. He will signal important concepts to remember using an asterisk (*). For multiple slides covering more complex works, Edward will copy the last line of text from the first slide onto the second slide, using a dash (-) to signal the thought or concept continues from the previous slide. He describes this as the "scroll forward" point.

With images and text added, Edward reviews the content of his slides and compares it to the book. He looks for alignment between not only the presentation of the concept but also the images and perspectives represented in those images. Audio recording begins after this comparison is completed.

The first forays into recording Edward's interactive presentations involved using MMU's Media Room at the library. He initially recorded the audio tracks in the WhisperRoom® and received assistance from the Media Room staff in integrating the tracks into his presentation slides. Due to technical issues and availability, however, Edward shifted production to his local Windows® desktop computer running the most recent version of PowerPoint®. As he records, Edward describes himself as "loosely
walking through [the presentation]," making sure to key-in to phrases used in the text of the slides. The presentation is then saved in native PowerPoint® format (.pptx).

Professor Edward also uses the Optimize function available in the Windows® version of PowerPoint 2013® to reduce the file size of the presentation. Both the native PowerPoint® file and the optimized version are posted to the course Blackboard® site for student access.

The resources Edward consulted while creating his interactive presentations were many. He reviewed some of the elements learned in his early adventures with PowerPoint®, referring to details he had worked through with a colleague at a previous institution. The Media Room at the library and its staff helped him early-on, working with him on the initial audio narrations, aligning those to the appropriate slides in the presentation, and saving the materials in a finalized format. When a range of technical troubles arose, Edward consulted campus instructional design and support staff and his college's technical support personnel.

Professor Quimby

In addition to being a distance education instructor, Professor Quimby is an instructor at a distance. Living in the southern portion of the United States, Quimby is the only instructor to participate in this study via telephone interview. Phone and e-mail are the primary modes of communication between Quimby and the staff at MMU.

Criminal justice is Quimby's area of expertise. He holds a bachelor's degree in criminal justice and a Masters of Public Administration (MPA). Quimby is also a graduate of the National Executive Institute, a highly selective law enforcement executive training program offered by the Federal Bureau of Investigation (FBI) in Quantico, VA.
Quimby recalls his teaching experience going back to the 1980s when he was teaching in-person criminal justice classes at a community college on the East Coast. When his professional life brought him to the Midwest, Quimby began teaching for a private, non-profit university near Midwestern Metropolitan University (MMU). There, he taught introductory criminal justice courses for the first two years in the classroom. Another career-related move found Quimby living in the South. Wanting to continue his teaching activities, the introductory courses at the private university were morphed into online offerings, which he has now been teaching for the past 11 years.

Quimby's move to the South brought additional teaching opportunities. He began teaching for a southern technical college in 2003. They were just getting their online criminal justice program off the ground and asked Quimby to develop and teach two courses. The technical college partnered with Bisk Education to produce video recordings of Quimby's lectures and to make them available via their learning management platform. Around this same timeframe, Quimby was introduced to the chairperson of MMU's criminal justice programs. She was also leading her department's initiative to transform their degree programs from face-to-face format to online delivery. After a few rounds of negotiation, Quimby developed an online introductory survey class in criminal justice at MMU and has taught it every semester for the past four years.

The road to interactive presentations for Professor Quimby was paved early in his experiences with distance education. In order to teach for the private, non-profit university in the Midwest, Quimby had to complete a certification process where he took a six-week course online to learn how to teach online. Technology and presentations were elements included in this training. As an instructor for the southern technical
college, PowerPoint® presentations were the foundation of the videotaped lectures. These experiences proved valuable when Quimby began to develop the course for MMU. He was already familiar with the majority of the technology required to create these types of instructional materials. In addition, he understood the power of "[using] personal experience and observations and real-life examples to enhance and expand on what the textbook said."

In thinking about how he envisioned using his interactive presentations, Quimby described it as, "The lectures were intended to be mandatory." They were intended to supplement information "brought out through research and the textbook." Students would benefit from the presentations because they could see how Professor Quimby's experiences and observations from over 25 years as a top administrator in police departments related to "what was in the book and the framework of criminal justice." Students could learn basic concepts that "they ought to take with them out of [the course]."

For the MMU course, Quimby's process for creating presentations began with the textbook. He found a textbook that outlined the concepts he felt were appropriate for an overview survey class and then began to craft his own structure for the course using that outline. Quimby used a recent version of PowerPoint® on his Windows® PC to then create basic text slides of the content. A few images were added to a select number of presentations to provide visual interest and to serve as examples for some of the more complex concepts. Next came the audio narration. Using a basic microphone attached to his computer, Quimby narrated each slide. As he describes it, "I made a basic outline of salient points, [anecdotes, and observations] I wanted to cover, and I expounded upon
each one of those as I gave my presentations." His aim was to sound conversational and spontaneous while presenting the content. At the conclusion of the recording session – Quimby spent a whole day recording all 15 of his lectures – the PowerPoint® files were saved in their native .pptx format. However, when it came to making them available to students through the course Blackboard® site, it was decided to transform the files using Adobe Presenter® in order to create a more seamless viewing experience in keeping with the practices of the criminal justice department. The Adobe Presenter® plug-in to PowerPoint® was used to save the presentations and publish them as Flash® videos hosted on MMU's Adobe Connect® server. Links to these recordings were then captured and posted to the appropriate modules in Blackboard®.

When asked about resources he consulted during the creation and use processes, Professor Quimby noted he had used the Internet for several pieces. He did some initial research on how other online programs presented instructional materials – PowerPoint®, video, etc. Settling on PowerPoint®, Quimby "found a couple of tutorials on how to use [some of the functions of the program]." He also consulted with his department's distance education support personnel on their practices for delivering content, resulting in the move to Adobe Presenter® and Adobe Connect® for the final format and hosting options. Lastly, the instructional design and support team out of MMU's central computing unit was used for more complex troubleshooting with the interactive presentations.
**Professor Bennett**

Professor Bennett joined MMU in 2006 as a faculty member in the psychology department. His educational background includes a bachelor's degree in psychology and graduate degrees in educational psychology.

Bennett's higher education teaching experience began over 10 years ago while he was working as a school psychologist. At the time, he started as a lecturer at a land-grant university in the Midwest, teaching undergraduate educational psychology courses for their teacher preparation programs. The opportunity to teach similar courses at a private university closer to his workplace arose in the mid-2000s, and he began teaching there while continuing in his school psychologist role. In 2006, Bennett made the decision to seek a full-time faculty position and ended up at MMU. He currently teaches "primarily graduate-level courses" but does teach at least one undergraduate course per year.

Teaching distance education courses is a recent experience for Bennett. Within the past two or three years, it was decided the program in which he primarily teaches would begin offering online courses for their master's degree. To assist in meeting this goal, Bennett developed an online course "from the ground up" for the program. His first experience teaching the course was this past fall semester.

Bennett's use of interactive presentations in his distance education course is unique in comparison to the other participants in this study. Rather than create presentations for his lectures, he used the voice-overs "as a way to introduce each week's topic." His rationale for the voice-over PowerPoint® presentation was to provide an introduction to each week's topic that included an overview of what [the students] would read … what they should focus on, what they should skim,
what they should read closely, what were some of the key messages to get out of those readings.

When asked why he chose voice-over PowerPoint® as his medium for this material, Bennett talked about hearing a description of this technology and seeing a demonstration of it by MMU's instructional design and faculty support staff. In his words,

It seemed like that was probably the most manageable for a first time try-out of an online course. Because I was already familiar with PowerPoint®, the voice-over piece just seemed like a fairly simple way to add to that already-existing technology.

Bennett also described his concern about the students' learning experiences with online courses. He had heard from some students about their negative experiences in online courses, where the course was more like a "glorified independent study" course, and he wanted to give his students "something more than just the expectation of reading on their own. He wanted them "to hear as well as see what I considered the key points for each topic" and to humanize the experience – to get to know the "human who is behind the computer who is teaching you." Bennett summarized it as, "Teaching for me has that personal aspect to it; the voice-over was my way to get to that."

As mentioned earlier, Bennett envisions his students using the presentations as a supplement to the readings. The presentations could also serve as organizers because they do signal which concepts are important. In addition, for some elements, Bennett provides further explanation than what is highlighted in the assigned texts as well as examples, so the presentations can take students beyond their readings. While not
required, per se, Bennett felt students who listened to the presentations did have an advantage because he is very directive in the voice-over. "There were often times open-ended questions on the quiz that related directly to what I said on the voice-over; I even told them that."

To create the interactive presentations, Bennett's approach was pretty straightforward. He initially started with the slides themselves, creating slides of "bulleted items or the bare-bones information" he wanted to feature. Pictures and comics related to the concepts to be discussed were added to lend visual interest. Using the most recent version of PowerPoint® on his Windows® desktop computer and a headset microphone, Bennett would usually record his presentations once a week. Sitting at his desk, he would use the Record Audio function in PowerPoint® and then just "talk to my computer … [talking] off the top of my head, looking at my slides on the screen." He might also have the textbook or the readings at-hand, if necessary. Bennett described recording the audio narration slide-by-slide so that he "could fix that slide … if I made a mistake." And, Bennett does admit his presentations aren't "eloquent; there's mis-cues in the way that I say things." However, these mis-cues and the use of a conversational verbal style lends to the humanizing experience he was trying to create.

After the audio was recorded, Bennett would save the presentations in native PowerPoint® (.pptx) format. He would then post the files to the class Blackboard® site. Descriptive information, such as "how long it was … how many minutes" and brief directives for viewing the materials, were also included with each file.

MMU's instructional design and support team and YouTube® were sources of support for Bennett as he created his interactive presentations. As mentioned earlier,
demonstrations by and discussions with instructional designers provided Bennett with starting points for turning his PowerPoint® presentations into voice-over, interactive presentations. He also described locating video tutorials on YouTube® to learn more about making the process of correcting or modifying the presentations easier. He believes it was a YouTube® tutorial that gave him the idea of recording the audio in slide-by-slide fashion.

Professor Sidney

Holding a bachelor's degree in psychology and a master's degree in criminal justice, Professor Sidney arrived at MMU in 2011 to pursue a doctoral degree in criminology and criminal justice. Her first teaching experiences have come as a result of this pursuit. During her first year of study, she served as a graduate teaching assistant for two courses -- one delivered as a traditional, face-to-face class and the other delivered as a blended class. She is now an instructor of record for her own course on the sociology of deviance. It was this course that brought Sidney into distance education at MMU. Last summer, her department chairperson offered funding to instructors to develop online courses for their degree programs, and Sidney took advantage of the offering to develop a course she really wanted to teach. The course was offered online for the first time this past fall semester.

The decision to create interactive presentations was not quite an independent one for Sidney. Her department had already made a commitment to providing students in their online degree programs with interactive and engaging online learning experiences based upon best practices. It was customary for instructors in her department to create voice-over presentations to deliver lectures and course content. Luckily, Sidney was
already familiar with PowerPoint® and could use it to create the slide deck serving as the foundation for the presentations. Adobe Presenter® was added into the mix to capture the audio narration and interaction.

In keeping with the practices of the department, Sidney's presentations are used as lectures in her online course. She considers them to be required course content, expecting students to view them in the same way as they would view completing the course readings and associated assignments. The lectures serve as "the starting point for the module." The presentations include a review of the previous module's main points as well as a "roadmap of what we're going to talk about." Students use the presentations to key into important concepts that are further explored in the assigned readings and discussion activities.

The process of creating the interactive presentations began, for Sidney, with the textbook. After taking notes on the text, Sidney wrote up her lectures and began crafting the PowerPoint® slides themselves. Using one of MMU's templates for backgrounds, colors, and font choices, she used bulleted text statements to highlight important concepts. She also created a script for the audio narration at that time. When it came time to record the narration, Sidney used a Windows® laptop and the most recent version of PowerPoint® with the Adobe Presenter® plug-in. The final versions of the presentations were exported as Flash® files and imported into the Blackboard® course site where they were then connected to individual module items for students to access.

Throughout the creation process and activities related to the deployment of the presentations in the learning management system, the distance education coordinator within Sidney's department was a key support resource. The coordinator provided her
with guidance as to the practices usually followed by other instructors within the
department. This included the use of a standardized background and theme for the
presentation slides as well as the Adobe Presenter® technology used to render the final
versions of the presentations.

