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Text and mimesis : reconfiguring technology and adult learning

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TEXT AND MIMESIS:
RECONFIGURING TECHNOLOGY AND ADULT LEARNING

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Dissertation Abstract

TEXT AND MIMESIS: RECONFIGURING TECHNOLOGY AND ADULT LEARNING

Contemporary instruction provides opportunities beyond auditory explanations, freehand sketches, and notes presented on a chalkboard to now include multimedia elements (Mayer 2009; 2008; 2005). In 2010, university faculty may prepare and provide elaborate visual and auditory aides during instruction – inside and outside of the classroom – that promote learning (Mayer 2009; 2008; 2005). The contextual questions that informed this research were, how do adults – faculty at University of San Francisco (USF) – learn to utilize new technology independently, outside of in-person training? Further, how may multimedia videotexts assist in this space? This inquiry explored technology-based multimedia videotexts as a medium that may provide meaningful learning experiences for individual adult learners.

A critical hermeneutic field-based protocol (Herda 1999) was used for this interpretive participatory inquiry. Text and *Mimesis* were the constructs that serve as foundational categories for this ontological study. Critical Hermeneutic philosophers Paul Ricoeur and Hans-Georg Gadamer provided the historical and theoretical framework for this investigation.

Research conversations were recorded and transcribed; data were analyzed and configured into a new narrative. This collaborative research process is based on the idea that conversations between the researcher and the research participant may lead both parties to new understandings. A new narrative of multimedia video use in adult learning emerged in

conversation with research partners; additionally, a completed multimedia streaming video tutorial and website were created in light of this inquiry, for use by University of San Francisco community members.

This dissertation, written under the direction of the candidate's dissertation committee and approved by the members of the committee, has been presented to and accepted by the Faculty of the School of Education in partial fulfillment of the requirements for the degree of Doctor of Education. The content and research methodologies presented in this work represent the work of the candidate alone.

Nicholas P. Recchia	March 7, 2011
Candidate	Date

Dissertation Committee

Ellen A. Herda	March 7, 2011
Chairperson	Date
Caryl Hodges	March 7, 2011
	Date
Christopher Thomas	March 7, 2011
	Date
Kelly Carey Cooper	March 7, 2011
	Date

There is always more order in what we narrate than in what we have actually lived; and this narrative excess of order, coherence and unity, is a prime example of the creative power of narration.

Paul Ricoeur (2004a[1986]: 131)

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CHAPTER ONE

STATEMENT OF THE ISSUE

Introduction

In the technological age of the year 2010, organizational and educational environments within modernized societies have become dependent on advanced technology. Adult learners strive to adapt to these technological shifts; however, as each new trend passes, individuals who do not actively participate in the craft of technology use fall further and further behind. The field of adult education is an essential area for technological advancement as it helps to meet the needs of the adult learning population. This dissertation explores how technology-based multimedia videotexts create a meaningful experience for individual adult learners.

More specifically this document examines the process of adult learning through the medium of multimedia videotexts, presented online and accessible on-demand. Using interpretive participatory research, this study was carried out in a critical hermeneutic tradition. The two research categories listed below provide the boundaries for this inquiry:

1. Text: text understood from a critical hermeneutic orientation is a written or visual medium open to interpretation and not bound to a singular or literal meaning. Examined within the category of Text is the subcategory of Metaphor.
2. *Mimesis*: *Mimesis* is a threefold process where human action is imitated in a poetic fashion concerning our past traditions and experiences, and our future imagined possibilities applied to the present in terms of social action.

Examined within the category of Mimesis are the subcategories of $mimesis_1$, $mimesis_2$, and $mimesis_3$.

Conversation partners were asked to investigate ways in which they learned to utilize technology in their past and present, as well as how they imagined advancing their understanding and use of technology in their future. Furthermore, participants partook in experiencing a short multimedia-training program designed to advance their understanding of operating classroom technology within the University of San Francisco (USF). Two constructs, Text and Mimesis as indicated above, served as foundational categories for this ontological study. Critical Hermeneutic philosophers Paul Ricoeur and Hans-Georg Gadamer provide the historical and theoretical framework for this investigation. A critical hermeneutical approach is used in this research to explore the various interpretations shared during research conversations to allow the possibility for meaningful action to take place. As a means to educate adults within the specific community of USF, this research began in conversation with faculty and informed a new online multimedia learning opportunity to emerge for the community.

Background of the Issue

Technology is becoming increasingly available within all educational environments (Gumport and Chun 1999; Duhaney 2005). With the increase of technological resources available within classroom settings, a common trend within the educational field is to increase teachers' use of technology during their instruction (Gumport and Chun 1999; Duhaney 2005). At USF, the Information Technology Services Department (ITS) strives to provide and maintain state-of-the-art instructional technology for faculty and staff, in order to enhance the educational experience for USF

students. A growing concern within the USF community is related to learning opportunities provided to faculty and staff members. The question asked is, when an individual is not aware of how to operate the technological equipment present within the classroom environment, does this state-of-the-art instructional technology go unused? While there are educational resources provided to faculty and staff, one must find the time during the business day to schedule an appointment or learn proficiently from a downloadable user's guide. Based on the increase in smart classrooms, the complexity of the available technology, and the numbers of faculty requesting assistance, there appears to be a need for revising and expanding how ITS supports the USF community; delivering learning opportunities through multimedia videotexts may become a meaningful process.

Multimedia videotexts streamed over the Internet is a sophisticated process presenting an autonomous learning experience for individuals. Beyond a user's guide, textbook, or in-person training, multimedia videotexts – also referred to as multimedia video, multimedia streaming video, or multimedia video tutorial – are a type of text. Similar to a picture or words on a page, video imagery is a form of text, an expression of information left open for a person to interpret meaning. Multimedia videotexts are examined in this research as a way to present an educational experience as audio and visual imagery delivered through an end point – personal computer, laptop, or mobile device.

Research Site

Based on my experience working for ITS in the area of technology and classroom support, I have learned of many undocumented first hand stories of how ITS has evolved

from a department to a division. In the late 1990's, USF constructed their first few smart classrooms. The original smart classrooms consisted of a large podium housing: a complete computer (full-size desktop computer, keyboard, mouse and cathode-ray tube [CRT] monitor), audio system (speakers and amplifier), liquid crystal display (LCD) computer projector, and projection screen. These rooms were primarily created to enhance the learning experiences of students within science and art courses. The smart classroom equipment allowed complex scientific diagrams and classical/modern art imagery to be presented digitally during class. Few faculty members used this complex equipment during presentation, and in-person individualized instruction was manageable and provided to select faculty prior to use. In addition, support was available to these faculty members by specialized representatives within USF's ITS department when utilization issues occurred.

As USF entered the new millennium technology continued to improve with the goal to "…enhance student learning and administrative services through technology, as called for in the Vision, Mission, and Values Statement of the university" (Ziajka 2005: 391). In response, USF expanded the ITS department and appointed the "university's first chief information officer [CIO]" (Ziajka 2005: 391). During this transition, ITS was reorganized into a division, and new support oriented departments emerged in ITS. The department of Classroom Technology (CT) was configured as the ITS area responsible to support the instructional technology used within classrooms. In an effort to improve technology available for instruction, additional classrooms were designed in a fashion similar to the few already in place; although, newer, contemporary technology

components were used. CT supported these classrooms and provided in-person training opportunities.

During the early 2000s, the need for smart classroom equipment increased. Though USF was not able to convert all academic classrooms into smart classrooms at the same time, an alternative solution surfaced – the mobile computer cart (see Appendix A for visual). The mobile computer cart was instructional technology mounted onto a portable cart with wheels, which provided deliverable classroom technology to the majority of USF rooms upon an instructor's request. I was a trained student-technology specialist employed for CT from 2004 to 2005, and delivered mobile computer carts all over campus. In fulfillment of each CT request a student-technology specialist, or I, delivered a mobile computer cart to the respective room and set-up the technology prior to the start of class. Many faculty and staff became familiar with the classroom technology equipment; however, the familiarization with this equipment did not lead to functional utilization. Instead, instructors became reliant on extensive technical support and accustomed to inserting a media disk or opening a specific program, as opposed to the independent use of classroom technology.

The organizational structure of the ITS division between 2005 and 2007 continued to evolve. I rejoined ITS in 2007 as a fulltime employee for the Help Desk department. In this position, I assisted the university with technical support over the phone. From 2005 to 2009, USF was able to shift from the delivery and set-up of mobile computer carts, to smart classroom technology permanently installed into each classroom. As a result, there was no need for student technicians to set-up and prepare the technology and provide in-person support for each mobile cart delivery; rather, there

were Client Support Specialists – like me – available to provide phone support. This transition placed faculty responsible to learn and understand how to operate all educational technology, and call ITS if technical support was needed. As of January 2010, USF faculty could be placed in one of eight differing smart classroom configurations – each classroom housing similar equipment, with slight variation in the operational process.

Significance of the Issue

As a member of the USF community since 1999, I have witnessed many changes to campus. During this time period technology has been, and continues to be, a point of excitement as well as concern within the community. Many educators adjusted their lecture style from primarily using the chalkboard and an overhead projector to include newer technologies – laptop, LCD computer projector, iClickers®, *et cetera*. Contemporary instruction provides opportunities beyond auditory explanations, freehand sketches, and notes presented on a chalkboard, to now include multimedia elements (Mayer 2009; 2008; 2005). Elaborate visual and auditory instructional aides including PowerPoint® presentations, YouTube® videos, web links, and other online multimedia elements are prepared beforehand for use in the classroom – by way of a computer – to enhance instruction. Although the evolution of technological equipment within classrooms has advanced, the opportunities available for individuals to successfully learn to utilize classroom equipment has not. Opportunities to learn classroom technology beyond static self-help manuals, or in-person training – provided by USF's Center for Instruction and Technology (CIT) during business hours – were previously unavailable to USF community members prior to this research.