**Professor Sherman**

Professor Sherman has been teaching at MMU for seven years. His educational
background includes a bachelor's degree in sociology, a master's degree in education, and
a doctoral degree in special education. Prior to his arrival at MMU, Sherman taught at
another Midwest college of approximately the same size as MMU. His current teaching
load includes a mix of undergraduate and graduate classes.

The opportunity to develop and teach distance education courses at MMU came in
2011-2012 with the decision to create an online degree program in special education.
Sherman and his colleagues made a concerted effort to fulfill the need for professionals
with specific special education credentials. His online course in learning disorders was
among the first offered in the new degree program. Further courses have been developed,
and Sherman now teaches at least one online course per semester.

When asked why he chose to create interactive presentations for his distance
education courses, Sherman offered several perspectives on his reasoning. He began
with, "The strength of my teaching has always been lecture in terms of transmitting
content and making it relevant to students. My strength as an instructor is the lecture, and
I know that." With this firmly in mind, Sherman sought a technology his students could
access without having to "go out and buy additional software," as well as investigating
technology he already had in front of him that was easiest to use. He discovered
PowerPoint® had a record narration function, and that sealed the deal. Interactive presentations became the medium of choice to deliver lecture content infused with his personal experiences as a former teacher.

Sherman envisions the interactive presentations he creates as supplemental to the course readings. He sequences the experience such that, "First thing you do is read the chapter, take notes, and then listen to my lecture." He believes his students need the presentations to help them make sense of the textbook content. Not only does he reference the concepts from the textbook, but he also provides insights into how those concepts are applied in the "real world." With previous experience as a special education teacher, Sherman can describe the application of the concepts to practice, or as he calls it, "[making] the content relevant to practice … research to practice."

Sherman's interactive presentations were created in weekly bursts. He recalled sitting down in his office once a week, shutting his door, and telling his colleagues not to bother him. He would then open his previously-created presentation slides in the most current version of PowerPoint® for Macintosh and start to record his narration. Because the slides were created ahead of time and followed an outline derived from the textbook, Sherman could concentrate on making the content relevant, inserting comments on personal experiences or ideas for applying the concepts to real-world situations. Images and tables were used sparingly and only when relevant to the content. Other multimedia objects such as videos were not embedded; he preferred to link to those types of materials outside of the presentations. After recording the narration, Sherman would save the presentation in PowerPoint® (.pptx) format and then upload it to Blackboard®.
When asked about consulting help documentation or others for support, Sherman responded he did not use either sources. He was comfortable exploring the software on his own and just trying different approaches to figure things out as he went along.

**Professor Ayres**

Professor Ayres is an experienced faculty member in the College of Business Administration at MMU, having been here now for over 22 years. Ayres' educational background began with a bachelor's degree in physics. With that degree, she initially found herself in the early stages of a career in the Air Force. After working in missile launch control, though, Ayres decided to leave the military to pursue a business degree with thoughts towards managing a research lab. One professor in her MBA program, however, steered her in another direction, asking Ayres if she wouldn't rather pursue a Ph.D. in finance and a teaching career in higher education. With a doctoral degree in hand, Ayres began teaching for MMU in the fall of 1992.

Ayres' teaching experiences pre-date her formal degrees. For Ayres, teaching others dates back to her time in high school when she was asked to tutor fellow classmates in geometry, algebra, and accounting. Opportunities to teach lagged while she completed her bachelor's degree and began her military service; however, these were revived when she returned to higher education to pursue her graduate degrees. She served as a teaching assistant for about 4 years during that time. Coming to MMU in 1992, Ayres started out teaching a financial management principles course. Her repertoire has expanded over the years to include courses in corporate finance, banking, and insurance, though she reports she's taught the principles course "every semester and most summers since" coming to MMU.
As for distance education, Ayres remembers volunteering about three or four years ago to transform one of the courses she was already teaching in the classroom into an online course. The move was part of the university’s push to offer more courses at a distance to boost enrollment. Being competent with technology and participating in college and university technology committees where distance education was talked about often, Ayres was in a position to take on the request. She's taught one course as a distance education course every semester since that first offering.

Ayres describes her use of interactive presentations as a way to provide focus to the material presented in the textbook for the class. She reinforces in the presentation what she considers to be important from the text and which elements will become points of assessment in later quizzes and tests. The interactive presentations are considered required, and Ayres believes students "are disadvantaged for the exam" if they don't watch the lectures.

In addition to lecture materials, interactive presentations have been used for lecture supplements. Courses in banking and finance are often laden with equations and mathematical calculations. Teaching in the classroom for over 20 years, Ayres noted the importance of doing more than assigning practice exercises to students; she saw a need to walk students through the calculations, demonstrating through worked examples how solutions were derived. This need also arose in her online courses, and interactive presentations offered one way to capture this practice. Now, Ayres provides several worked example presentations with each unit to give students the opportunity to review and run-through the math.
As for the creation of both the lectures and the worked example presentations, Ayres described her initial attempts in using Adobe Connect® Web conferencing software to record video lectures. She had already created the PowerPoint® slide presentations for use in the face-to-face classroom version of her course and thought she could just record herself stepping through them using Adobe Connect®. Unfortunately, students experienced buffering problems with the videos. Ayres also noted there was no way to edit the recording if you made a mistake half-way through, and so an alternative was sought.

In PowerPoint®, Ayres again started with slides she had already created. The text of the slides was developed so as to follow a conceptual outline based on the textbook for the course. Ayres attempted to reduce and focus the content in the presentations. With each presentation, she provided an opening slide containing an overview of the topics to be presented and then pared-down the text on the remaining slides to ensure she wasn't "trying to cram too much into one slide." Ayres took a unique approach in presenting the text on the slides as well. She left blanks where key words and answers to the math problems would be. The intention was that students would fill in these blanks as they listened to the audio narration.

The design of the slides also came under scrutiny. Ayres preferred darker backgrounds with lighter type for easier viewing on a computer screen. She also took into consideration "that a significant portion of the population is red-green colorblind and so [I] try to avoid using red and green."

With the text and design of the slides set, Ayres began the narration process. Using her Windows® laptop along with its embedded microphone and a current version
of PowerPoint®, she started to fill in the details of the information presented as bulleted text. The first issue she noted was with the quality of the audio – her voice was being overshadowed by background noise. A headset mic solved that issue. The second issue she noticed was that some of her slides were still quite lengthy – an issue made more noticeable during the recording of the audio track. Ayres chose to further deconstruct these slides to break them into shorter chunks, ending up with slides accompanied by approximately three minutes of narration each. Lastly, the narration process uncovered the need to modify the progression through the presentation. Ayres found herself going back and forth between slides, often viewing one slide and then referring in the narration to a previous slide or a slide earlier in the presentation. Moving back and forth disrupted the recording process so Ayres ended up duplicating slides to disperse them in such a way that her audio narration would sound and feel more natural.

Once the recording process was complete, Ayres saved the presentation as a PowerPoint® slideshow file (.ppsx). She felt students did not need an "editable" version of her presentation and that the experience would be more seamless if students viewed it as a slideshow rather than having to figure out how to put the presentation into slideshow mode. In addition, a PDF version of the presentation printed in handout mode was created. Both the slideshow file and the PDF file were then posted to Blackboard® for student access.

Throughout our conversation, and especially upon hearing of the issues she had faced during the recording process, I was curious as to whether Ayres had consulted with any resources before, during, and after the creation of her interactive presentations. She recalled having gone to some training on-campus at some point to learn about adding
audio to PowerPoint® presentations. She also worked with her college's technical support personnel.

**Professor Cornelius**

For Professor Cornelius, informatics – a science focused upon the storage, manipulation, and retrieval of information – and information systems – the application of information technology to solve problems – have been part of his life for over 30 years. His formal educational background, including a bachelor's degree in business informatics, a Master's in Business Administration, and a Doctorate in Management Information Systems, is evidence of this.

Like many others, Cornelius' teaching experience began as a doctoral student. As he describes it, "they gave you the textbook; they gave you the syllabus; and put you in front of a class." Cornell's experiences built from these auspicious beginnings, and he began to pay attention to the best practices being offered by other educators through literature, research, and conferences. The past 20 years have found him at Midwestern Metropolitan University (MMU), teaching both undergraduate and graduate classes in the information systems programs within the information science and technology college.

Cornelius' exposure to teaching in distance education delivery modes came over eight years ago. Looking for ways to not only boost enrollment but to also meet the needs of an ever-diversifying student population, the information systems department began developing courses that could be delivered synchronously via satellite or Web conferencing software or asynchronously online. Cornelius' courses were among the first in his department to be offered in these delivery modes.
The decision to create and use voice-over presentations in distance education courses was a personal one for Cornelius. He had observed how others had developed their online courses and thought about the goals he and his program were fostering in their curricula. Making choices as an instructor, he describes, is "almost like [being] an entrepreneur here … you look at what works" for conveying content and for supporting students in their discovery of the application of the concepts. For Cornelius, voice-over presentations were the best solutions for teaching the conceptual elements of the course, accompanied by discussion and activities to cover the application components. He could, with interactive presentations, "convey actual content directly" to students, supporting that information with what he calls "your go-to examples and your go-to ideas that will really bring the topic alive." Cornelius also talked about the value-addedness an instructor brings to the experience. An instructor curates "content into a lecture and [provides] an explanation that hopefully they (the students) can follow more easily." Through this curating process and the audio narration, students can begin to "understand who the [instructor] is."

As for how Cornelius envisions students using his interactive presentations … how he situates these materials in his course, the lectures are seen as one step in a larger learning process. In his words, "the lectures are followed by assignments that build on that; these assignments then become discussions." The materials are intended to be very straightforward, with Cornelius explaining basic concepts and providing examples as appropriate. In responding to a question regarding whether he considers the presentations to be required, Cornelius commented in a sardonic voice, "I don't even require the assignments. It's just that people who don't turn in assignments tend to fail the class." He
went on to say, though, "the lectures have content that's going to be on exams and in the assignments; there had better be a relationship there … It all shows up eventually."

Cornelius used TechSmith's Camtasia® software to create his presentations. His process, however, began with the creation of a PowerPoint® slide deck for each lecture. The text of the slides pretty much followed the content outlined in the text used for the course. As he described it, "The first time you teach a class, you stick to the textbook because that's all you've got. You introduce more and more things over time." Examples and visuals illustrating the concepts presented are among the things added over time.

In addition to honing the text of the slides, Cornelius talked about refining the actual design of the slides. He drew upon his experiences in delivering instruction via satellite and a workshop on teaching with this technology he and a colleague attended. At the workshop, topics such as image quality and designing visuals for contrast and size were highlighted. He also drew upon design elements he had seen out in the world. The end result was a slide theme that included white backgrounds with muted blues and grays for accent and text colors. This design is applied to all of Cornelius' lecture presentations.

Once the slide deck is set, the file is imported into Camtasia®. With a print-out of the slides in-hand so he knows what's coming up next, Cornelius turns on his Webcam and begins recording the first slide with his headset microphone on his dual-monitor Windows® desktop computer. He only records the video on the first slide to give students a sense of connection to who he is and then uses only voice-over narration for the remaining portion of the presentation. Cornelius explains his approach as "talking my way through it." He does not use a script, but rather relies on the bulleted text on the
slides and his own knowledge of the content for moving through the presentation. He tries to keep it engaging, emphasizing he is not reading from the textbook because that's not what you do in class … and you're not really teaching [then]; you're just reading your voice-over. [If you do that,] you're books on tape.

Cornelius edits his presentations as he goes along. He finds Camtasia® very easy to use in this regard. Its built-in audio editing capabilities and the ability to rearrange content quickly enable him to keep his presentations up-to-date. He is also able to export the presentations to several formats, including ones optimized for smartphones and other mobile devices. For the majority of his presentations, Cornelius saves the Camtasia® file into a Flash®-based Web video format as well as a video optimized for an iPad®/iPhone® device and posts them to his college's streaming video server. He then links to these files and uploads PDF copies of the presentation printed in the 6-slide-per-page handout layout.

When asked about resources he consulted when first creating his presentations, Cornelius responded that he "[stole] a lot" in terms of ideas and approaches. He's paid particular attention to "good hosts on TV and how they talk; how they present themselves," especially picking up on their declarative speaking pattern. Cornelius also reads the literature on teaching and instructional strategies and pays attention to teaching blogs "because there's so much good stuff in there." And, as he notes, it doesn't always have to be the good stuff – "You can also see and learn from bad examples." In the end, Cornelius is a strong believer in finding out what works for you as an individual and finding your own instructional style.
Professor Lucille

Professor Lucille has been affiliated with Midwestern Metropolitan University for nearly 15 years now. With a background in journalism, marketing and business administration, Lucille has taught for both the Arts & Sciences college and the Information Science & Technology college.