Summary

The utilization of technology is the present and future medium for presenting, storing, and processing information within organizations and educational environments. Adults in these settings may benefit from new learning opportunities that guide technology use. Multimedia videos streamed over the Internet is a contemporary learning opportunity that offers an autonomous experience for individuals. Through interpretive participatory research, carried out in the critical hermeneutic tradition, my research conversation partners and I explore new learning possibilities available online and on-demand for the USF community. Informed by this research a new multimedia video tutorial and complementary website has been created. USF community members now have the opportunity to learn and appropriate smart classroom technology online and on-demand by way of multimedia streaming video.

Chapter Two begins the Review of Literature and explores Anthropological Theory. The anthropological context informs my analysis of Adult Learning, Multimedia Learning, and Organizational Learning. The Review of Literature paves a path for multimedia video use within the adult learning space.

CHAPTER TWO

REVIEW OF LITERATURE

Introduction

This Review of Literature examines the interweaving of Anthropological Theory within the context of Adult Learning, specifically related to Multimedia Learning and Organizational Learning. The first section of this review analyzes relevant anthropological theory and provides a foundation for exploring theories about adult education. The research literature presents an interpretation of adult learning in need of new educational opportunities, pertinent to all academic and organizational environments. By integrating multisensory concepts through streaming media technology, new educational experiences may be available for adult learners.

Anthropological Theory

The anthropological movements of the nineteenth and twentieth centuries present a new holistic and academic approach to studying human sciences. Opposed to evolutionary theorists such as Edward Tylor and Lewis Morgan, Franz Boas believes human culture could only be understood from historical investigations, thus alluding to unique relationships between individuals and their cultural frameworks (Moore 2004: 41-43). As Boas (1932: 608) asserts:

> [h]ow little the biological, organic determinants of culture can be inferred from the state of culture appears clearly if we try to realize how different the judgment of racial ability would have been at various periods of history. When Egypt flourished, northern Europe was in primitive conditions, comparable to those of American Indians or African Negroes, and yet northern Europe of our day has far outdistanced those people, who at an earlier time were the leaders of mankind. An attempt to find biological reasons for these changes would necessitate innumerable un- provable hypotheses regarding changes of the biological make-up of these peoples, hypotheses that could be invented only for the purpose of sustaining an unproved assumption.

Boas helped legitimize anthropological inquiry, by establishing the trends in human history and their relation to cultural influences and societal development. Varying greatly from Darwinian theorists, Boas (1932: 612) explains, though "[t]he morphological classification of societies call to our attention many problems. It will not solve them. In every case it is reducible to the same source, namely, the interaction between the individual and society." Boas established the foundational importance of human cultural differences, which led to a new way of understanding the relationships between individuals and society based on unique histories and traditions, as opposed to universal generalizations.

Further research involving unique human cultures includes Claude Levi-Strauss who discovered the unconscious foundational aspect of human-social interactions, which led to his theory of structural anthropology (Moore 2004: 236). Structuralism investigates patterns of human thinking from conscious and unconscious perspectives, and contributes to the universal interpretation of human thought processes. Levi-Strauss (1966[1962]) discusses the universality of human logistical thinking, explaining how both large and small scale societies, regardless of their complexity, use the same unconscious thinking and reasoning process.

Although Levi-Strauss started the anthropological movement uniting humanity with a universal structural concept of cognitive ability and use of language, it was not until the interpretative approach of Clifford Geertz that the concept of culture evolved. Geertz (1973: 5) asserts:

> [t]he concept of culture I espouse… is essentially a semiotic one. Believing, with Max Weber, that man is an animal suspended in webs of significance he himself has spun. I take culture to be those webs, and the analysis of it to be therefore not

> an experimental science in search of law but an interpretive one in search of meaning.

This interpretation by Geertz (1973) allows for the ontological status of human beings to differ based on the cultural import, which therefore shapes subjective reality. By creating educational experiences for humans within the current cultural paradigm, meaningful cultural import can lead to new understandings; in regards to this research, the cultural import is the creation and implementation of a multimedia videotext, which may guide adult learning in a new direction for understanding how to utilize technology.

Adult Learning

Leaders and administrators in organizations and educational institutions are constantly in search of newer, faster, and more efficient ways for employees to learn new skills that may improve job function and performance. When USF brings in new technology, such as the adoption of a new computer database system or new classroom technology equipment, employees are expected to acquire the skills necessary to successfully use these new resources. For an individual to learn a new skill one must construct meaning from the experience, Mezirow (1991: 4) asserts, "[m]eaning is an interpretation, and to make meaning is to construe or interpret experience- in other words, to give it coherence." Regardless of the theory in which an educational experience is constructed, the goal for adult learners is to have an opportunity to interpret and create meaning from new educational stimuli, such as learning by way of multimedia videotexts.

The research literature on adult education (AE) and adult learning is vast, representing various theoretical frameworks that demonstrate an inconsistency in educational practices. Starting with Eduard Lindeman's book *The Meaning of Adult*

Education (1989[1926]), initial assumptions were formed about the learning experience of adults and how learning is part of the adult disposition. Often referred to as the father of American adult education (Schapiro 2003), Lindeman (1989: 4-5) explains his view of adult learning, whereby adult education is more than simply preparation for the future, "[t]he whole of life is learning, therefore education can have no endings. This new venture is called adult education not because it is confined to adults but because adulthood, maturity, defines its limits...." From Lindeman's original publication in 1927 to the dawn of the current decade 2010, a variety of different AE views have been produced swaying the field in different directions.

The concept of pedagogy (Freire 1996[1970]), or later critical pedagogy (Kincheloe 2008[2004]), encourages individuals to take action to overcome any form of oppression through the acquisition of knowledge. One aspect pedagogy described by Freire (1996: 53) is the misguided "banking concept of education," whereby "knowledge is [viewed as] a gift bestowed by those who consider themselves knowledgeable upon those whom they consider to know nothing." To overcome the oppression of formalized education and the "teacher-student contradiction," a partnership must emerge, a reinterpretation of individuals "as conscious beings" in the world learning with one another (Freire 1996: 60). New understandings of student-teacher relationships developed following Freire's (1996) work, and with it so did pedagogy (Knowles, Holton, and Swanson 2005[1973]).

Traditional pedagogy "is a set of assumptions about learning and strategies for teaching" that established the art of educating children, as well as influenced the field of adult learning (Knowles et al. 2005: 36). Pedagogy was created in Europe and became the

foundational structure for the United States educational system (Knowles et al. 2005: 36). This pedagogy was considered "the theory of youth learning," and attempts were made as early as 1949, to establish "an integrated framework of adult learning" (Knowles et al. 2005: 58). In an effort to create a concept specifically exploring "the art and science of helping adults learn," the term andragogy was coined "the antithesis to the pedagogical model" (Knowles et al. 2005: 61).

Once in opposition to pedagogy, the andragogical assumptions (Knowles et al. 2005) are presented as a transactional model whereby the individual is active in the educational process and is ultimately responsible for learning. This andragogical model is founded on six assumptions the adult learner possesses: (1) a need to know, (2) self-concept, (3) experience, (4) readiness to learn, (5) orientation to learning, and (6) motivation for learning (Knowles et al. 2005). Though AE's andragogy was once differentiated from the pedagogy view, the andragogical perspective has evolved over the years as Knowles et al. (2005: 72) explains:

> [t]he pedagogical model is an ideological model that excludes the andragogical assumptions. The andragogical model is a system of assumptions that includes [the] pedagogical assumptions. The andragogical model is not an ideology; it is a system of alternative sets of assumptions, a *transactional* model that speaks to those characteristics of the learning situation.

These learning situations Knowles et al. (2005) refers to are the six assumptions associated with adult learning. Compared to children, adults have more life experience, thus within educational settings, adults are often more intrinsically motivated and able to appropriate the learning-context-examples, imagining an implementation into future life-situations (Knowles et al. 2005).

Life experiences assist adults to learn regardless of the arena: academic, vocational, work-related training, et cetera, thus many AE theories have been devised from an andragogical orientation to obtain comprehensive educational success for adults as learners (Brookfield 1995; Knowles et al. 2005). Brookfield (1995) identifies examples of successful adult learning theories including: self-directed, experiential, cross-cultural and distance learning, as well as practical theorizing, critical reflection and learning to learn. Each area of study has provided valuable insight independently and collaboratively to AE; however, it is within a different paradigm of learning that my research occurs. Based on adult learning research coinciding with the theoretical contributions of multimedia learning (Mayer 2005), my research appropriates both contexts, whereby a multimedia videotext surfaced to assist adult learners at USF.

Multimedia Learning

Multimedia learning is an educational process involving a minimum of both words and pictures to enhance instruction (Mayer 2005: 2009). Interpretations vary regarding an absolute meaning for multimedia learning. Differing mediums can serve as examples including: chalk talk, TV, and PowerPoint® presentations (Mayer 2009). As Mayer (2005: 1) explains, "the term multimedia conjures up a variety of meanings," including but not limited to a combination of: words, text, pictures, music, video, animation, and live performance. Furthermore, multimedia instruction is the strategic presentation of multisensory stimuli to maintain interest, entertain, and foster learning (Mayer 2005; 2009). Mayer (2005: 2-3) asserts, "multimedia learning occurs when people build mental representations from words (such as spoken text or printed text) and pictures (such as illustrations, photos, animation, or video)." Through this multisensory

medium, adults may come to new understandings as additional learning opportunities are presented via multimedia.

In the utilization of multimedia instruction, "more accurately called dual-mode, dual-format, dual-core, or dual-channel learning," humans are provided access to process information to the best of their ability, in-person or by way of instructional video presentations (Mayer 2009: 5). Consistent with Mayer's (2001; 2005; 2009) multimedia learning, successful instruction is carried out from a learner-centered interpretation, in which there are two ways to approach multimedia learning, technology or learner-centered. From a technology-centered approach, Cuban (1986) and Mayer (2001; 2005; 2009) explain how placing technology as the focal point does not lead to a solution, but leads to a non-sustainable educational environment. Explained another way, investing in technology with hopes of settling on a way to use it is not wise.

Instead of technology-centered, multimedia technology can be learner-centered; whereby the working of the human mind is the focal point starting with investigating the question, "how can we adapt multimedia technology to aid human cognition?" (Mayer 2005: 10). Norman (1993) concurs with a learner or human-centered approach focusing on ways to promote human intelligence through integrating technology use. Arriving to new understandings is difficult, if technology can assist with educating humans, investing time may be beneficial. Laudauer (1995) explains two complementary ways computerized technologies have influenced and integrated into the mainstream through automation and argumentation technology. Computerized automation, according to Laudauer (1995: 7) can be forms of technology interpreted "to act as assistances, aids, and power tools." Computerized argumentation can aid human cognition and intellectual

growth (Laudauer 1995). Focused on aiding human cognition within a learner-centered paradigm, multimedia education may assist people to learn by way of providing a new medium for interpretation.

Research indicates (Bransford, Brown, and Cocking 1999; Mayer 2008; 2009) that people learn complex materials through activating prior knowledge during interpreting or reinterpreting new experiences, which leads to new understandings. Therefore, these new experiences may be presented in a multimedia learner-centered approach, as an optimal cognitive aid (Mayer 2009). Mayer (2009: 17) asserts: "[i]n contrast to the information-acquisition view, the knowledge-construction view is that multimedia learning is a sense-making activity in which the learner seeks to build a coherent mental representation from the presented material." Multimedia becomes a "helpful communicator" or a "sense-making guide" assisting learner's construct new knowledge (Mayer 2009: 17). As a communicating guide for sense making, viewing a multimedia streaming video may assist adults with learning technology. The Cognitive and Technology Group at Vanderbilt (1996), Bransford, Brown, and Cocking (1999), as well as Mayer (2009), transition from memorization in order to learn materials, to a knowledge construction view of comprehension that allows for knowledge transfer. The goal of learning is to retain more than "factoids – isolated bits of information," where one may have good memory recall but inadequate knowledge transfer (Mayer 2009: 20). Rather, it is through "meaningful learning," that both knowledge transfer and retention occurs, resulting in knowledge integration (Mayer 2009: 20).

Mayer (2009: 21) identifies "multimedia learning outcomes" into three categories: [1] no learning, [2] rote learning, and [3] meaningful learning. As previously mentioned,

meaningful learning represents integration of knowledge retention and transfer, whereas rote learning results in varying levels of retention with poor transfer abilities, and "no learning" is equated to poor retention and transfer skill demonstration (Mayer 2009: 21). For learning to become meaningful an individual must be cognitively active in one's learning process, which provides opportunities for one to activate prior knowledge during unclear learning situations (Chi, Bassok, Lewis, Reimann, and Glaser 1989; Roy and Chi 2005; Mayer 2009). This process is referred to as self-explanation (Chi et al. 1989: 146), for when one is confused, she or he may use prior knowledge to cognitively figure out an understanding by way of self-explanation (Chi et al. 1989; Roy and Chi 2005; Mayer 2009).

Evidence based experimental comparisons "carried out over the past twenty years," demonstrates multimedia learning can help people learn (Mayer 2009: 29-30). As expressed by Mayer, (2009: 30-31) there are at least four examples of effective instruction via multimedia content including: [1] how lightning storms develop (Mayer, Steinhoff, Bower, and Mars 1995; Harp and Mayer 1998; Mayer and Moreno 1998), [2] how car braking systems work (Mayer 1989; Mayer and Anderson 1992), [3] how a bicycle tire pump works (Mayer and Gallini 1990; Mayer and Anderson 1991), and [4] how the designing of interactive computer games assist students with growing plants (Moreno, Mayer, Spires and Lester 2001). This research supports that multimedia instructional materials assist individual learning. However, one must understand why such instruction contributes to education.

Pertinent to my research, multimedia instruction assists learners to arrive at new understandings by way of annotated illustrations (Mayer et al. 1995; Mayer 2009) and

narrated animation (Mayer and Anderson 1991; 1992; Mayer and Moreno 2002; Mayer 2009). Annotated illustrations utilize static pictures or illustrations accompanied by printed text, whereas narrated animation includes illustrations and/or animation along with spoken and/or printed text (Mayer, Hegarty, Mayer, S., and Campbell 2005; Mayer 2009). It is difficult to determine which method is most successful during learning. Mayer et al. (2005: 264) found students learn better via annotated illustrations, but offered their finding "suggests that animations could be constructed in ways that tap the positive features of static illustrations." Mayer et al. (2005: 264) explained the need for additional research in narrated animation and a method for improvement, whereby

> …learners can be given control over the pace and order of animations by being allowed to use slider bars and pause buttons; learners can be guided to attend to the key steps in an animation by presentation of the animation in meaningful segments in which the next segment is initiated by a learner action such as clicking a 'continue' button; and learners can be encouraged to engage in active processing through activities such as generating explanations or answering questions during learning.

Incorporating narrated animation within multimedia education may assist adults to become active in the learning process. The multimedia video tutorial created in my research involves annotated illustrations and narrated animation, as well as a combination of the two. Additionally, learners viewing the multimedia videotext are provided play/pause, and linear control over the tutorials pace to accommodate varying learner needs.

Cognitive Theory of Multimedia Learning

Grounding the study of education through multimedia is Mayer's cognitive theory of multimedia learning. The cognitive theory of multimedia learning is founded on three assumptions: [1] dual channels (Paivio 1990[1986]; Baddeley 1992; Mayer 2009), [2]

limited capacity (Chandler and Sweller 1991; Baddeley 1992; Mayer 2009), and [3] active processing (Mayer 2008; 2009; Wittrock1989). Over the course of twenty years and close to one hundred experimental comparisons, Mayer (2009) presents a comprehensive overview outlining eleven principles within three distinct sections guiding the creation and utilization of multimedia learning design; these three sections include [1] reducing extraneous processing, [2] managing essential processing, and [3] fostering generative processing (2009: vii-viii). Each of these three multimedia design factors are reviewed in detail below.

Reducing Extraneous Processing

Extraneous processing can be an issue associated with multimedia learning (Mayer 2009). Mayer (2009: 85) explains "extraneous processing overload" as:

> a situation in which the cognitive processing of extraneous materials in the lesson is so demanding that there is little or no remaining cognitive capacity to engage in essential or generative processing. Extraneous processing is likely to occur when the lesson contains attention grabbing extraneous materials or when the lesson is designed in a confusing way.

Achieving a factual and transfer skill understanding is the desired instructional outcome of multimedia learning. Within this research the goal is learning to utilize smart classroom equipment where extraneous material is avoided and does not "consist of interesting but irrelevant verbal statements and graphics" (Mayer 2009: 86). In alignment with Mayer's cognitive theory of multimedia learning (Mayer 2005; 2009), when creating multimedia learning material extraneous processing can be reduced through five principles: [1] coherence (Harp and Mayer 1997; 1998; Mayer, Moreno and Mayer 2000; Heiser and Lonn 2001; Mayer and Jackson 2005), [2] signaling (Harp and Mayer 1998; Mautone and Mayer 2001; Stull and Mayer 2007), [3] redundancy guidelines (Kalyuga,

Chandler, Sweller 1999; Mayer, Heiser, and Lonn 2001; Moreno and Mayer 2002), [4] spatial contiguity (Mayer 1989; Mayer, Steinhoff, Bower, Mars 1995; Moreno and Mayer 1999; Ayres and Sweller 2005; Ginns 2006), and [5]temporal contiguity (Mayer and Anderson 1991; 1992; Mayer and Sims 1994; Moreno and Mayer 1999; Mayer, Moreno, Boire, and Vagge 1999; Ginns 2006). Mayer (2009: 87) summarizes these principles explaining:

> [1] Coherence techniques involve the deleting extraneous words, sounds or graphics from a multimedia lesson. [2] Signaling involves highlighting the essential words and pictures in a multimedia lesson. [3] Redundancy techniques involve removing redundant captions from narrated animation. [4] Spatial contiguity involves placing words next to corresponding graphics on the screen or page. [5] Temporal contiguity involves presenting corresponding narration and graphics simultaneously.

Striving to reduce extraneous processing these guidelines support learning within cognitive thresholds (Mayer 2009: 87).