Lucille's first forays into teaching were in workshops and seminar sessions on business planning and marketing for metropolitan area business owners. Her first for-credit courses were offered through the local community college system's business program. Through a newspaper advertisement, Lucille learned MMU's English department was looking for an instructor to teach a technical writing course and applied. She has been teaching in this subject area every semester for the English department and MMU's continuing studies division for the past 14 years. Lucille added a course offered through the Information Science & Technology college in the fall of 2008.

Lucille began teaching the English course online during the summer of 2008. The second course was taught online the summer of 2009, and she is now teaching at least one online section each semester. The addition of the course for the Information Science program brought further opportunities to develop a blended course, which is approximately one-third online and two-thirds completed in the classroom. This blended course was implemented during the fall 2009 semester.

Interactive presentations offered several advantages to Lucille for moving into distance education. Lucille was already familiar with PowerPoint®, having created presentations for not only her previous courses but also for her professional activities. With a "full library of PowerPoints®," she could assemble interactive presentations that
conveyed concepts important for students to understand while also providing visuals and helpful examples. Interactive presentations could also meet the needs of a diverse student population – tailoring the learning experience to those who were visual learners while also meeting the needs of those who preferred to learn by listening. Lastly, as she had learned through a previous project in which she recorded local business owners and used that recording as the audio track to a PowerPoint® presentation, Lucille could bring a bit more of a "real-world" perspective to the material.

Lucille refers to her interactive presentations as her lectures. Although she has not specifically designated them as being required course materials, she does inform her students, "Not listening to the presentations is like not coming to class and listening to the [presentation]." In addition to presenting course content, Lucille has created supplemental presentations on such co-curricular topics as creating PDF versions of course assignments, using MMU's library databases, and touring the course site in the Blackboard® learning management system. She envisions students using these materials on an as-needed basis, often referring to these and the other lectures when she provides feedback on assignments and other course assessments.

As mentioned earlier, Lucille began the process of creating interactive presentations for her online and blended courses with slide sets she had created for her in-person classes. The text of the slides was reviewed to ensure the content reflected the information she wanted to bring into the online class. In some cases, Lucille kept the text as-is and only "modified … the design of the PowerPoints®." Lists of bulleted text statements dominated the early versions of her interactive presentations; however, after seeing Penn State Engineering Communication professor Michael Alley's (2013) work on
presentation design, she has recently begun using full sentences for the titles on each slide to provide better context to the main thoughts being presented. Lucille also attempts to add copyright-free images and graphics to illustrate more complex topics.

Recording the audio narration is a fairly easy process at the moment. Using a headset microphone, Microsoft PowerPoint 2003®, and an older version of Adobe Presenter® on her laptop computer, Lucille makes a conscious effort to "talk as naturally as I can" as she records slide by slide. She will review the recording, but tries not to re-record to the point of perfection. In her words, "If I flub, or I can't think of a word, that's ok … That's what people do when they talk. I think it makes it more real, rather than trying to make it perfect."

Once satisfied with the recording, Lucille converts the file using Adobe Presenter® software. This software allows her to export the voiced-over presentation to a PDF file. Her reasoning for this file format choice was that she "really didn't want my PowerPoints® to be taken and used for other things so I decided … to lock them in." She also noted some students using Macintosh computers or open source office suite software had problems with PowerPoint® files. The PDF file format, then, allowed for more universal access. The PDF does retain the audio narration track and its synchronization with the slideshow. Students access these files through links in folders in the Blackboard® course site.

Hearing of the lengths Lucille goes through to offer interactive presentations, I asked whether she sought assistance from others or used help documentation to figure out her process. She recalled a time when she was teaching for the local community college system and participated in a few professional development workshops on PowerPoint®.
Assistance from staff in the instructional design and support unit at MMU were consulted during the early years of using the learning management system. Lastly, Lucille also discussed how she had done quite a bit of "of online searching and … looking for what other people [did]."

**Summary**

Each case presented in this chapter highlighted the experiences of individual instructors at Midwestern Metropolitan University. While their educational backgrounds and teaching experiences differed greatly, similarities in these instructors' experiences in creating and using interactive presentations in their distance education courses did shine through. Many utilized similar technologies (Microsoft PowerPoint® software, Windows®-based computers) and approached their creation processes with comparable starting points. There were also notable differences in intention and in use that are important elements to consider. A more detailed discussion of these similarities and differences, as well as other key themes, derived from examining all of the cases are presented in the next chapter.
CHAPTER 5
CROSS-CASE ANALYSIS AND INTERPRETATIONS

Introduction

A cross-case analysis allows for the comparison of experiences across all participants. Patterns of similarity begin to emerge. Points at which experiences diverge can also be identified. Lastly, facets of larger understanding surface when examining the cases as a whole. This chapter begins with a discussion of similarities and differences in instructor experiences as framed by the questions guiding this research. Included in the discussion are references to connect my interpretations of their experiences to larger bodies of research where appropriate. The chapter concludes with a discussion of elements that transcend these questions to become key considerations for instructors interested in creating and using interactive presentations in distance education courses.

Similarities

Why do instructors create interactive presentations?

Voice/Persona. One of the prevalent themes relating to why instructors create interactive presentations that emerged from my interviews with MMU instructors was the concept of "voice," or as I will refer to it, persona. Over half of the participants commented on the importance of having students "hear my voice" via the presentations. Both Professor Derek and Professor Bennett talked about the personal aspects of teaching and how the voice-over presentation "was [a] way to get to that." Others described the presentations as ways students can connect with "the human being" teaching the class, offering glimpses into the instructor's personality, likes and dislikes, interests, and opinions.
How the human being is represented in an online course is important. The early work by Berge (1995) identified four roles an instructor of a computer-mediated course may fulfill. Among those roles is a social one in which the instructor "promotes human relationships" (Berge, 1995, para. 8). Coppola, Hiltz, and Rotter (2002) built upon this basic idea with their research on roles of instructors in Asynchronous Learning Networks (ALNs) – learning environments using "the World Wide Web and the Internet to deliver courses" (p. 170). As a result of their interviews with instructors teaching in these environments, an affective role consisting of tasks associated with "influencing student's relationships with the instructor" (p. 178) was an important element in the experience of teaching online.

Along those same lines and receiving more recent attention in distance education research is the work of Charlotte Gunawardena, D. Randy Garrison, and Terry Anderson. Gunawardena's early work with Frank Zittle (1997) examined social presence – "the degree to which a person is perceived as a 'real person' in mediated communication" (p. 9) – and discovered it was highly related to student satisfaction.

Garrison and Anderson describe social presence as an essential element in their Community of Inquiry (CoI) model (Garrison, Anderson, & Archer, 1999). Their concept of social presence broadens the definition offered by Gunawardena and Zittle. For Garrison and Anderson, social presence is defined as "the ability of participants in a community of inquiry to project themselves socially and emotionally, as 'real' people (i.e., their full personality), through the medium of communication being used" (p. 94). Research is currently underway to attempt to measure social presence in distance
education courses and to relate sub-constructs of presence, including teaching presence, to satisfaction and course/program assessment (Arbaugh et al., 2008).

The concept of social presence is also contributing to the exploration of online teaching persona. William O. Phillips (2008) examined teaching persona as the "professional 'self' put forth when you deal with … students" (p. 1). Part of the persona an instructor develops as a teacher, regardless of learning environment, represents an authentic self that is expressed in specific ways through characteristics such as course organization, caring, humor, and experience.

For instructors of distance education courses, creating and using interactive presentations supports the development of social presence and persona. As the participants described, recording a voice-over narration for their presentations lends a reality to the experience they provide for their students. Students get to hear their instructors' voices and get to know their tonal inflections, phrasing, and general style. Interactive presentations also allow instructors to develop relationships with their students by enriching the exploration of course concepts with the relating of personal experiences. These are experiences not easily achieved through other mediums.

**Sharing personal experiences.** Somewhat related to voice/persona and expand or clarify is the idea of sharing personal experiences. Several participants recognized the opportunity interactive presentations offer for sharing the instructor's personal experiences with course topics. Many of the respondents had served in other roles in their profession prior to or in conjunction with their teaching responsibilities. Their experiences in these other roles were used to bring textbook readings and other course content "to life," providing students with stories and insights relevant to their learning.
As described above, research in the area of social presence/persona offers insights into why the sharing of personal experiences can be valuable. Incorporating personal experiences into interactive presentations, particularly in a distance education environment, provides opportunities to become more familiar with the instructor. Course concepts can also be presented in varying contexts, with relevance to real-world application highlighted.

**Expand or clarify.** Nearly all of the participants included in their reasoning for creating presentations the idea of expanding upon or clarifying information found in course readings. As will be discussed in more detail later, most instructors initially created slide presentations based upon textbook material. They then layered examples, clarifications, and/or personal experiences upon this foundation with the goal of making the content more relevant and understandable. Clarifying the connections among course concepts and/or between course concepts and their application in the real world was an important element for these instructors.

Establishing these connecting points is critical for student learning. Clark, Nguyen, and Sweller (2006) discuss connections in terms of near and far transfer of learning and the development of schemas that can be activated as a student encounters new information. The authors describe near transfer as routines or "procedures that are done the same way each time they are performed" (p. 220). Far transfer involves adapting "skills to each new situation" (p. 220).

For some of the instructors interviewed, near transfer activities comprise a large part of their courses. Formulas and standardized procedures could be found in the presentations created by Professors Ayres, Bennett, Cornelius, Red, and Sherman. For all
instructors, offering examples and personal experiences help support far transfer learning by presenting information in multiple ways. Clark, Nguyen, and Sweller (2006) describe this as providing information in a varied context so that students have the opportunity to identify "similar structural features" (p. 222) and responses that can be adapted when faced with new circumstances.

Shell et al. (2010) discuss the importance of connections in their Unified Learning Model. As they describe, "the key to transfer of knowledge is that some aspect of the environment in which the knowledge will be used must trigger a pattern match" (p. 53) in knowledge schema. Although the instructors in this study could not provide a direct experience to their students, a few of them could walk through scenarios, outlining procedures and incorporating visuals. Sharing personal experiences also aids in transfer as instructor stories and descriptions provide details that can be stored in memory for future use. Students could use visual, textual, and audio triggers to activate prior knowledge when faced with similar situations in project and professional work.

I know this technology. It probably goes without saying that we often choose direction based upon past experiences. Such is the case with many of the individuals participating in this study when it came to creating interactive presentations. As Professor Carl described it, "it wasn't that much of a stretch to think about" using interactive presentations given his previous experience with audio and video. For others, starting with a software application they already knew (PowerPoint®) provided a level of comfort such that "the voice-over piece just seemed like a fairly simple way to add to that already-existing technology." This provided some efficiency in the creation process, but more importantly, having previous experience with the technology allowed the
instructors to focus more upon teaching and crafting an online experience for their students than on the tool itself.

**How do instructors use interactive presentations?**

Part of the role of an instructor involves making decisions about which materials and resources to include in a course to support student learning. When instructors "curate content," as Professor Cornelius describes it, they put materials together with a vision towards how students might use them to support their own learning. The "important stuff" is identified as required – materials students *must* read or complete in the assumption that doing so will provide them with "what they need to know." Other materials may not be labeled as required, instead being referenced as extra resources, helpful sites, and the like. This labeling and organizing can become quite important when there are few or no synchronous interactions between students and instructor.

I was curious how my participants envisioned their interactive presentations – did they see these materials as required or supplementary? If they were required, did they or how did they inform students of their importance? Looking at the cases as a whole, I began to see these answers were somewhat dependent on the reasons given in answer to the question of why they chose to create these materials in the first place.

**Required.** Approximately half of the participants in this study identified their interactive presentations as lectures, and they intended "the lectures to be mandatory." Designating the presentations as lectures gives them a status of importance if one equates the viewing/listening experience to what occurs in face-to-face courses. With a face-to-face course, students are expected to attend class meetings and to engage with the instructor and the course content through an instructor's lectures. Attendance and class
participation scores are often recorded as part of a student's grade to reflect this engagement. In blended and completely online environments, some instructors seek ways to compensate for these activities, attempting to provide an experience equal to what one would get in a synchronous, face-to-face environment. Interactive presentations serve as one method of fostering this type of engagement.

Unfortunately, as one might already guess, there is an embedded assumption in this perspective that may not always hold true— the idea that labeling materials as "required" will somehow guarantee a student will attend/watch/view/engage, regardless of delivery format. Instructors interviewed for this study readily acknowledged this paradox. All of them created presentations knowing there was no way to "force [the students] to watch the lectures" nor were there any mechanisms they could employ to truly determine if students had used the presentations. In the end, I found that nearly half of the participants reconciled these incongruences by relying upon the foundational higher education philosophies of "this is college," "our students are adults," and "I'm not their mother." Professor Cornelius phrased it more positively as "I treat my students as adults … as in, you know what's best for you."

**Supplemental.** Four participants described their interactive presentations as supplemental materials in their courses. For Professor Alice and Professor Zeke, some of the presentations were the result of a collaborative effort between them. They purposefully set out to create materials covering concepts "that would provide a foundation for talking about other topics in [Zeke's] class." Professor Bennett created and used his interactive presentations as introductions to weekly course content, offering guideposts to students for navigating and understanding course readings. Professor
Sherman viewed his presentations as a source students could turn to as they sought to understand concepts presented in the course texts. All of these instructors believed in the value their presentations provided and made sure students were aware of their availability by sending out announcements through the learning management system or referring to them in feedback and other interactions with students.

"Non-lecture" content. Half of the participants commented they had created interactive presentations for content beyond their lectures. In some cases, the content featured in these presentations related to activities such as completing course assignments, using library resources, or applying proper grammar and writing mechanics. In others, presentations were created for additional practice, using worked examples to demonstrate finance concepts or using a sample document to show how to edit a paper. The motivation for creating these materials usually originated with poor academic performance – bad grades on tests, mistakes on papers, etc. – or the receipt of similar questions from multiple students. While none of the instructors identified these materials as either required or supplemental, several followed a practice similar to Professor Ayres when it came to giving feedback or responding to questions: "I can tell them exactly which slide to go look at [in the presentations]" and to use these resources when they feel they need them.

How do instructors create interactive presentations?

The process for creating interactive presentations can be mysterious, particularly for those who have never looked behind the curtain to see how digital presentations are crafted. It can also be made more daunting when accompanied by the need to learn other aspects about creating and delivering a distance education course. This section features
aggregated details of the processes instructors at MMU followed to create their interactive presentations.

**Starting points.** Having made the decision to create an interactive presentation, where does one begin when it comes to content, design, and technology? Two sources served as the foundation for presentations created by the instructors who participated in this study.

**Textbook.** By far, the most frequent response to questions about the process of creating presentations and how to get started included a reference to the textbook selected for the course. Several described their starting points for identifying and organizing the content of their courses, including materials presented via interactive presentations, as emerging from the selection and review of textbooks. Nearly half of the participants commented upon their reliance on the textbook when they were first starting out with their courses. Professor Cornelius' comments seem to summarize it best, "The first time you teach a brand new class, you stick to the textbook because that's all you've got. You introduce more and more things over time."

After reviewing the text, notes and outlines of chapters and concepts deemed relevant were made. Presentation slides were then created, featuring statements and key phrases from the chapters the instructors wanted to emphasize. Several instructors alluded to the presentation slides as reflecting "the outline," "structure," or "sequence" of the "more critical elements of the chapter."

**Publisher content.** The idea of starting with presentation slides from the textbook publisher arose from one of the earliest interviews in this study. As Professor Red was showing me one of his interactive presentations, I noticed the name of the textbook he
was using, along with the publisher's name, was displaying on his presentation slides. I asked if that was intentional, and he commented that the "publisher provided PowerPoints® that went with each of the chapters," and he just modified their presentations to "match-up with our goals and our objectives of the class."

I had heard in previous interactions with other MMU faculty that they sometimes had access to publisher content and was curious about what experiences the other instructors participating in this study would have with this content. Incorporating a question directly relating to this idea into the interviews with the other participants, I learned there were mixed approaches to using publisher content for creating interactive presentations. Some referred to their use of slides from the textbook publisher as a starting point and something to look at "before you jazz them up." Others said they "probably wouldn't use publisher [materials]" at all. As Professor Alordayne commented, "How do you emphasize what you think is important if you're using canned materials?"

It would seem that although using publisher content as a starting point might be more efficient because design choices and textual content are already addressed, there is a downside. As discussed previously, the instructor's role in a course includes a social presence/persona as well as curating relevant content. If publisher materials are used but remain unmodified, a piece of the representation of the instructor's persona in the course is lost, and the role of the instructor is slightly diminished.

**Design considerations.** For the instructors participating in this study, elements relating to the visual design and layout of their presentations did surface in our interview. Elements such as the formatting of the text appearing on the slides, background and color choices, and the use of visuals or images were the most frequently cited design
considerations. Figure 2 summarizes these design choices as represented in each of the presentations shared with me. Additionally, attention to information presented in the audio narration was given.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Background (Color or Pattern)</th>
<th>Text Color</th>
<th>Font Type (Titles)</th>
<th>Font Type (Body)</th>
<th>Visuals (Images/ Graphics)</th>
<th>Animations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>White</td>
<td>Dark blue</td>
<td>Serif</td>
<td>Sans Serif</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Carl</td>
<td>Darker gray gradient</td>
<td>Light yellow</td>
<td>Sans Serif</td>
<td>Serif</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Alice</td>
<td>Geometric squares of primary colors (green, yellow, blue)</td>
<td>Black on lighter bg White on darker bg</td>
<td>Serif</td>
<td>Serif</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Zeke</td>
<td>Geometric squares of primary colors (green, yellow, blue)</td>
<td>Black on lighter bg White on darker bg</td>
<td>Serif</td>
<td>Serif</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
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<td>Dark tan</td>
<td>Serif</td>
<td>Serif</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Alordayne</td>
<td>Light teal/Light yellow</td>
<td>Dark teal</td>
<td>Sans Serif</td>
<td>Sans Serif</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Edward</td>
<td>Black</td>
<td>White</td>
<td>Serif</td>
<td>Serif</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Quimby</td>
<td>White</td>
<td>Black</td>
<td>Sans Serif</td>
<td>Sans Serif</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Bennett</td>
<td>White</td>
<td>Black</td>
<td>Sans Serif</td>
<td>Sans Serif</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Sidney</td>
<td>Black bg; black-to-red gradient stripes at top/bottom (MMU template)</td>
<td>White</td>
<td>Sans Serif</td>
<td>Sans Serif</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Sherman</td>
<td>White bg with yellow stripe</td>
<td>Maroon (title text) Black (body text)</td>
<td>Sans Serif</td>
<td>Sans Serif</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Ayres</td>
<td>White or gray</td>
<td>Black or dark blue</td>
<td>Sans Serif</td>
<td>Sans Serif</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Cornelius</td>
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<td>Sans Serif</td>
<td>Sans Serif</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Lucille</td>
<td>Darker purple gradient &amp; texture</td>
<td>Light Yellow</td>
<td>Sans Serif</td>
<td>Sans Serif</td>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

*Figure 2.* Summary of design considerations from sample presentations.

**Text formatting.** Many of the instructors interviewed described trying to keep their slides simple, choosing to present information as bulleted list items on each slide. A few commented that they "didn't put too much" on their slides. Two instructors specifically mentioned the choice of font style used in their presentations. Professor Alice talked about using the font type of Courier because of its serif design for readability. Professor Ayres described using a font that mimicked "chalk on a chalkboard" in some presentations featuring worked exampled problems. It appears the
majority of the instructors interviewed in this study preferred a sans serif font, with 10 of
the 14 choosing a sans serif type style for slide title text, body text, or both.

The research on text formatting and fonts for reading on screens is a bit mixed. Edward Tuftes (2003) now infamous salvo against PowerPoint® brings to light the impact of choices presenting information in bulleted lists can have. One of the main problems with PowerPoint®, he describes, is the dilution of thought when one formats the text of their presentation as bulleted lists. Too much information concerning context and purpose is lost. Contrasting this position are findings from studies such as Ling and van Schaik (2006) where "shorter line lengths should be used when text is to be read more thoroughly, rather than skimmed" (p. 403). Instructors creating interactive presentations should take into consideration their goals for the text included on the screen, determining whether the text is meant to capture the detail of a concept or if it serves as more of a point of reference to details expressed in the voice-over narration.

In regards to fonts and font choices, there has been a long-standing conversation about which types of fonts are better for screen reading – serif or sans serif. Serif fonts are those font styles in which a small line or stroke is added to the beginning or ending of the main stroke used when forming a letter or symbol. Examples of serif fonts include Times New Roman and Courier. Sans serif fonts are those without these extra beginning or finishing strokes, such as is found with the font types of Arial, Helvetica, and Verdana. The serif font has been preferred in the print world because the extra strokes contributed to legibility and readability. In the online environment, however, a sans serif font was recommended because screens and monitors did not usually provide a high enough resolution to maintain good contrast and clarity. Monitor technology has evolved to the
point that the debate of whether to use a serif font or a sans serif font on presentations may no longer need to be waged. According to Jakob Nielsen (2012), "Legibility research is inconclusive as to whether serif fonts are truly better than sans serif" (para. 11). The best advice to instructors is to strive for good contrast between lettering and background and to choose a font representative of the mood or intent to be conveyed.

**Background and color choices.** In keeping with the "minimal design" of the slides, backgrounds and color choices for MMU instructor presentations favored lighter backgrounds with text in darker colors. Most used flat, solid colors for their backgrounds though a few did feature textured backgrounds. The majority of slides featuring light backgrounds used black or darker shades of blue for text colors. White or light yellow was a preferred color for text on a dark background.

As with the discussion of font choices, background colors have been the subject of research when it comes to reading on a screen. Holtze (2006) describes hue, luminance, and saturation as three components of color that greatly influence the interaction between reader and screen. The combination of hue (the pigment color), saturation (the intensity of the color), and luminance (the amount of light in the color) has both a physiological and a psychological impact on the reader. As Holtze states, "Highly-saturated colors draw the eye and would be well used to emphasize small, important areas, … muted colors would be better for larger areas … so that they could be viewed comfortably for longer periods of time" (p. 89). This statement complements the work of Jakob Nielsen (2000) who champions "high contrast between foreground and background colors, and [avoiding] busy background patterns" (p. 302). About half of the participants in this study followed the lighter background, darker foreground practice,
with most choosing a white or light yellow background color and dark text colors. Others attempted to achieve high contrast with a dark background and lighter text color choices. Only four participants used a background that included a pattern or visual of some type. These textures and visuals, while noticeable, were subtle enough not to cause extreme distraction from the text content featured on the slides.

**Visuals.** Most instructors incorporated visuals – images, graphics or both – into their slides. In following with their purposes for creating interactive presentations, the visuals did seem to enhance or explain the concept presented in the text and audio of the slide. In cases where a diagram of the concept was unnecessary, images were used to convey a feeling or relationship to a real-world experience or situation.

Using visual elements in instructional materials, and in multimedia objects in particular, can be risky. The work of Richard E. Mayer provides best practice guidelines based upon evidence gathered through experiments and other research. Mayer (2005) identified key principles to guide the instructor when considering the use of visuals in multimedia materials. Of importance to this study are the principles of Redundancy, Signaling, and Spatial Contiguity. These principles are defined as follows:

- **Redundancy principle:** People learn more deeply from graphics and narration than from graphics, narration, and on-screen text.
- **Signaling principle:** People learn more deeply from a multimedia message when cues are added that highlight the organization of the essential material.
- **Spatial contiguity principle:** People learn more deeply from a multimedia message when corresponding words and pictures are presented near rather than far from each other on the page or screen. (Mayer, 2005, p. 198)
From the comments made by the instructors in this study and reviewing the presentation files, I surmised most of the visuals used in MMU instructor presentations could be classified as meeting the Spatial Contiguity principle and perhaps the Signaling principle. Images and graphics to illustrate concepts being presented were placed near text referring to the images. A few of the instructors used color and animation as visual cues when the audio narration synchronized with the text content displayed. This synchronization helped keep the viewer focused and alerted him/her to their location in the presentation.

As for the Redundancy principle, this is a principle that is difficult to follow for the instructor new to creating multimedia materials. The instructors in this study often presented graphics and on-screen text along with their audio narration. These elements were usually presented at the same time, leaving the viewer no opportunity to process each piece independently and then as a whole.