Managing Essential Processing

In order to learn one must have cognitive capacity available to process material (Mayer 2009: 171). When a lesson presents excessive information essential to understanding a new concept, one's ability to "engage in deeper processing of the material" allowing for retention and transfer of new information is compromised (Mayer 2009: 171). Comprehensive multimedia focuses on a lesson's core material, the essential information required when fulfilling learning outcomes (Mayer 2009: 171). According to Mayer (2009) and supported through research, essential processing is managed in three ways, [1] segmenting (Mayer and Chandler 2001; Mayer, Dow, and S. Mayer 2003; Ayres 2006), [2] pre-training (Mayer, Mathias, and Wetzell 2002; Pollock, Chandler, and Sweller 2002), and [3] modality (Mousavi, Low, and Sweller 1995; Mayer and Moreno

1998; Moreno and Mayer 1999; Low and Sweller 2005; Ginns 2005). Mayer (2009: 172-173) asserts:

> [1] Segmenting involves breaking a whole presentation into coherent parts that can be digested sequentially. [2] Pre-training involves helping learners get to know the names and characteristics of key concepts before receiving the whole presentation. [3] Modality involves presenting the words as spoken text rather than as printed text.

Utilizing these instructional techniques promote individual learning and avoid "essential processing overload," which in turn promote "generative processing" (Mayer 2009: 171).

Fostering Generative Processing

Generative processing is one's cognitive ability to make organized and coherent sense of information by way of relating such information to prior knowledge, entertaining new meaning, and integrating such content into one's own understanding (Mayer 2009: 221). Underutilization of generative processing occurs "when learners have cognitive capacity available but are not motivated enough to use it for generative processing during learning" (Mayer 2009: 221). Three principles foster generative processing and include: [1] multimedia techniques (Mayer 1989; Mayer and Gallini 1990; Mayer and Anderson 1991; 1992; Mayer, Bove, Bryman, Mars, and Tapangco 1996), [2] personalization, and [3] voice techniques (Moreno and Mayer 2000; Mayer, Sobkp, and Mautone 2003; Mayer, Fennell, Farmer, and Campbell 2004; Atkinson, Mayer, and Merrill 2005; Wang, Johnson, Mayer, Rizzo, Shaw, and Collins 2008). Mayer (2009) also identifies a fourth non-fostering principle, [4] image techniques (Mayer 2009: 222, 260; Atkinson 2002). Based on his research and analysis, Mayer (2009: 222) concisely summarizes the four generative processing principles:

> [1] Multimedia techniques involve presenting material using words and pictures rather than with words alone. [2] Personalization involves putting the words of

> multimedia message in conversational style rather than formal style. [3] Voice techniques involve having the narrator or tutor speak with a human voice rather than a machine voice. [4] Image techniques involve having an image of the narrator or tutor on the screen during learning.

Mayer's research has demonstrated the three fostering techniques – omitting image techniques – to be consistent with encouraging an increased understanding of material through intensified processing (Mayer 2009: 222). By way of appropriating Mayer's (2009) cognitive theory of multimedia learning, multimedia instruction may be actualized.

Why Multimedia Instruction Can Work

A learner acquires new information by constructing mental representations within one's mind, these representation are formed by the stimuli-input present in one's environment (Mayer 2005). This stimuli-input can come from a variety of sources that are dependent or independent of one another, such as spoken words, text, images, video, music, human demonstration or modeling, et cetera. As mentioned earlier, to be considered multimedia learning and instruction, the multimedia model must involve at least words and pictures. Complementing the concept of multimedia, Gardner's (1993) theory of multiple intelligences explains, "the existence of several relatively autonomous human intellectual competencies," all requiring different educational styles for learning to become meaningful (1993: 8). Based on this theory, Gardner (1993) identifies eight distinct intelligences: linguistic, logical-mathematical, visual-spatial, musical, naturalistic, bodily-kinesthetic, interpersonal, and intrapersonal, whereby educators can enhance instruction by attending to the varying needs of learners.

Instruction provided through the medium of an online multimedia streaming video, presents a process of furthering current educational opportunities as both a

primary, as well as a supplementary means of learning. However, this is not the first time such a concept has been anticipated, as Thomas Edison (cited in Cuban 1986: 9) proclaimed in 1922:

> I believe that the motion picture is destined to revolutionize our educational system and that in a few years it will supplant largely, if not entirely, the use of textbooks… on the average we get about two percent efficiency out of schoolbooks… the education of the future, as I see it, will be conducted through the medium of the motion picture… where it should be possible to obtain one hundred percent efficiency.

Though Edison imagined a future where a technology-centered approach would shift education, Mayer (2005: 9) explains why this approach is not fitting, "[w]hen we ask, 'What can we do with multimedia?' and … our goal is to 'provide access to technology,' we are taking a technology-centered approach with a 100-year history of failure." Alternatively, the learner-centered approach focuses on the individual, and starts with understanding the functioning of the human mind (Mayer 2005: 9-10). This approach focuses on the learner and investigates how multimedia technology can adapt instruction (Mayer 2005: 9-10).

Streaming Media

Streaming media, also referred to as streaming video, is a method for delivering quality video and media over the Internet (Steyaert, Laevens, Vleeschauwer, and Bruneel 2008). Research over the past decade including the work of Izquierdo and Reeves (1999), Steyaert et al. (2008), and Babu, Perkis, and Hillestad (2008), has lead to effective algorithmic demonstration, delivering quality multimedia viewing for consumers. Current technological infrastructures including 3-G networks, also referred to as 3rd Generation or "3rd Generation Partnership Project (3GPP)," are standard in delivering "wireless video communications" (Basso 2006: 173). This service converts multimedia, including

streaming media, to mobile devices for consumer viewing (Basso 2006; Steyaert et al. 2008). For example, when one uses a laptop to watch a YouTube® video clip over the Internet, streaming video technology is utilized. Streaming media, popular in social networking, may enhance e-learning and is of interest to the USF community as evidenced by support requests to ITS.

E-Learning

Interpretations differ over the meaning of e-learning. According to Clark (2005: 591), "[e]-learning is instruction delivered on a computer that is designed to achieve specific learning goals." However, she indicates the generalness associated with this definition by asserting that "e-learning courses reveals a kaleidoscope of examples" (Clark 2005: 591). Rosenberg (2006: 19) expresses the ambiguity associated with e-learning, for "there continues to be confusion about the term *e-learning*, as with a host of other terms, like *online training*, *Web-based training*, and even older terms such as *computer-based training*." Contributing to the complexity of the e-learning concept, are additional subcategories used to identify the differentiations that have emerged. Rosenberg (2006: 19) explains, variations of e-learning models include "*asynchronous*, or completely self-contained e-learning, and *synchronous*, or virtual, leader-led e-learning (sometimes referred to as a 'virtual classroom')." Lacking a universal framework within the evolving field of technology, communicating and defining e-learning has become increasingly complex (Rosenberg 2006: 19).

Mitchell, Chen, and Macredie (2005) discovered benefits of using web-based tutorials to enhance educational experiences for college-age students. However, participants did express differing individual experiences and enjoyment when using the

world-wide-web in conjunction with non-linear training environments (Mitchell et al. 2005). When implementing web-based training, instructors must provide guidance to their learning population, ensure learning objectives are met and provide "versatility in system design to allow for use by a variety of individuals, rather than a particular user group" (Mitchell et al. 2005: 37-38). The educational design of the multimedia videotext used in my research was created in a linear fashion and guided by a table of contents always accessible by the learner. Depending on the adult learners' individual needs, this type of educational experience may be used as the primary means of organizational learning or a supplement to in-person instruction.

Organizational Learning

The ease and accessibility of multimedia video tutorials may assist organizations evolve learning opportunities and instructional needs to an online, on-demand, medium. By developing and implementing online multimedia training materials with on-demand accessibility, this learner-centered model may enhance interest, participation, and skill levels of USF faculty and staff using classroom technology equipment.

Theory behind organizational learning indicates that organizations may develop, improve, and retain success through managerial strategies referred to as mental models (Senge and Fulmer 1993). Mental models are constructed from managerial teams, who work together to develop a strategy for organizational success, based on shared ideas (Senge and Fulmer 1993). According to Chris Argyris and Donald Schön, organizational learning is established through a difference between single-loop and double-loop learning (Fulmer 1994). Argyris and Schön (1978: 2-3) explain organizational learning as the recognition and correction of errors, for

> [w]hen the error detected and corrected permits the organization to carry on its present policies or achieve its present objectives, then that error-detection-and-correction process is *single-loop* learning. Single-loop learning is like a thermostat that learns when it is too hot or too cold and turns the heat on or off. The thermostat can perform this task because it can receive information (the temperature of the room) and take corrective action. *Double-loop* learning occurs when error is detected and corrected in ways that involve the modification of an organization's underlying norms, policies and objectives.

Argyris and Schön identify single-loop learning as the continuous daily learning carried out within an organization, whereas double-loop learning is what will result in the revamping of a company's deep rooted assumptions, as well as the operational functionality and adapted outlook on the environment (Argyris and Schön 1978; Fulmer 1994).

Derived from the single-loop/double-loop definitions established above, more refined categorizations of organizational learning have been established. Robert Fulmer identifies three different typologies in his work; however, the area of relevance for my research is anticipatory learning (Senge and Fulmer 1993; Fulmer 1994). Anticipatory learning, in the context of an organization, occurs when an organization is conscious of how present decisions may influence the future, as well as how it may consider environmental factors during the decision making process (Fulmer 1994; Senge and Fulmer 1993). Anticipatory learning requires the presence of two sub-components; participatory and future-oriented learning (Fulmer 1994; Senge and Fulmer 1993). Participatory learning is the collaborative effort of concerned people whereby everyone interested in seeking alternative solutions unite collaboratively to develop new ideas (Fulmer 1994). Future-oriented learning is the in-depth evaluation of potential decisions, where people use forward and backward thinking to analyze and make educated predictions assessing the future, ensuring today's decisions do not negatively alter

tomorrow (Senge and Fulmer 1993; Fulmer and Perret 1993; Fulmer 1994; Senge 1994[1990]).