**Screen versus narration.** Given the considerations for formatting the text on the screen, I was interested in gaining further insight into how the text on the screen compared to the audio narration. I was also interested in how the instructors determined what information would be presented as text and/or included in the audio narration. Part of my interest stemmed from my own study of cognitive learning processes and how the design of instructional materials can influence learning. I was curious as to what I might find when I examined authentic materials created by MMU instructors.

When asked, most of the instructors interviewed described the text they placed on the slides a "note," a "basic idea," or a "main idea." A few commented on the inclusion of the full text of a quote or definition as the text of the slide. For the most part,
instructors mentioned the text on the screen served as a prompt for explanation and/or expansion within the audio narration. Professor Derek described it as, "I'll click on a slide, and I might read something from the slide but then I will just talk." While the instructor might use a key phrase or statement in the narration, rarely was the entire text of the slide read verbatim.

As is mentioned throughout this chapter, the research of John Sweller, Ruth Colvin Clark, and Richard E. Mayer in the areas of cognitive learning processes and the design of multimedia materials is quite influential and offers best practice guidelines. Among the guidelines they offer that relate to the questions of screen versus narration are the following:

- **Prior Knowledge**: Use audio for low prior knowledge learners (Clark, Nguyen, & Sweller, 2006, p. 69)

- **Signals**: Use signals to draw attention to verbal information (Clark, Nguyen, & Sweller, 2006, p. 79); People learn better from a multimedia lesson when essential words are highlighted (Mayer, 2008, p. 764).

One might argue that a student encountering an interactive presentation covering distinct content could be seen as a low prior knowledge learner. While they may have some familiarity with the larger conceptual domain, they may not have experience with the specific content offered in a presentation. This may be especially true if they view the presentations first without reading other related course materials. In this case, having an audio narration to explain the information presented would support learning processes.

Clark, Nguyen, and Sweller (2006) describe the use of signals and signal phrases to point out important information in visual displays. Signals can range from the use of
arrows and highlighting to verbal cues. Mautone and Mayer (2001, as cited in Clark, Nguyen, & Sweller, 2006, p. 81) found that audio narration could be effective in supporting learning if combined with signaled text. An instructor could signal important information by formatting (bolding, italicizing, or colorizing) the text of important information while also emphasizing signal phrases from this text in their audio narration. Only one instructor, Professor Ayres, incorporated the practice of using signaled text with audio emphasis; others primarily offered emphasis in their audio track without a visual signal in the text displayed on the screen.

**Recording the audio narration.** The process of recording audio narration for an interactive presentation involves not only the mechanics of recording – using insert and audio formatting menus along with headphones and monitors – but also an awareness of oneself and purpose for which the materials are being created. Talking to MMU instructors creating these materials for their distance education courses brought to light elements in how one approaches and completes the recording process.

**Mental models.** For those instructors who talked about their initial preparation for recording the audio narration to their PowerPoint® slides, the idea of treating the process the same as if they were standing in front of their face-to-face class and lecturing was prevalent. Several described trying to go through their presentations "as I would normally go through it in the classroom," relying upon the experience to be similar to "the way I would give the lecture … as if I I'm in front of 30 students." Unfortunately, as many of them soon discovered, trying to record the presentation in this manner resulted in unexpected consequences. Professor Red talked about the issue of starting the narration for a slide with a clear idea of what he wanted to say but then finding himself
going through the information for the slide and not knowing how to finish it without "[sounding] like an idiot." Professors Ayres and Cornelius described the greatest difficulty with this approach as being the lack of feedback. Both commented that not getting immediate feedback, as would be happening with a face-to-face course lecture, was a challenge. All agreed their approach to recording the audio narration changed after their first attempts. Professor Ayres' comment that she "had to sit down and plan … and rethink what I was going to say" seemed to be a common sentiment among the participants.

*Scripts.* In relating the experience of having different mental models in mind when approaching the recording sessions, the instructors described the role of scripts in these efforts. The majority of participants spoke of using notes and outlines rather than full scripts. Professor Quimby's approach of having "a basic outline of salient points I wanted to cover" nearby as he recorded his audio or Professor Red's experience in having a printed copy of the slides in hand echoed the experiences of other participants. All described having these aids as useful for keeping focus and in helping prepare for transitions through their presentation content.

One note of interest that emerged from this discussion was that of audio tone and style. Those who used notes and outlines rather than a script described their desires for delivering the information in ways that were "more conversational and spontaneous." This approach can be linked to the concept of social presence as described earlier when talking about why an instructor creates interactive presentations. Clark and Mayer (2011) provide a cognitive processing basis for using conversational tone in audio narration. As they describe it, "Using conversational style in a multimedia presentation conveys to the
learners the idea that they should work hard to understand what their conversational partner (in this case, the course narrator) is saying to them" (p. 184). They also contend conversational style supports higher levels of learner engagement with the instructor and with the course materials.

**Technology.** One of the main areas of interest when undertaking the process of creating interactive presentations is technology – what specific hardware, software, and other equipment is used to create these materials? Another aspect relates to the file formats involved in interactive presentations. Are there specific audio formats for the voice-over narration? In what final format should the presentations be saved so that students can access the materials? These were questions I explored in my interviews with the instructors. Their responses, as one might imagine, reflect choices influenced by campus culture and personal experience. Figure 3 summarizes the hardware, software, and equipment used by the participants as well as the final file formats in which the presentations are saved.
<table>
<thead>
<tr>
<th>Participant</th>
<th>Operating System</th>
<th>Type of Computer</th>
<th>Software</th>
<th>Microphone</th>
<th>Final File Format</th>
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</table>

*WhisperRoom® refers to the soundproof vocal booth available in MMU Library's Media Room.

File Format Key:
- PPTX = PowerPoint® 2013 (Windows)/ PowerPoint® 2011 (Macintosh)
- PPT = PowerPoint® 2007-2010 (Windows)/ PowerPoint® 2008 (Macintosh)
- SWF = Flash® video format
- M4V = MPEG-4 Video Layer
- PDF = Portable Document Format
- PPSX = PowerPoint® 2013 Slideshow

Figure 3. Matrix of hardware, software, and equipment used to create interactive presentations. The final file formats of the presentations are also given.
Operating system and software versions. The technology used to create interactive presentations for instructors at MMU was dominated by the Windows® operating system as well as the most current versions of Microsoft PowerPoint®. MMU can be characterized as a predominantly Microsoft Windows® campus. The majority of desktop computers made available to faculty, staff, and students are Windows® PCs. Over the past five years, more and more faculty have shown an interest in being more mobile and purchases of laptop computers have increased, with the Windows® operating systems remaining the system of choice for these machines as well. Bulk purchase agreements for hardware (desktops and laptops) and a system-wide software licensing agreement with Microsoft have ensured the strong representation of Windows® on campus.

There are niches for Macintosh-based computers, however. Faculty in MMU's College of Education are provided with dual-boot Macintosh laptops as their primary computing workstation. As dual-boot computers, the laptops can start up in either the Macintosh operating system or the Microsoft Windows® operating system, though many report using their "Mac side" most often. Regardless of which operating system is loaded, the most current version of the Microsoft Office® software suite is usually installed.

Macintosh computers are also used in the College of Fine Arts, the College of Arts & Sciences, and in the Media Room at the library. Usage in these areas is often attributed to the prevalence of Macintosh computers in the professions served by these disciplines. Many reported they had become familiar with Macintosh computers during their early education years or as they were working in their first professional positions.
**Final presentation format.** Many of the instructors interviewed partially attributed their creation and use of interactive presentations to the availability of PowerPoint® for themselves as well as for their students. This then necessarily influenced the final format of the presentation file made available to students. Over half of the participants posted some version of their interactive presentations in native PowerPoint® file format – .pptx, .ppt, and/or .ppsx. These file formats require the student to download the file and open it either the full PowerPoint® program or a PowerPoint® viewer application.

After downloading .pptx and .ppt files, students would have to launch the presentation into slideshow mode in PowerPoint® in order to get the full interactive presentation experience. They would also have the ability, with the use of the full PowerPoint® program, to modify the presentation in their locally-stored copy. Professor Ayres expressed concern about the opportunity to change her presentations that accompanied access to the full PowerPoint® (.pptx) file and so initially posted the final versions as PowerPoint® slideshow (.ppsx) files. Professor Alordayne offered similar explanations for offering her presentations as slideshow files. While the student would still have to download the file and open it for viewing, the file would open directly in slideshow mode, and students would not be able to edit the presentation. Professor Alordayne also commented on posting her presentations in .ppt format as a way to accommodate those students who might not have the most recent version of PowerPoint®.

The sentiments of accommodating students through more accessible file formats and reducing students' opportunities to edit presentations were also expressed by instructors posting Flash®-based (.swf) and iPhone®/iPad®-formatted (.m4v) video files
or PDF versions of their presentations. Professors Carl and Cornelius specifically spoke about using a video format for their final versions so that students would not have to download a large file – their video files are streamed and begin to play as soon as enough information is temporarily stored in computer memory, providing an experience similar to watching a YouTube® video. In addition, Professor Cornelius created .m4v video versions of his presentations at the request of students wanting to access the materials from their Apple iPhone® and iPad® devices. For Professor Lucille, ensuring students could not edit her presentations was important though accessibility was kept in mind. She chose to "[lock] in" her presentations by offering the files in PDF format, allowing the students to download and view the presentations using PDF-reader software such as Adobe® Acrobat Reader® without providing them editing opportunities.

The issue of file formats is becoming increasingly complex. More and more, students are accessing course materials using mobile devices that may not support native PowerPoint® formats nor Flash®-based video access. Software applications are available for mobile devices for reading these formats, though it is doubtful whether students would be aware of these options or willing to purchase them. Instructors are becoming more aware of this particular issue and are seeking solutions to better accommodate evolving student needs.

Complicating the picture is the file format used for the embedded recording of the audio narration. Although students may be able to download, open, and view the presentation slides, there may be problems with hearing the audio narration. As was discovered by Professor Edward, PowerPoint® software records the audio narration in differing file formats depending upon the platform used for recording. Windows®-based
PowerPoint® records the embedded audio in Windows Media Audio (.wma) format while the Macintosh-based PowerPoint® program records in MPEG-4 Audio Layer (.m4a) format. In addition, Windows®-based PowerPoint® includes an "optimize media" feature which can be used to reduce the file size of the final presentation file. The optimization process transforms the .wma audio into .m4a format.

The impact of audio file format complexity becomes one of accessibility. Windows® computers do not natively support or play .m4a formatted files. Macintosh computers do not natively support or play .wma files. On both platforms, additional audio codecs (data encoding/decoding software libraries) or media programs must be installed in order to hear the embedded audio. This may place undue burdens on instructors and students who are unaware of this need and who have neither the time nor the skill to work through troubleshooting and installation processes. The simplest solution is to transform the PowerPoint® presentations into video formats, though this comes with its own set of concerns as described above.

Where do instructors look for assistance when creating interactive presentations?

Given some of the complexities involved in the creation and use of interactive presentations, I was curious as to whether instructors sought assistance during their experiences and, if so, would they identify what resources they consulted. Only one professor expressed not seeking assistance during his creation experience. Others described locally-sourced resources such as the library or the instructional design and faculty support unit at MMU or colleagues within their departments. Faculty and colleagues in departments or within similar professional areas served as consultants for a
couple of instructors. Lastly, the World Wide Web factored into a few individuals' experiences.

Professors Alice, Zeke, and Edward initially sought assistance from the Media Room in MMU's library, relying upon the expertise of its staff to record, edit, and insert the audio narration into their PowerPoint® presentations. MMU's instructional design and faculty support team, housed in the campus central computing unit, was mentioned as a support resource for three of the instructors. The instructors described participating in workshops and classes given by these staff members where demonstrations of the process for adding audio to already-created PowerPoint® presentations were featured. Technical support staff at other institutions where some of the instructors taught were mentioned as helpful resources, particularly in troubleshooting the process to post the final presentation files.

Colleagues within the instructors' specific departments turned out to be very valuable resources. Three instructors specifically mentioned how these individuals made themselves available for both technical support – showing instructors a few of the ins and outs of the software packages – and strategizing on other aspects, including slide design and pedagogical considerations. A similar story was told by instructors who consulted with their colleagues outside of the university in similar professional areas. As Professor Edward described it, "I learned PowerPoint® as a kind of crash course with my good buddy from [my previous institution]."

Professors also commented on locating and using online resources for support. YouTube® videos were mentioned predominantly when tutorials on specific software features and functions were sought. Professors Alice, Cornelius, and Lucille described
searching through Google® and blogging sites devoted to teaching at times during their creation experiences. These sources offered best practice information on such topics as copyright and slide design as well as new ideas for approaching content delivery and student engagement in technology-supported learning environments, including distance education courses.

**Differences**

Looking at the aggregated whole of the cases, the primary areas of difference fell into the categories of how instructors used their interactive presentations in their courses and elements associated with the creation process, namely the design of the text of the slides and the use of scripts.

One instructor, Professor Bennett, intentionally created interactive presentations for purposes other than lectures. His presentations were designed as weekly introductions to the course content and activities. This is unusual for those teaching at a distance. In hopes of gaining a better understanding, we talked a bit further about his purposes. Professor Bennett believed "[students] tend to retain more if you actually write down information." This is important because students "have the opportunity to hear what's being said and then [to create their] own understanding in the way that [they] write it down." He wanted his students to spend their time creating this understanding from multiple sources, including course readings and other support materials. The interactive presentations became weekly introductions in an effort to focus their attention as they were making meaning for themselves.

Professor Ayres offered a unique style of text formatting in her presentation design. She talked about leaving blanks in the text of her slides. As she described it,
I don't give [students] the whole slide. I would leave out key words. I would leave the answers empty for all of the math problems we were doing … so they would have to follow along. They would have to fill in that number or at least they'd have to watch me sit there and fill it in.

While this isn't the first time I've heard of instructors formatting their presentations in this way, I did find it unusual for an instructor teaching distance education courses to use this technique in an effort to keep her students actively engaged even in online courses.

Three individuals chose to use scripts for their audio narration. Professors Alice, Zeke, and Sidney wrote out the words they would use in their voice-over ahead of the recording session. Professors Alice and Zeke described using a script as a way to ensure their presentations sounded more professional. This decision was partially informed by Professor Zeke's musical background and experience in audiovisual recording. The potential use-case scenarios in which the interactive presentations would be featured also informed the decision. Initially, as Professor Alice described it, the interactive presentations were to be used specifically in Professor Zeke's psychology courses. However, it became evident that Professor Zeke had bigger visions for the content, seeking to share it with other groups beyond his students. The vision for using the presentations for a larger purpose fueled the need to polish the materials and ensure the audio narration was a bit more formal, fulfilling the desire to more properly represent the professionalism of the instructors.

As for Professor Sidney, her use of a script for the audio narration in her interactive presentations was driven by inexperience and efficiency. She found it easiest to create a script so that she could focus more on ensuring the recording sessions went
smoothly. Putting in the work of identifying and detailing content ahead of time freed Professor Sidney from having to balance her attention between describing new content and manipulating new technical processes.

**Other Considerations**

Reviewing the transcripts and audio recordings of participant interviews and reflecting on their experiences as a whole, a few additional elements loosely related to the main research questions, but of importance in understanding the instructor's experience in creating and using interactive presentations, are identified. Figure 4 gives a visual whether an instructor mentioned an aspect related to each of these themes as well as indicates if the topic was discussed in more detail. These themes include: *Time*, *Assessment*, and *Advice*.

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<th>Assessment</th>
<th>Advice</th>
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<td>Length of Presentation</td>
<td>Plan and practice</td>
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<td>✓ *</td>
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</tr>
<tr>
<td>Lucille</td>
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</tbody>
</table>

* denotes instructor spoke in more detail about the subject.

**Figure 4.** Other themes of importance emerging from instructor interviews. A checkmark represents the instructor mentioned an aspect related to the theme.
Time

Time was a recurring theme among the instructors' descriptions of their experiences. From one perspective, the concept of time referred to finding enough time to create, update, and deploy the interactive presentations. An alternate but related perspective found time being associated with the length of the presentations themselves.

The instructors interviewed in this study are in many ways typical professors. Their workload includes not only teaching responsibilities but also commitments to scholarly research and professional service. Those not employed as full-time MMU instructors face the demands of other professional and personal obligations. Strategies varied for juggling these demands with finding the time to record their presentations. For Professors Red, Quimby, Sidney, and Ayres, recording took place during the summer months prior to the first offering of their distance education courses. For others, including Professors Edward, Sherman, and Cornelius, recording usually took place within approximately one to three weeks of when the content needed to be available to students. As for budgeting enough time for a recording session, consensus among the participants was that it took approximately two or two-and-a-half times the length of the presentation to record the audio. If the presentation normally took 45 minutes to deliver in the classroom, there was a good chance it would take upwards of 90 minutes to record the audio for the interactive presentation using the same slide set. Some professors estimated an investment of about 10 hours for a 20-30-slide presentation created from scratch (from content outlining through slide design/audio recording to finalizing and posting to the learning management system).
On a related note, instructors wondered about best practices when it came to determining how long their interactive presentations should be. Some commented on their doubts as to whether students would actually sit and watch their presentations for an extended amount of time. Others determined the length of their presentations after they had begun recording the audio narration, getting a feel for when too much information was being presented in a single presentation and when there were major transitions between content areas that could be used for breaking a large presentation into smaller segments.

The research conducted by Clark and Sweller on Cognitive Load Theory supports these latter actions. They specifically describe practices relating to content segmentation, learner control, and practice. In Cognitive Load Theory, three types of cognitive load are identified. For this study, two of the three types – extraneous load and germane load – are of importance. Extraneous load involves the inclusion of elements that are "irrelevant to the learning goal" (Clark, Nguyen, & Sweller, 2006, p. 12). Germane load is the "mental work imposed by instructional activities that benefit the instructional goal" (Clark, Nguyen, & Sweller, 2006, p. 11). Reducing extraneous load can be achieved through the segmentation of content and giving learners control over the pace of the instruction. Germane load can be addressed through examples and worked practice to support the building of knowledge schemas and mental models, enabling students to connect new concepts with prior knowledge.

The interactive presentations offered by the instructors in this study would be considered "learner-paced", meaning the learner has more control in navigating the content. As such, sequencing content and chunking it into more compact segments
spread across multiple presentations is more helpful than recording a lengthy lecture covering a diverse range of topics. In addition, incorporating examples and worked problems more often into the presentations would allow students to practice and apply the course concepts, supporting deeper learning and learning transfer.

Professor Cornelius offered a unique, counter-perspective on the "how long should my presentations be" theme. He said that, although several scholars had studied length of video and student attention and proposed keeping videos short, he did not necessarily follow this practice. In his words,

You should not limit yourself to 5, 10, 15 minutes because sometimes you explain concepts that are far more sophisticated, requiring an explanation, requiring a setup, and then a follow-through. My lectures vary in length because I do try to separate topics. Sometimes, you have an integrated story to tell, [and a longer presentation is necessary].

This may be a relevant consideration, given an instructor's attention to the connectedness of concepts being presented.

Assessment

From the outset of this project, I wondered how the instructors judged the effectiveness of their interactive presentations. Determining whether the materials gathered by an instructor and presented to students in a course achieve established and desired goals is a challenge. How does one know whether students are using the materials and whether they are positively contributing to student learning?

I put this question to the MMU instructors and received a mix of initial responses that fell towards the "I don't really know" and "That's a good question" categories.
Probing deeper, I asked whether the discussion board posts, other written assignments, quizzes, and tests used in their courses covered information from the interactive presentations, either directly or indirectly. Most agreed their presentations covered some of the information included in these course assessment activities, and at a certain level, they expected to see some material from the presentations "paraphrased." However, as Professor Cornelius commented, "The lectures are [only] a portion of it," with "it" being the whole of the course materials and assessment activities supporting student learning.

Aside from assessment activities within the course, several instructors described receiving general feedback from students via the end-of-semester course evaluation. MMU uses the Students' Evaluation of Educational Quality (SEEQ) standardized survey instrument (Marsh, 1982, as cited in Richardson, 2005, p. 388). There is a place where students can provide written comments, and at least four of the participants mentioned this as the source of any feedback they would have received as to the effectiveness of their interactive presentations and course materials. In the end, Professor Bennett's comments seem to reflect the thoughts of others,

I guess my thinking of it, as I reflect back, was that in my in-person classes, I also don't ask them for feedback on the PowerPoint® presentations. The feedback that I get in terms of their learning is through their performance on their assignments and their quizzes and tests.

Advice

I wrapped up my interviews with each participant with questions about advice, tips, and techniques they would have to offer to others, given their burgeoning experience with the technologies and strategies involved in creating and using interactive
presentations in distance education courses. Their advice clustered into the following categories: *Plan and practice; Keep it simple; Add value;* and *Grow.*

**Plan and practice.** By far, the most common piece of advice offered by the instructors emphasized planning, preparation, and practice. Professors Bennett, Sherman, and Cornelius recommended finding models to emulate. Professor Ayres suggested getting "at least six weeks ahead so that during the first half of the semester, you're [working on] the second half of the [semester's presentations]." Professor Alordayne voiced similar suggestions, commenting "it would be nice to have more done ahead of time so that during the class itself I would be able to be adding materials instead of coming [up with them] from scratch." For Professors Edward and Sherman, ensuring the equipment available for creating and recording is of good quality is a key factor in the planning process.

With equipment and materials in hand, practice becomes an important activity. Many remarked on the fact that their comfort level in creating and using interactive presentations increased the more they practiced. As Professor Red said, "It's been a steady evolution, and the more we play with it, the better we get." Professor Cornelius added to this sentiment with his comment, "There's a lot of Mulligans in the recording of lectures." By this, he meant there are opportunities for do-overs … for re-recording until a level of satisfaction is achieved.

**Keep it simple.** At least two instructors recommended following the K.I.S.S. principle. Professor Carl commented, "Unless you really need that whiz-bang thing … the angst that you go through [may not be] worth it." Professor Lucille suggested using a uniform "design all the way through the PowerPoints® … so [they have] a cohesive look
to [them]." A single look and feel also makes it easier to create and update future presentations since the majority of the design decisions are made during the initial template creation phase.

**Add value.** A few of the instructors reiterated the importance of the instructor's role in adding value to the course. Professor Derek described it in terms of efficacy and maintaining the instructor's confidence in doing his/her job well by offering more to his/her students. Personality and presence were themes from both Professor Alordayne and Professor Quimby. Alordayne felt it was important for students to get to know their instructors through their presentations and course activities. Quimby commented on the value a practitioner brings to the teaching and learning experience. He said,

I think the practitioner's value in the classroom is the fact that they've lived through and experienced stuff and can talk about it from a real-life perspective. I think it gives it a little more spice and added credibility than just to be theoretical.

**Grow.** A last piece of suggested advice relates to professional development and growth. For many of the participants in this study, creating and using interactive presentations in their distance education courses provided opportunities to learn new skills with existing technology and new approaches to delivering content in their courses. They felt they benefited from the experience in that these skills could be used in other situations, and they were a bit more comfortable in exploring technologies.

For others, creating and using interactive presentations sparked an interest in learning more about audiovisual formats. A handful of instructors talked about a future that involved the use of more video-based instructional materials. Embedding videos in
their interactive presentations or transforming their interactive presentations into video-based formats were among the next areas of exploration.

**Summary**

This chapter focused on cross-case analysis and interpretation to gain a broader understanding of an instructor's experiences in creating and using interactive presentations in distance education environments. Similarities and differences discovered when looking at an aggregate view of individual cases were highlighted. The next chapter discusses the implications these interpretations may have for instructors, instructional support personnel, and future research in the study of interactive presentations and distance education environments.
CHAPTER 6

IMPLICATIONS AND CONCLUSIONS

This chapter serves as a summary of this qualitative study, undertaken to gain a better understanding of instructor experiences in creating and using interactive presentations in their distance education courses. A brief review of the findings, along with possible implications these may have for instructors and instructional design support personnel, will be presented. Areas for future research will also be suggested.

Brief Review of Findings

An embedded-single case study approach was used to gather information from 14 instructors at a Midwestern metropolitan university. This approach allowed for an examination not only of individual instructor cases but also of the broader picture that emerges when considering the cases as a whole. At both levels, data captured through semi-structured interviews were analyzed in an attempt to more specifically respond to four subquestions of the overarching research question.

- Why do instructors create interactive presentations for their blended and/or online course(s)?
- How do instructors use interactive presentations in their blended and/or online course(s)?
- How do instructors describe the processes by which they create interactive presentations?
- Where do instructors look for assistance when creating interactive presentations?
Why do instructors create interactive presentations?