Organizational structure varies as does the balance between how much emphasis an organization places on participation verses future-oriented learning. Robert Fulmer (1994) identifies four different models organizations may embrace during learning phases: (1) Low Participation, Present Oriented- Because I said So, (2) High Participation, Present Oriented- As you Like it, (3) Low Participation, Future Focused- Change Master, and (4) High Participation, Future Focused- Inventing the Future. The model embraced by a particular organization depends on the operational structure and objectives set forth within the organization. The organizational model that most resembles my research is Fulmer's fourth approach of inventing and forward thinking for the future, where high participation leads to creating an organization's future (Fulmer and Perret 1993; Fulmer 1994). Fulmer (1994: 22) explains, that by "[i]nventing the [f]uture, anticipatory learning is practiced when a group of motivated individuals work together, not to forecast, but to create a future to which they can commit themselves." To assist organizations and educational institutions improve their anticipatory learning, active involvement of the institutional community is required.

Organizational learning is critical to organizational success; an individual must learn to successfully carry out one's job function in order to assist the organization meet its goals. Organizations evolve when individuals within the organization arrive at new understandings of fulfilling job requirements. Organizational learning unfolds as individuals reinterpret ways to successfully carrying out responsibilities through new

meaningful actions. The use of multimedia videos in organizations may assist individuals arrive at new understandings leading to organizational learning.

Summary

This Review of Literature begins with Anthropological Theory, incorporates Adult Learning and Multimedia Learning, and highlights Organizational Learning. Chapter Three, Research Theory and Protocol, informed by the complexity of Multimedia, the dynamics of Adult Learning, and models of engagement associated with Organizational Learning, transcends the reviewed literature and begins the critical hermeneutic inquiry. By way of conversation, members of the USF community have opportunity to reflect and share successes and challenges in learning and technology use, and consider new possibilities for bringing multimedia video to Adult Learning at USF.

CHAPTER THREE

RESEARCH THEORY AND PROTOCAL

Introduction

Through an interpretive participatory inquiry, I explored how technology-based multimedia videotexts create a meaningful experience for individual adult learners. I was specifically interested in the process of adult learning through the medium of a multimedia video tutorial. This review of research theory begins with the Conceptual Background and Protocol of my investigation. Two critical hermeneutic constructs, Text and Mimesis, served as foundational categories for this ontological study. The concept of text, and subcategory of metaphor led my research categorical review, followed by Ricoeur's threefold concept of mimesis, with each aspect of mimesis, past, present and future serving as subcategories. The interweaving of text and mimesis present an applied and theoretical context for researching adult learning through technology, whereby a platform for imagining the process of interpretation, understanding, and appropriation through multimedia texts unfolded.

Conceptual Background and Protocol

My inquiry followed the critical hermeneutic participatory research protocol developed by Herda (1999). This collaborative research process is based on the idea that conversations between the researcher and the research participant may lead both parties to new understandings (Herda 1999). As Herda (1999: 86) asserts: "[i]n field-based hermeneutic research, the object is to create collaboratively a text that allows us to carry out the integrative act of reading, interpreting, and critiquing our understandings. This act

is grounding for our actions." Through conversation, "our attempt is to bring biases out into the open," allowing data to emerge and inform the research (Herda 1999: 90).

The imagined world this research explored is adult learning through the medium of technology, fulfilled by utilizing multimedia videotexts; moreover, a multimedia video tutorial. As opposed to the traditional paradigm of text whereby learning may occur through reading words on a page, a prototype multimedia video tutorial was created for this research providing an interactive, interpretative medium for learning. This exploration examined the meaningfulness of information presented to adult learners beyond traditional text and considered multimedia video tutorial learning opportunities. The multimedia video tutorial created and explored in this research included a mixture of pictures, graphics, PowerPoint® slides, video footage, and audio voiceover, creating a hybrid learning experience for adults. By way of the threefold mimetic process, conversation partners shared their preconfigured, (m_1) learning style; the way they have currently learned to use technology. Furthermore, they shared their imagined future (m_3), how they envisioned learning new technology. The configured (m_2) or present time and space, provides opportunities for stories of the past and future to be mediated in conversation, whereby the threefold mimetic process may be actualized.

After viewing the multimedia video tutorial, presented by way of a personal laptop, conversation partners and I continued to imagine and reconfigure how multimedia texts may support future adult learning opportunities. Emanating from the research categories of text and mimesis, this inquiry guided my conversation partners and I towards new understandings of adult learning with multimedia technology.

Research Categories

Examining interpretations of text and mimesis in light of meaningful past, present, and future learning experiences was essential in the exploration of multimedia video tutorial options. The research categories text and mimesis informed my inquiry and assisted with establishing "direction and boundaries" for conversations, in addition to reflecting my interests and ideas to the research issue (Herda 1999: 102). Each guiding question surfaced from the below discussion on research categories. Text and mimesis, the critical hermeneutical categories that guide my inquiry, include subcategories of metaphor, mimesis_1, mimesis_2, and mimesis_3.

Research Category One: Text

The analysis of text from a hermeneutic perspective begins with accepting language as ontological, part of one's being. As opposed to Wilhelm Dilthey's view on language (Herda 1999: 73), a technique and a "model of intelligibility… grounded in the context of natural science," the hermeneutic perspective of language holds no claim of absolutism. Critical hermeneutics is grounded in discourse where language and text serve as medium open to interpretation and not bound to a singular or literal meaning. The critical hermeneutic interpretation of text differs from the traditional philosophical explanation of text and language. As Herda (1999: 61) explains, "[h]umans dwell in language. Language does not dwell in humans. Language brings worlds into being and, in bringing forth a particular world, the relationships among everything in that world are disclosed." In both spoken and written language there exists discourse, and through this "human phenomena" and ability of explaining and understanding one another "the model

of text interpretation" demonstrates a "power of disclosing the world" (Ricoeur 2007a[1986]: 167).

When examining the concept of text, Ricoeur suggests (2007[1981]: 209) there is a distinct difference between comprehension and explanation within the human sciences. Text does not hold a fixed meaning and is not universal in nature; rather text is open for interpretation (Ricoeur 2007). Ricoeur (2007: 210-211) asserts, "to understand a text is not to rejoin the author…" and though interpretation may lead a reader to agree with "the subjective intentions of the author," an alternate meaning may unfold. Most often, a text is experienced as written language; an individual's written thoughts left open for readers to interpret (Herda 1999: 72-73). As Ricoeur (1991: 427) states, "Aristotle did not hesitate to say that every well-told story teaches something; even more, he said that stories reveal universal aspects of the human condition and that, therefore, poetry is more philosophical than the history of historians." Through conversations stories are shared and interpretations unfold, and the horizon of new discoveries are possible. Ricoeur (2007: 142) tells us "that the text is the medium through which we understand ourselves." Through interpreting text, the reader may appropriate and come to "understanding at and through distance" (Ricoeur 2007: 143). This appropriation is what Gadamer (Ricoeur 2007: 143) calls the "the matter of the text," a proposed world where the reader is placed in "front of the text," and new understandings may emerge. From this hermeneutic view, both self-understanding as well as understanding of text occurs through appropriation, where one is reading and interpreting text as a proposed world, a world that can be imagined (Ricoeur 2007: 142-144).

Gadamer (2006[1965]) believed that language, interpreting text, history and understanding are integral aspects creating our identity; language is the medium allowing the world to be interpreted. Reflecting on Gadamer, Herda (1999: 64) asserts:

> …there is not a method to find the truth; rather we need to expose ourselves to the truth, much the same way we expose ourselves to art. Criteria and guidelines of truth and reason are subsumed in the fusion of horizons, specifically our present horizon of understanding fused with new understandings.

The use of text is an art form, interpretations differ and even an author can reconfigure a new understanding of his own work after it is placed in text. According to Gadamer (2006: 141-142), when it comes to music or dramatic performances, a different time and different circumstances can lead to a different outcome, what one experiences today may differ tomorrow and "the viewer of today not only sees in a different way, but sees different things."

As Herda (1999: 73) explains, when referencing two individuals partaking in conversation, "what they say, after it is said, no longer belongs to either speaker or hearer. It has, in a sense, a life of its own…this preservation of meaning enables us to communicate at a distance, a distance created over time." Text from a hermeneutic orientation changes all individuals participating in the interpretation of written work, including the author and readers alike. Different interpretations arise from the same text, and often interpretations are in conflict (Herda 1999). As opposed to seeking a universal truth from text, text is a "meaningful entity" open for interpretation; through the medium of discourse and use of metaphor conflicting interpretations may lead to new understandings (Herda 1999: 75).

Metaphor

Individual interpretations of texts may vary, leading different people to different understandings (Ricoeur 2007a). Through this "process of narrowing the scope of generic concepts concerning the literary genre" some form of comprehension is reached, however, it may not be the specific understanding the author had in mind (Ricoeur 2007a: 158). To assist in deciphering the varying meaning of text and language, the concept of metaphor is applicable (Ricoeur 2007a: 158). Metaphor contributes to the theory of hermeneutics by unraveling "the double meaning" present in language (Ricoeur 2007a: 158). When explaining the layers of metaphor, Ricoeur (2007a: 158) asserts, one must start "[i]n more general terms, a text has to be constructed because it is not a mere sentence of sentences, all on an equal footing and separately understandable. A text is a whole, a totality." Metaphor holds the totality of sentences and varying meaning together, assisting people understand and explain concepts with one another in language (Ricoeur 2007a).

During conversation or within text, when an individual attempts to explain or understand a concept, one must construe in whole (Ricoeur 2007a). In language people attempt to convey a conceptual understanding when conversing over a given topic, this "relationship between whole and parts – as in a work of art or an animal – requires a specific kind of 'judgment' for which" individuals must interpret the "dialect between guessing and validating" (Ricoeur 2007a: 158). People do this "because language is metaphorical" requiring interpretation "to unfold the several layers of meaning" (Ricoeur 2007a: 158). Metaphoric language is key to explanation and understanding for it allows individuals to articulate and construe what something "is" in being and in acting (Ricoeur

2004[1975]: 43). This metaphoric discourse for Ricoeur (2004:43) is "lively expression…that which expresses existence as alive." Reflecting on Ricoeur's (2004) theory of metaphor, Simms (2006[2003]: 64) asks readers to

> [c]onsider, for example, the proposition 'Faith will enable us to derive some hope from our despair.' This is hardly likely to rouse the addressees of this utterance to action. But now consider the same ideas expressed in the words of Martin Luther King Jr (King 1963): 'With Faith we will be able to hew out of the mountain of despair a stone of hope.' Through metaphor abstract language here is made concrete, and consequently it becomes the language of action.

Ricoeur's metaphor is essential to text and language for it "is the instrument by which mimesis, imitation, becomes *muthos*, plot, and therefore not merely an imitation of nature, but an imitation of human action" (Simms 2006: 64). By way of metaphor, this imitation of human action assists my research with interpreting of concepts text in light of Ricoeur's threefold mimesis. In the context of this inquiry, using multimedia video, digital text presents the imitation of human action through written words, narration, and video footages that when presented harmoniously, may create a meaningful and imaginative experience for adult learners.

Research Category Two: Mimesis

To explore the concept of mimesis through a hermeneutic interpretation, I begin with briefly reviewing Aristotle's plot and Augustine's time from a Ricoeurian perspective. A review of each stage of Ricoeur's threefold concept of mimesis follows.

Ricoeur attests (1984: 52-53), based on his interpretation of Augustine's "analysis of time in the Confessions" and Aristotle's "analysis of plot in the Poetics," these two differing theories influenced him to construct the "mediation between time and narrative." This mediation led Ricoeur (1984: 52) to discover a transcultural relationship between the temporality of one's character and the narration of story, as demonstrated

through human existence. Though both of these theories were examined by Ricoeur independent of one another, his analysis of plot and time led to a deeper, reconfigured, meaning of Aristotle's term mimesis (Ricoeur 2007: 180). Mimesis was originally described by Ricoeur (2007: 180) as the art of constructing or creating, followed by a second dimension referring to the "imitation of human actions." The focus of my research was on Ricoeur's mimesis (m), a threefold process where action is imitated in a poetic fashion concerning our past, present and future in the form of mimesis$_1$, $_2$, and $_3$: mimesis$_1$ is the prefigured/past, mimesis$_2$ is the configured/present, and mimesis$_3$ is the refigured/future (Ricoeur 1984: 60).

Mimesis$_1$

Mimesis$_1$ is our preunderstanding of the varying forms of human action (Herda 1999: 76). As Ricoeur explains (1984: 60) "…there is not a future time, a past time, and a present time, but a threefold present, a present of future things, a present of past things and a present of present things." It is our present interpretation and reinterpretation of past events, which provide access to mimesis$_1$. When entertaining thoughts of learning new technology, conversation partners and I reflected on our past experience using technology. Positive, negative, and neutral experiences contribute to our pasts; however, during research conversations individual memories of knowledge acquisition related to technology and how these understandings occurred became essential. In order to comprehend the past, and reinterpret a pre-understanding in the present, mimesis$_1$, an analysis of Ricoeur's temporality of time is needed.

As human beings living within modern society our world is constructed around the concept of time (Ricoeur 1984). Ricoeur (1984: 62) explains "[b]eing- 'within' -time

is above all to reckon with time, and, as a consequence of this, to calculate. It is because we do not reckon with time and do make calculations that we must have recourse to measuring, not vice versa." Our language utilizes the concept of time in an existential way, where we express time in terms of needing to have, take, or lose time; in addition, our grammatical network and use of "temporal adverbs: then, after, later…et cetera," demonstrates our preoccupation with time, thus determining our "meaning of this time, not the things we care about" (Ricoeur 1984: 62-63). Ricoeur provides a rich example of the preoccupation of "being- 'within' -time" when examining Heidegger's usage of the word "now" from *Being in Time* (Ricoeur 1984: 63). Ricoeur (1984: 63) asserts "It is important to see the difference in signification that distinguishes the 'now' proper to this time of preoccupation from 'now' in the sense of an abstract instant." Furthermore, since the function of time refers to a measurement of light occurring within a day, our preoccupation of time is derived from a concrete measure.

It is the usage of a word like "now," which holds both an epistemological and ontological meaning, depending on the grammatical sentence structure, that allows for the "linear representation of time" to alter (Ricoeur 1984: 63). Ricoeur writes (1984: 63):

> [s]aying 'now' becomes synonymous for us with reading the hour on the clock. But to the extent that the hour on the clock are perceived as derivations from the day, which itself links Care to the world's light, saying-now retains its existential meaning, but when the machines that serve to measure time are divested of this primary reference to natural measures, that saying-now returns to the abstract representation of time.

Ricoeur's analysis of time, in reference to the "now" bridges the concepts of care and narrative order, where they both "share the same foundation of within-time-ness" (Ricoeur 1984: 63-64). Human preunderstanding is consistently demonstrated through narrative, as individuals share stories and carry out actions every day, thus modeling a

reinterpreted understanding of the past, illustrated within the present (Herda 1999: 76). As Herda (1999: 76) explains, "something has to exist before it can be configured." It is the interplay of mimesis, starting from our preunderstanding, $mimesis_1$, which begins the transcendent journey of interpretation through stage-to-stage, $mimesis_1$, $_2$, and $_3$. In my research the preunderstanding of technology brought out during conversations informed a present interpretation and an imaginative reinterpretation.

Mimesis$_2$

As expressed above, $mimesis_2$ (m_2) is the present of present things (Ricoeur 1984: 60). It is our temporal interpretation and reinterpretation of past events, while imagining the possibilities of future events that provide access to $mimesis_2$. Ricoeur (1984: 65) asserts "[b]y placing $mimesis_2$ between an earlier and a later stage of mimesis in general, I am seeking not just to locate and frame it. I want to understand better its mediating function between what proceeds fiction and what follows it." $Mimesis_2$ is constant imitation and mediation of one's varying human actions configured in the present (Herda 1999: 76). Stories, like narratives, have a beginning, middle and end. Aristotle offers the word "plot," Ricoeur configures "emplotment," for the story comes from the character or participant who is carrying out this mediation, as he shares his narrative (Ricoeur 1984: 64-65).

Emplotment, as an Aristotelian concept, that originates from "muthos;" Ricoeur reconfigured emplotment with his threefold mimesis (Ricoeur 1984: 31-32). When an individual shares a story, by way of this threefold mimesis, $mimesis_2$ allows for emplotment; a temporal configuration of a story transformed by the individual and presented as a whole (Ricoeur 1984: 65). This emploted story in the present (m_2) is one's

interpretation informed by one's past (m_1), future (m_3), or a meshing of the two, delivered in conversation or fixed in text (Ricoeur 1988: 261-274).

Reflecting on Ricoeur, Simms (2006: 98) explains mimesis$_2$ as "emplotment, the ordering of events and the establishing of casual and other relations between them." Of the three-stage mimesis, m_2 "is the most important," for only in this sphere of configuration can emplotment be revealed (Simms 2006: 86). In conversation with research participants, guiding questions led some participants to emplot a past experience, or an imagined possibility of learning that informed my inquiry. Critical interpretive participatory research with conversation partners provided opportunities for stories to be shared. By way of m_2, events and incidents of the past along with envisions of the future, were mediated through story and configured as unique learning and technology narratives.

Mimesis$_3$

Mimesis$_3$ (m_3) is the complementary third stage of the threefold mimetic cycle. However, reaching m_3 does not lead to the ending point of mimesis, for the "unfolding of mimesis does not contain an end within itself" (Ricoeur 1984: 70). Ricoeur (1984: 71) explains by way of "generalizing beyond Aristotle… mimesis$_3$, marks the intersection of the world of the text and the world of the hearer or reader." The intersection of these two worlds, text and reader, present an opportunity for imagination and application to occur within the reader. Gadamer (2006: 335) also refers to this intersection of text and reader, when he asserts "all reading involves application so that a person reading a text is himself part of the meaning he apprehends. He belongs to the text that he is reading." Furthermore, this intersection of worlds leading to mimesis$_3$ is analogous to Gadamer's

(2006: 367) "fusion of horizons," where "the close relationship between questioning [the text] and understanding is what gives the hermeneutic experience its true dimension." This hermeneutic experience is ongoing, and involves the mediation of interpretation, contemplation, and appropriation, that eventually may give way to a new and potential reconfiguration.