Four themes emerged from interviews with MMU instructors as they related their experiences and attempted to describe why they chose to create interactive presentations. Many instructors felt it important for students to get a sense of who they (the instructors) were as people. Instructors concluded voice/persona could be conveyed through voice-over presentations. Relatedly, personal experiences with course concepts and situations could be shared. Expanding or clarifying information found in course readings served as an additional purpose for creating and using interactive presentations. Lastly, an instructor's previous experience with presentation software was a factor in the decision to create and use interactive presentations.

How do instructors use interactive presentations?

Instructors were asked how they envisioned the use of the interactive presentations in their blended and online courses. Given that many of the participants described their presentations as lectures, the assumption was that students would use these materials in ways similar to the lecture experience encountered in face-to-face courses, as required or mandatory course activities. A few participants responded their presentations were supplemental and intended to be used as support resources. On a related note, eight respondents described their efforts to purposefully create interactive presentations on co-curricular, "non-lecture" elements such as using library resources.

How do instructors create interactive presentations?

The process for creating interactive presentations involves content preparation and design considerations along with technical aspects, including specific technology choices and file formats. For the instructors at MMU, preparing content for presentations
often begins with the textbook selected for the course. Notes and outlines from the readings became text on slides, with the audio narration used to add examples and personal experiences. Some participants described an alternative source of content – content created and offered directly from the textbook publisher. Though not preferred for direct use, instructors could modify that content and further develop their presentations.

Several participants referenced slide design when describing their process for creating interactive presentations. Instructors were aware and made conscious decisions regarding text formatting and background and color choices. In addition, the inclusion of visuals (images or graphics) was given consideration. Determining what information to present on the screen versus in the audio narration was also described.

Specific technologies used in the creation process were identified. The predominant operating system used by these instructors was Microsoft Windows®, with the majority creating their presentations on desktop computers. Headset microphones were only used by a handful of instructors. All participants used a version of Microsoft PowerPoint® to create their initial slide sets. A few used additional software such as iSpring®, Audacity®, and several Adobe® products to render versions of the presentations in other formats. A PowerPoint® file (.pptx, .ppt, .ppsx) was often the final choice of file format, with video-based (.swf, .m4v) and other "locked-down" formats (.pdf) made available in certain circumstances.

**Where do instructors look for assistance when creating interactive presentations?**

Instructors consulted a mix of resources when looking for assistance. Expertise found in localized resources – the library and the instructional design and faculty support
unit – was used. Colleagues within departments or in similar professional areas elsewhere were consulted. Finally, videos on YouTube® and information found on Web sites and teaching blogs provided assistance on features, functions, and strategies.

**Implications**

Having interviewed instructors at a Midwestern metropolitan university and interpreting their responses to gain insight into the experience of creating and using interactive presentations in distance education courses, the question to ask now is how might others benefit from what I've learned. Two audiences may find particular value in these findings: other instructors giving consideration to integrating presentation technologies into their teaching strategies and instructional design support personnel responsible for assisting instructors from both a pedagogical and a technical perspective.

**Other Instructors**

**Clear purposes and intentions.** As with all course material decisions, having a clear purpose and intent for creating and using interactive presentations is critical. The participants described overt purposes, including content delivery and sharing examples and experiences. However, other purposes and intentions were uncovered. Concepts such as voice/persona or required viewing may play a larger role when developing these materials. Others may want to reflect a bit more on their purposes to determine how to best construct and deliver interactive presentations.

**Assessing effectiveness.** Related to purposes and intentions is that of having a clear understanding of the goals and objectives these materials are serving and determining whether the materials are meeting those needs. Others have examined effectiveness from the perspective of academic achievement (Stephenson, Brown, &
Griffin, 2008; Lents & Cifuentes, 2009; Savoy, Proctor, & Salvendy, 2009; and Geri, 2011), content representation (Burke, James, & Ahmadi, 2009; and Gupta, 2011), and in terms of instructor effort (Gupta, 2011). While the participants in this study lightly touched upon each of these, I believe deeper consideration should be given so as to determine if the presentations are impacting student learning and/or student satisfaction (depending upon purpose) and whether the return on the investment of time and effort is sufficient. Instructors should give consideration, from the beginning, to how they will determine which elements of the presentations are most deeply connected to course objectives and how they might go about assessing whether the elements are supporting those objectives. This approach follows the backwards design model described by Grant Wiggins and Jay McTighe (2005) where instructors begin with identified desired outcomes (goals, objectives, purposes, etc.) and then design or curate resources, including interactive presentations, and activities to directly contribute to the achievement of those outcomes. This helps ensure materials are focused and provides instructors with a clearer vision of evaluation criteria for determining the effectiveness of the materials.

**The technologies you know.** Instructors in this study described using Microsoft PowerPoint® software for creating their presentations because it was a technology they knew and to which they had ready access. This echoes Pace and Kelly's (2006) discussion of tools used in support of distance education. Instructors should explore features already available in technologies they use as a first step on the path to creating more media-rich instructional materials. The learning curve may not be as steep as one might encounter with a completely new software package.
Think outside of the slide. As evidenced by a few of the participants in this study, interactive presentations can be used for purposes other than the delivery of lecture materials. Presentations can be created to provide students with worked examples and practice materials. They can also serve as resources on co-curricular topics and as mechanisms to demonstrate processes. Instructors should think creatively about how interactive presentations might be used beyond the usual. The best way to accomplish this is to consider what presentation technology, in the words of Norman (2002), affords to the user. What are the main features and functions of PowerPoint®? What does it do best? How might these elements be matched to an instructor's purposes, goals and objectives?

Celebrate and commiserate. Sharing and learning from colleagues were featured elements in this study. A few instructors intentionally sought guidance from others in their departments and on campus and from those in similar professional disciplines. Models and resources can be found through a variety of channels, including Web sites, blogging resources, and professional conferences and workshops devoted to teaching and learning. Each offers opportunities for inspiration and innovation as well as commiseration. Seeing what others are doing with teaching and technology and identifying where pitfalls and challenges may occur can provide invaluable learning.

Instructional Design Support Personnel

The role of an instructional designer and other faculty support personnel can vary across campuses and institutions. While some actually create instructional materials and design learning experiences on behalf of an instructor, others provide training, demonstration, and sidelines support for the instructor crafting his/her own resources.
The insights gleaned from this study may be of use to other instructional design support personnel regardless of how s/he fulfills his/her role.

**Be prepared for the pedagogy and the technology.** Often, instructional designers are well versed in the technologies used to support instruction and may have a basic understanding pedagogical strategies for teaching. Interviews with instructors about their experiences shows there are a variety of purposes and approaches taken when creating and using interactive presentations. To provide the best support to meet these complex needs, deeper knowledge of pedagogy and technology is needed. An understanding of cognitive learning processes and multimedia principles allow support personnel to help instructors design materials for maximum effectiveness in facilitating student learning. Strategies fostering student engagement, active learning, and the like can incorporate interactive presentation materials.

As for the technical aspects, this study provided a glimpse into the tools and resources used by instructors. New software and new features/functions in existing software are continuously appearing, and instructional designers must continue to evaluate these. File format developments, new devices such as tablets and smartphones, and innovative uses of technology in both educational and commercial settings offer additional sources of information to be incorporated into support services. Combined with pedagogical knowledge, instructional designers and support personnel can better determine how technologies best serve existing and developing needs and can work with instructors to achieve teaching and learning goals.

**24/7 resources.** Learning that the instructors in this study sought resources from the World Wide Web, and YouTube® in particular, it is clear some locally-developed
support resources need to be available in multimedia format 24 hours a day, 7 days a week. The opportunity exists for instructional designers and faculty support personnel to develop videos and interactive presentations on topics relevant to those interested in developing these types of instructional materials. The challenge for us will be to go beyond "teaching the tool." Presentations should be created not only for demonstrating software features but also for highlighting key learning principles. Vignettes on cognitive learning processes, multimedia principles, and other evidence-based theoretical concepts can be created and made available to instructors. These can serve as the basis for the reasoning behind decisions relating to create/design/use (the "why") that accompanies the technical procedures (the "how").

As resources are designed, we must ensure we follow and model the principles we're espousing. Best practices in regards to design considerations – fonts, colors, visuals, etc. – and cognitive processing – cognitive load, the neurobiology of learning, the use of examples and practice opportunities – provide guidance.

**Points of collaboration.** This study afforded opportunities to identify where instructional design and support staff might better connect with instructors. In addition to tailoring resources, points of collaboration were made more obvious. Staff knowledge of the learning management system may be useful as instructors seek ways to assess learning and the effectiveness of their interactive presentations. Instructional designers and support personnel are also in positions to bring instructors from across campus departments into contact with each other, supporting the development of information and collaborative work networks.
Recommendations for Further Study

While insights have been gleaned from this research, more can be gained through further study. The following are recommendations for areas in need of investigation:

- Technology Adopter Status: The concept of an instructor's approach to technology may be an important component in the creation and use of interactive presentations. Do early adopters create and use these types of materials? If so, what technologies do they favor – are these the same tools as have been identified in this study? Do early adopter processes differ from those of middle and late adopters?

- Experiences with Other Materials: This study focused upon experiences in creating specific types of instructional materials. As new technologies emerge, it will be important to capture instructor perspectives as they integrate these into their teaching and learning activities. How these perspectives in creating other multimedia materials – produced videos, lecture capture, interactive textbooks/readings, and the like – compare to the experience of creating interactive presentations could produce interesting observations.

Conclusion

Instructors of distance education courses have many choices when it comes to designing course materials and learning experiences. One approach has been to develop interactive presentations – audio voice-over slide presentations or presentations incorporating voice-over narration plus other interactive elements. While the research to date has focused on the impact of these types of instructional materials on student academic achievement and satisfaction, there is little known about the instructor's
perspective – why they create these resources and what processes they follow for making and using these materials.

This qualitative study sought to offer insights into those perspectives, specifically exploring the instructor's experience in creating and using interactive presentations in his/her distance education courses. Using an embedded single-case study design, interviews with 14 instructors from a Midwestern metropolitan university were conducted during the Spring 2014 semester. Sample presentations and course sites in the learning management system were reviewed to provide further details and to compare with interview data.

MAXQDA software was used to analyze transcribed interview text, with segments initially tagged with keywords and phrases to represent emerging themes. Field notes from interviews and notes taken during the review of sample presentations and course sites were then incorporated into the analysis to arrive at my interpretations for understanding why instructors created interactive presentations, how they used interactive presentations, what processes they followed in creating their presentations, and which support resources they consulted during their creation processes.

While individual cases provided thick descriptions of experiences, cross-case analysis highlighted similarities and differences in each of these areas. Broader themes, including time, assessment, and advice, emerged and were described. Connections to research and implications for other instructors and instructional design support personnel were also discussed. Finally, recommendations for further study were offered in an effort to identify additional avenues for exploring instructor experiences with interactive presentations and other instructional technologies.
References


CA: Pfeiffer.


Appendix A

Institutional Review Board (IRB) Approval

January 16, 2014

Karen Heis
Teaching, Learning and Teacher Education

David Brooks
Teaching, Learning and Teacher Education
123A HSINZ, UNL, 68588-0355

IRB Number: 2014-0077 EX
Project ID: 14077
Project Title: Creating and Using Interactive Presentations in Distance Education courses

Dear Karen:

This letter is to officially notify you of the certification of exemption of your project by the Institutional Review Board (IRB) for the Protection of Human Subjects. It is the Board's opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study based on the information provided. Your proposal is in compliance with the institutional Federalwide Assurance (FWA) and the IRB Regulations for the Protection of Human Subjects (45 CFR 46) and has been classified as Exempt Category I.

You are authorized to implement this study as of the Date of Exemption Determination: 01/16/2014.

1. The approved informed consent form has been uploaded to NIEgrant (file with .Approval.pdf in the file name). Please use this form to distribute to participants. If you need to make changes to the informed consent form, please submit the revised form to the IRB for review and approval prior to using it.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:
  * Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which is in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
  * Any serious accidental or unintentional change to the IRB approved protocol that involves risk or has the potential to cause;
  * Any publication in the literature, safety monitoring report, interim results or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
  * Any breach in confidentiality or compromise in data privacy related to the subject(s) or others;
  * Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

This project should be conducted in full accordance with all applicable sections of the IRB Guidelines, and you should notify the IRB immediately of any proposed changes that may affect the exempt status of your research project. You should report any unanticipated problems involving risks to the participants or others to the Board.