Mimesis$_3$ is the present of future things, or as Herda (1999: 78-79) explains, "at this stage [m_3] we imagine ourselves acting and inhabiting a world with indirect reference to the world in mimesis$_1$." There is a circular relationship between $m_{1, 2,}$ and $_{3,}$ with each stage informing the other; simply put, the present becomes the past thus continually guiding the present to imagine a future (Ricoeur 1984: 60). This mimetic cycle does not necessarily occur linearly, for often m_1 informs m_3 mediated temporally through m_2 (Ricoeur 1984; Herda 1999). The circular relationship of mimesis$_{1, 2,}$ and $_3$, as examined in the paragraph below is actually more than a circle and rather an ongoing spiral (Ricoeur 1984: 72).

The continuous interplay of mimesis $_{1, 2,}$ and $_3$ are circular in nature, but as Ricoeur (1984: 72) explains, what appears as a "vicious circle" or a continuous looping of $m_{1, 2,}$ and $_{3,}$ actually materializes as "an endless spiral that would carry the meditation past the same point a number of times, but at different altitudes." Conversation partners draw on their past when sharing their views of learning and utilizing technology in the future. The past one reinterprets is not necessarily emploted the same way every time. Although interpretive "redundancy" (Ricoeur 1984: 72) does occur, it is within the hermeneutic tradition of interpretive participatory research where "this third stage is an appropriation of the text in addition to an opening up of possible new actions in the real

worlds of our lives and organizations" (Herda 1999: 77). Guided by research questions considering text and mimesis, conversations with research participants offered a path to interpret, understand, and appropriate an imagined world for adult learners with multimedia video.

Entrée To Research Site

I conducted my research at USF, a community I have been involved with for over a decade. As an alumnus and current employee at USF, my eleven years of experience with faculty at this University has provided many opportunities to interpret a need and envision possibilities for my research. I began formally working on the entrée to the research site in spring of 2008, when I decided to carry out my inquiry within the same community I work. As a member of USF's Information Technology Services (ITS) Help Desk for three years, I have had the privilege to assist numerous faculty members with varying technology related issues. Through my experience, the challenge of explaining and reinterpreting technology in conversation with faculty over the phone, in e-mail, and in person – without appropriate visuals – was often challenging; however, when I was able to spend additional time, build relationship, and explain by demonstrating a new feature or function, many faculty members found meaning in our time together. The relationship a faculty member and I established in conversation using visuals and repetition, created a meaningful experience for both of us. Herda (1999: 101) explains "[o]ur interests and the interests of others give meaning to our search and inquiry collaboratively over time… interests provide a basis for learning, for learning takes place only in the context that has meaning for us." My research site was intentionally chosen as a space of inquiry where innovation could unfold in theory and my community.

Selecting Participants

As of 2010, beyond my educational endeavors at USF, my employment in ITS over five years – both as a student worker and fulltime staff – has led to many collaborative relationships with USF faculty. Interested in partaking in conversations with a variety of subject matter experts affiliated in different schools and colleges at USF, I compiled a list of faculty whom I had assisted in the past with technical support. Adding depth to the participants I considered, I included faculty members identified through personal affiliations as well. The individuals invited to participate in this research were faculty and adjunct faculty from a variety of USF's different divisions (see Table 1: Chart of Conversation Partners). Conversing with faculty from different facilities, each serving USF in various capacities presented an opportunity to create a deep narrative of technology practice. I imagined each conversation would reveal the challenges facing adult learners in this technology driven time period of 2010 – the year my research occurred – whereby the interweaving of these voices into one narrative informs a collaborative story.

Table 1: Chart of Conversation Partners

Name	USF Title	USF Divisions
Dr. Kelly Carey Cooper	Adjunct Faculty	School of Education /Leadership Studies, Organization & Leadership
Dr. Mathew Mitchell	Professor /Faculty	School of Education /Learning & Instruction
Dr. Susana Kaiser	Associate Professor /Faculty	College of Arts & Sciences /Media Studies & Latin American Studies
Dr. Tom Lucas	University Professor /Faculty	College of Arts & Sciences /Art & Architecture
Dr. Mark Miller	Assistant Professor /Faculty	College of Arts & Sciences /Theology and Religious Studies
Dr. Deneb Karentz	Professor /Faculty	College of Arts & Sciences /Biology

Dr. Martha Schaffer	Associate Professor /Faculty	College of Arts & Sciences /Modern and Classical Languages
Dr. Mary Wardell	Dean of Students and Associate Vice President / Adjunct Faculty	College of Business and Professional Studies/ Professional Studies

Conversation Participants

My research included eight conversation partners ranging across USF's campus. As discussed above my research participants are faculty at USF. Working at USF provides faculty access and some form of experience with classroom technology. As working professionals within academia, my conversation partners are adult learners who have contributed extensively to this inquiry. Prior to the start of my inquiry, the research participants listed in Table 1 (Chart of Conversation Partners) were e-mailed a letter of invitation (see Appendix B for Letter of Invitation). By way of e-mail, I confirmed an appointment arranging a time, date, and meeting place with each participant (see Appendix C for Letter of Confirmation to the Research Participant). The following section provides brief descriptions of each conversation partner.

Kelly Carey Cooper

Dr. Kelly Carey Cooper began teaching technology classes in 1991. She is a former graduate of USF's Organization and Leadership (O&L) program - class of 2000 - and has been teaching Web Development in the Digital Media/Internet Services Department at West Valley College, located in California's Bay Area since 1997. Additionally, she is a current adjunct faculty for USF's School of Education, and formally taught in USF's College of Professional Studies from 1995 to 1999.

Mathew Mitchell

Dr. Mathew Mitchell is a Professor in the Learning and Instruction Department within USF's School of Education. His Ph.D. in educational psychology is from the University of California at Santa Barbara. Professor Mitchell has been teaching at USF since 1993. His research interests and areas of expertise include: Multimedia learning, mathematics education, and student motivation to learn.

Susana Kaiser

Dr. Susana Kaiser is an Associate Professor at USF teaching within the Media Studies Department and the Latin American Studies program. She earned her Ph.D. from the Institute of Latin American Studies at the University of Texas at Austin, her M.A. from the Department of Communication at Hunter College of the City University of New York, and her B.A. in Advertising from the Jesuit University of El Salvador, in Buenos Aires, Argentina, her country of origin. Before coming to USF in early 2000s, she was a Postdoctoral Fellow at the University of California, Berkeley. Her research focuses on communication, cultural/political memory, and human rights. Her teaching interests include the multiple links of the media with political, civil, cultural, social, and economic rights, race and ethnicity, Latin American and Latin history and media. Some of the courses that she teaches are: Race, Ethnicity and Media, Latin American Cinema, Latins in the U.S. Media, Human Rights and Film, Latin American Perspectives.

Fr. Thomas Lucas

Fr. Thomas Lucas S.J., Professor of Art+Architecture and director of USF's Thacher Gallery, received his doctorate in Theology and the Arts at the Graduate Theological Union, Berkeley, CA, in 1992. He also holds degrees from the Pontificia Università Gregoriana, Rome; Fordham University, New York; The Jesuit School of Theology at Berkeley, and Santa Clara University, California. Fr. Lucas is an internationally recognized expert in Jesuit art history, as well as a well-known liturgical designer and artist with an international portfolio. He joined the USF Faculty in 1995 after serving for three years as the National Secretary for Communications at the US Jesuit Conference, Washington DC. At USF he served as founding chair of the Fine and Performing Arts Programs for 8 years until the programs were divided into freestanding departments in 2003. After directing a joint degree program with the California College of the Arts for five years, he proposed, designed, and saw USF's Department of Art+Architecture through to establishment. In fifteen years in the classroom, he has taught courses in art history, stained glass, theology and art, landscape design, sacred space, and campus design seminars.

Mark Miller

Dr. Mark Miller is an Assistant Professor of systematic theology at USF. His interests focus on anthropology, soteriology, political theology, Trinity, and Christology. His Ph.D. is from Boston College and he has been part of USF's faculty since 2007. Professor Miller has also taught at the Ateneode Zamboanga, the University of Asia and the Pacific, Boston College, and Georgetown University.

Deneb Karentz

Dr. Deneb Karentz is Professor of Biology and Environmental Science at the University of San Francisco. She received her B.S. and Ph.D. degrees from the University of Rhode Island, and her M.S. from Oregon State University. Her research focuses on the ultraviolet photobiology of marine organisms: identifying strategies for protection from UV exposure and understanding mechanisms for repair of UV-induced damage. Her work includes investigating the ecological implications of Antarctic ozone depletion. Professor Karentz has been a member of USF's faculty since 1992, teaching in both the Department of Biology and Department of Environmental Science.

Dr. Martha Schaffer received her Ph.D. in Romance Philology from the University of California at Berkeley. Her current research centers on medieval Iberian texts and manuscripts, in particular the 13th century *Cantigas de Santa Maria*. She is part of the BITAGAP (*Bibliografía de TextosAntigosPortugueses e Galegos*) database team as well. She teaches within the Modern and Classical Languages Department. Professor Schaffer has been part of USF since 1992. At her request her photograph is not used.

Mary Wardell

Dr. Mary Wardell is the Associate Vice President and Dean of Students at USF; additionally, she serves as adjunct faculty within USF's college of Business and Professional Studies. A graduate and former adjunct faculty at Pepperdine University, she previously served as the Dean of Students at Otis College of Art and Design, before joining the USF community in 2008.