If you have any questions, please contact the IRB office at 472-6965.

Sincerely,

Bucky R. Freeman
Rebekah R. Freeman, CIP
for the IRB
January 21, 2014

Karen Hein

IRB 045-14-ET
TITLE OF PROPOSAL: Creating and Using Interactive Presentations in Distance Education Courses

DATE OF REVIEW: 01-21-2014
DATE OF FINAL ACCEPTANCE: 01-21-2014 VALID UNTIL: 01-21-2019

The Institutional Review Board (IRB) for the Protection of Human Subjects has completed its review of the above-titled external protocol. Please be advised that the IRB has accepted approval from University of Nebraska – Lincoln Institutional Review Board (UNL IRB) under the provisions of 45 CFR 46.114.

It is understood that UNL Institutional Review Board is responsible for oversight of the above-titled research project in accordance with Health and Human Services (HHS) regulations at 45 CFR 46, and Food and Drug Administration (FDA) regulations at 21 CFR 50, 56 as applicable. Such oversight includes continuing review no less often than annually, approval of any protocol amendments, reporting to the Office for Human Research Protections (OHRP), and FDA as applicable, unanticipated problems involving risk to subjects or others, and “serious and continuing” non-compliance, as well as suspensions. Should any reports be filed with OHRP and/or FDA, the IRB should be provided with copies of such correspondence.

Finally, please be advised that acceptance by the IRB of the approval of the UNL IRB is valid for a period of five years from the date of review. If the study continues beyond the five year period, the project must be resubmitted in order to maintain an active status.

Sincerely,

[Signature]

Bruce Gordon, MD
Executive Chair, IRB
Appendix B

Instructor Invitation and Reminder E-Mail Messages

Dear [Instructor],

I am writing to ask for your help in a research project I am conducting on the experiences of instructors who create and use interactive presentations in their distance education courses. For the purposes of this study, interactive presentations are defined as an audio voice-over slide presentation and/or a presentation incorporating voice-over narration plus other interactive elements such as self-assessment quizzes or elements requiring the viewer to manipulate objects on the slides. The university definitions of a distance education course – a course that is offered as a blended course or as a completely online course – are also used in this study.

I am interested in gaining an understanding of your experiences in creating interactive presentations – from the software and equipment you've used to create the materials to the support resources you've consulted. I am also interested in learning about how you are using your interactive presentations in your distance education courses. Because you have been identified as someone who has created and used interactive presentations, I would like to interview you.

If you agree to participate, we will arrange a convenient location for an interview that will take approximately 60 minutes to complete. The interview will be recorded, and the recordings will be erased after they are transcribed.

The information gathered from this study will be used to inform decisions regarding support resources and services offered by me, the Senior Coordinator for Instructional Design and Faculty Support, and my unit. Information discovered through this project will also be included in my dissertation and may be published in journals and/or presented at professional conferences and meetings; however, pseudonyms will be used and no identifying personal information will be included in any presentation of the research.

You are free to decide not to participate in this study. You may also withdraw at any time without adversely affecting your relationship with the researchers or your relationship with the University of Nebraska-Lincoln or the Midwestern Metropolitan University. Your decision will not result in any loss of benefits to which you are otherwise entitled.

There may be no direct benefit to you if you participate in this research; however, you will be contributing to the improvement of university support resources and services as well as to the understanding of instructional technology and its use in higher education/distance education environments.

Participants in research studies such as this have the right to ask questions and to have those questions answered. You may contact the primary investigator, Karen K. Hein, at
any time, via telephone at 402-XXX-XXXX (Office) or 402-XXX-XXXX (Cell) or via e-mail to khein@_____.edu. You may also contact the project supervisor, Dr. David W. Brooks, via telephone at 402-XXX-XXXX or via e-mail at dwb@____.edu. Should you have questions about your rights as a study participant, you may also contact the University of Nebraska-Lincoln Institutional Review Board at 402-XXX-XXXX.

If you are willing to participate, please contact me by e-mail or phone at the information listed below.

Thank you for your consideration. I look forward to hearing from you.

Karen

Karen K. Hein
Senior Coordinator for Instructional Design and Faculty Support
khein@_____.edu
(402) XXX-XXXX

David W. Brooks, Ph.D.
Professor
Department of Teaching, Learning, and Teacher Education
E-Mail: dwb@____.edu
Phone: 402-XXX-XXXX
Instructor Interview Reminder Message

Dear [Instructor],

This e-mail serves as a reminder that we are scheduled to meet on [date] at [time] at [place] for an interview regarding your experiences in creating and using interactive presentations in your distance education course(s).

If your plans have changed, if you are unable to keep this appointment, or if you have any questions about the study, please contact me at khein@_______.edu or (402) XXX-XXXX (Office).

Karen

Karen K. Hein
Senior Coordinator for Instructional Design and Faculty Support
Appendix C

Informed Consent Document

Creating and Using Interactive Presentations in Distance Education Courses

This research project focuses on the experiences of instructors who create and use interactive presentations in their distance education courses. You were invited to participate in this research because you have been identified through personal interactions with Karen K. Hein, Senior Coordinator of Instructional Design and Faculty Support, and/or recommendations from departmental chairpersons, distance education coordinators, distance education program directors, or other instructional design support personnel at the Midwestern Metropolitan University.

This study will require an interview that will last no more than one (1) hour and will include completion of this informed consent form. Questions focusing upon your teaching background, your experiences in creating interactive presentation files as well as your experiences in using those files in your distance education courses will be asked. All responses will be audio recorded and transcribed. In addition, a sample presentation file is requested. The file serves as supporting documentation to assist in understanding the creation and use of interactive presentations. All materials obtained in this study will be stored in a locked drawer in the investigator's office and on secured electronic devices for three years after the study is complete.

There are no known risks involved in participating in this study. Participation is open to individuals age 19 years or older. There may be no direct benefit to you if you participate in this research; however, you will be contributing to the improvement of university support resources and services as well as to the understanding of instructional technology and its use in higher education / distance education environments.

All responses will be kept confidential. Information discovered through this project will be included in my dissertation and may be published in journals and/or presented at professional conferences and meetings; however, data will be reported in aggregate forms, and pseudonyms will be used.

You may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study. You may contact the primary investigator, Karen K. Hein, at any time, via telephone at 402- (Office) or 402- (Cell) via e-mail to khein@unl.edu. You may also contact the project supervisor, Dr. David W. Brooks, via telephone at 402- or via e-mail at dwb@unl.edu.

Please contact the University of Nebraska-Lincoln Institutional Review Board at 402-472-6965 if you wish to talk to someone other than the research staff to obtain answers to questions about your rights as a research participant; to voice concerns or complaints about the research; to provide input concerning the research process; or in the event the researchers could not be reached.
You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the researchers, the University of Nebraska-Lincoln, or the Midwestern Metropolitan University. Your decision will not result in any loss of benefits to which you are otherwise entitled.

You are voluntarily making a decision whether or not to participate in this research study. Your signature indicates that you have read and understood the information provided above and that you have decided to participate. You may withdraw at any time without prejudice after signing this form should you choose to discontinue participation in this study.

☐ Check this box to indicate you agree to be audio recorded during the interview.

_________________________________________    _______________________
Signature of Participant                      Date

_________________________________________    _______________________
Signature of Primary Investigator              Date

**Primary Investigator**
Karen K. Heim  
Sr. Coordinator for Instructional Design

**Secondary Investigator**
David W. Brooks, Ph.D.  
Professor  
Dept. of Teaching, Learning and Teacher Ed.
Appendix D

Interview Guide

Thank you for agreeing to meet with me. As mentioned in the e-mail invitation, I am interested in gaining a better understanding of instructor experiences in creating and using interactive presentations in distance education courses. To that end, I would like to know about your efforts by asking a series of questions and by discussing your recollections of your experiences with these materials.

The information I gather from our conversation will be used not only for my dissertation but to help inform decisions about professional development programming offered at the university through my work unit.

You are free to decide not to participate or to withdraw from this study at any time without adversely affecting your relationship with the investigators, the institution, or the university system. Your decision will not result in any loss of benefits to which you are otherwise entitled.

Do you have any questions for me about the purpose of my research or about the interview at this point?

Questions

Background Information

• College and/or department in which you currently teach.

• Please describe your background in teaching in general.
  [Probe Questions]
  Have you taught at other institutions?
  Do you currently teach for any other institutions?
  How long have you taught at this university?
  Have you always taught in this subject area/discipline?

• Please describe your background in teaching in distance education environments.
  [Probe Questions]
  How many semesters have you taught online or hybrid courses at this university?
  How many courses/sections of courses have you taught online or in hybrid mode?
  Were these courses offered as face-to-face courses first or were they originally developed as distance education courses?
  Why did you move into teaching online?
Experiences with Technology

- How would you describe yourself when it comes to technology? Would you say you are an early, middle, or late adopter?

Experience with Interactive Presentation Technologies

- Please describe your experience in creating interactive presentations (voice-over PowerPoint®, Camtasia®, etc.).
  [Probe Questions]
  What software did you use?
  What equipment did you use?
  What features of the software/hardware did you find useful? Why?
- Did you face any challenges in creating your presentations? How did you resolve those challenges? What resources did you use for assistance?
- Would you provide me with an example of an interactive presentation you've created?

Use of Interactive Presentations in Distance Education Course(s)

- Please describe how you envision students using your interactive presentations in your course.
  [Probe Questions]
  For what purposes do these serve?
  Why did you decide to create interactive presentations for your distance education courses?
- Please describe how you situate the interactive presentations within your course.
  [Probe Questions]
  Where do you place the materials within your Blackboard course site?
  What instructions do you provide to your students as to how to use the materials?
- Did you use these interactive presentations in your non-distance education courses?
- Do the colleagues in your college, department, or program use interactive presentations?
- Have you had any feedback from your colleagues on the creation and use of interactive presentations in your distance education courses? Have you shared your materials with your colleagues?
- Have you had any reactions from students to these materials? Do you have any analytics on the use of these materials? If you've looked at the usage statistics, has this impacted your perspectives and processes?

Wrap-Up

Thank you for your time today. I appreciate your sharing of your experiences and perspectives. This recording will be transcribed, and you will have the opportunity to review the transcript and to provide feedback.
## Appendix E

### Notes from Reviewing Interactive Presentation Files

<table>
<thead>
<tr>
<th>Notes on Sample Voice-Over PowerPoint</th>
<th>Notes on How PPT is Situated in Bb Course</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name:</strong></td>
<td><strong>Color Scheme:</strong></td>
</tr>
<tr>
<td><strong>Course:</strong></td>
<td>Describe the color scheme used for the overall course site</td>
</tr>
<tr>
<td><strong>Title:</strong></td>
<td><strong>Course opens to:</strong></td>
</tr>
<tr>
<td>• Bb Item Title:</td>
<td>Describe the &quot;home page&quot; for the course site</td>
</tr>
<tr>
<td>• On Slide</td>
<td><strong>Navigation:</strong></td>
</tr>
<tr>
<td><strong>Number of slides:</strong></td>
<td>Details of the left-hand navigation menu</td>
</tr>
<tr>
<td>How many slides are included in this particular presentation?</td>
<td><strong>Path:</strong></td>
</tr>
<tr>
<td><strong>Length of Presentation:</strong></td>
<td>Describe the path taken to get to the interactive presentations, including folder names and any descriptions of directives or information for viewing/using presentations; make note of how the presentation is accessed – type of file, link to a streaming video, etc.</td>
</tr>
<tr>
<td>How long (in minutes and seconds) is the presentation?</td>
<td></td>
</tr>
<tr>
<td><strong>Visual Design:</strong></td>
<td><strong>Other:</strong></td>
</tr>
<tr>
<td>Describe the visual look of the presentation, including background colors, font choices, animations, etc.</td>
<td>Describe elements such as whether the audio begins automatically; if the slides must be progressed manually; observations on audio, including tone of voice and quality (background noise, clarity, etc.); notes on how the text is displayed – sentences, bullets, etc.; notes on whether images or other visuals are used;</td>
</tr>
<tr>
<td><strong>Other:</strong></td>
<td></td>
</tr>
<tr>
<td>Describe elements such as whether the audio begins automatically; if the slides must be progressed manually; observations on audio, including tone of voice and quality (background noise, clarity, etc.); notes on how the text is displayed – sentences, bullets, etc.; notes on whether images or other visuals are used;</td>
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