Data Collection and Text Creation

In critical hermeneutic participatory research, the data collection process is carried out through the creation of a shared text (Herda 1999). The researcher creates this shared text with the research participant by way of three-phases: [1] partake in the research conversation, [2] transcribe the conversation, and [3] review the transcription – the shared text process ensures accuracy (Herda 1999: 97-98). Invitations to prospective conversation partners were sent to USF faculty with varying experience using classroom technology (see Appendix B: Letter of Invitation). To create an accurate transcription with participants each conversation was digitally recorded with permission. Research participants "play a major role in developing the knowledge and understanding" essential to this participatory process, as each unique experience informs the research inquiry (Herda 1999: 97).

Following each conversation, the researcher transcribed the digital recording into a working text that was presented to the conversation partner for review (see Appendix C: Letter of Confirmation to the Research Participant, and Appendix D: Thank You Letter). This review of transcription provides opportunity for the participant to "reflect on what was said. Any changes the participant wants to make in the text" were honored (Herda 1999: 98). In addition, follow-up conversations may have occurred to present opportunity for participant and researcher to further the investigation and expand on what was originally transcribed (Herda 1999). Two participants changed small grammatical errors, however, no one changed the conversation text in any substantive way. Beyond the conversation, I kept a "journal" to record observations, questions, and my own reflections throughout the "data collection process" (Herda 1999: 98). The benefit of this personal

journal, as Herda (1999: 98) explains can be "[a] forthright and well-documented log… show[ing] remarkable changes over time in the researcher's understanding of both process and theory."

Research Journal

The research journal (see Appendix F) is an essential and personal source of data collection I used to document my evolving thoughts over time (Herda 1999: 98). My well-documented journal provided opportunities for me to interpret and reinterpret my "understanding of both process and theory" serving as a "life-source" (Herda 1999: 98). Beyond the ability to see a record of my reflections, I was able to see my "hopes, fears, questions, ideas, humor, observations, and comments" unfold as I progressed in this research (Herda 1999: 98). This journal was created as a collector of informal data, which I used along with my primary data during data collection and analysis.

Timeline

I conducted eight research conversations, collected data with my participants, and transcribed each conversation into written text between May and August 2010. During this time I analyzed each text and created sample analysis for each participant to review, along with transcription. Formal data analysis occurred between September and October 2010. My final chapters were completed by January 2011.

Data Analysis

The data analysis process in critical hermeneutic participatory research is possible for "the spoken word[s] in conversation" are transcribed into a fixed text (Herda 1999: 86). This "creative and imaginative" transcription experience allowed time and distance for data interpretation to unfold, where the "researcher appropriates a proposed world

from the text" (Herda 1999: 98). Herda (1999: 98-99) provides the following guide for collecting and analyzing data:

- Transcribe each recorded conversation into a working text;
- Review the text, "pull out significant statements, develop themes" and incorporate them within your critical hermeneutic theoretical concepts;
- Select quotes from the transcription to support your themes;
- Interpret themes in light of your research categories relevant to critical hermeneutic theory;
- Discuss research findings from a "theoretical level" including areas for future investigation;
- Present examples of "learning experiences and fusion of horizons" in light of both the researcher and participant.

Data analysis carried out by way of conversation, from a critical hermeneutic orientation assists in avoiding the "trap of telling others what they ought to do" (Herda 1999: 80). This data analysis process promotes ethical action as the researcher shares "commitment with participants to change the context, and hence often the problems" that may lead to new understandings and social change (Herda 1999: 86).

Research Questions

Informed by the research categories and critical hermeneutic theory, my guiding questions unfolded in conversation and assisted in creating a shared text. In conversation, participatory inquiry presents a medium for authentic discourse to occur. The purpose of carrying out conversations in a critical hermeneutic tradition is to present opportunity for both participant and researcher to arrive to new interpretive understandings of the

research topic. The direction of each conversation was guided by the research questions below; however, all questions may not have been asked.

Text:
1. What does text mean to you?
2. How do texts assist you in learning?

Mimesis:
M_1
1. Thinking back, within your general learning experience, what was a challenging learning experience for you?
2. How did you come to learn about technology?
M_2
3. How do you apply this understanding in your work today?
4. If you were given this Mobile Device [handheld cellular telephone with internet and video capability] as a gift, how would you learn to use it?
M_3
5. In the future, how do you envision technology used in teaching and learning?
6. How do you envision learning in the future?

As mentioned above, participants were asked to watch a short multimedia video prototype, whereby the video is a marker for specific appeal of the entire conversation. An additional guiding question or two were asked post multimedia video viewing that relate to $mimesis_3$.

M_3 (post-video viewing)
7. Where do you place yourself in this video in terms of your own learning?
8. How do you see multisensory media like this being part of your own learning and teaching life?

Though the participants were usually asked the above questions during research conversations, the inquiry was not restricted or limited to only those questions listed. In critical hermeneutic participatory research conversation and topic are open to interpretation and conversations may take on a life of their own. My inquiry was a collaborative effort involving the research participant and researcher.

The Research Pilot Project

In preparation for this research, I carried out a pilot study exploring the appropriateness of my research categories and guiding questions. The pilot project was an opportunity to practice participatory research and assist in creating my themes. Below is a synopsis of my pilot inquiry, including background information about my conversation partner, analysis of data, and reflections recorded during the process.

Research Participant

My conversation participant in my pilot research was Dr. Judith Lambton, a fulltime Associate Faculty member in USF's School of Nursing. She is a Registered Nurse (RN) with over forty years experience. Dr. Lambton has been with USF since 1992 instructing students in the undergraduate, graduate, and doctoral nursing programs. Her experience with teaching in USF classrooms spans over fifteen years, and her insights provided a valuable direction in this research.

Data Presentation and Analysis

During 2007 through 2009 I spoke with and assisted Dr. Lambton on numerous occasions, often related to issues using technology in the classroom. After helping Dr. Lambton with an email request I asked if I might have a few more minutes of her time to discuss this pilot research project. I invited her to participate in my pilot study as a conversation partner. Without hesitation she agreed and the next day I e-mailed a brief overview of the study and a conversation introduction. In a follow up e-mail we made arrangements to meet in two weeks.

The conversation took place in the Cowell building located on USF's main campus, where I met Dr. Lambton in her office. Prepared to be video and audio recorded

she invited me in. She worked on her computer as I prepared my equipment. With the audio recorder placed on her desk and camcorder mounted upon a tripod, I adjusted the lighting for optimal clarity. Sitting a few feet away from one another with the door closed and the technology recording, we began our conversation.

Dr. Lambton and I shared an extensive conversation involving her experience with teaching and learning. She shared stories shifting from her different roles including: a registered nurse, USF professor, department chair, and adult learner. Focusing around the context of the medical field, she identified the difficulty of educating her students without technology. She explained the newer expectations current students have associated with technology and their needs of constant communication via e-mail, for

> …one of the things about today's student is that they want instant feedback. So they send you an email at 11:00pm at night and wonder why you have not responded… So a lot of us do carry BlackBerries® and Apple® devices to just be responsive to our students.

Technology has changed over the course of her employment with USF, in combination with Nursing and the health field. She expressed the challenges involved with learning, as well as how the Nursing department has evolved integrating new technology into their curriculum.

Dr. Lambton interpreted technology as a tool specifically useful in both medicine and academia:

> [w]hen I think of technology, I don't think of something that is just interesting, I think of something that is going to solve a problem… So just in terms of my comfort with technology whether it's taking care of a patient, or teaching, if it solves a problem I like it, but I am not so interested in it, if it's just technology for technology sake.

Preferring to use technology as opposed to knowing about it, she explained, "I don't want to spend a lot of time messing around with it [technology], the time I spend I want to be

spending preparing and teaching." Our conversation serving as a medium, Dr. Lambton expressed ways she learns best, as well as insights on how she might learn better in the future.

When talking about reading instructional texts and their value in assisting her with learning to use new technology tools, she explained:

> …most of the time when I read about a new technology it's written in a language that's maybe more understandable to the programmer, or understandable to the tech people, than it is to the end user [referencing herself]. So for the most part when it comes to learning a new technology whether it's PowerPoint®, Blackboard® or any of that I do better by having someone tell me about it, and having someone allow me to do it with them, but reading a text manual for most new technologies, it's like reading German to me.

Dr. Lambton understands that learning one-on-one with another person demonstrating and explaining a new technology is not always possible. She expressed a way in which she can envision learning independently in the future:

> I think if there was a 20 second movie, just with someone doing it, moving a curser, I think a visual and, a narrated visual, is probably far better for most learners not just myself, but for most learners to see it demonstrated rather than just read it textually.

She continued expressing an idealized scenario for using such a movie and shared her struggles in light of the university's newer e-mail system, called DonsApps®, which was introduced at USF in fall 2009. Dr. Lambton explained:

> I think something that would be live and interactive, so you create this, I don't know, one minute movie about DonsApps®, and everybody can access it via Blackboard® or whatever, or however you want it to link. And then there is an open question and answer time, again using technology, a live chat thing. 'I am doing it now but I can't do this' and someone else pops in and says, 'well I have an iPhone® and this is what…' even creating a community perhaps. Even [if it was] for a short moment of time when you said from, the launch of a new thing [program], to the time in which you think you should have it adopted, 'for the next 24 hours, this kind of stuff will be available to you, just log on.' You know, frequent questions and answers, but live, those kinds of things I think are really

> helpful. But to just give text is not always the most helpful thing, in my estimation.

This idea of learning from a movie bridged over to a new context of multimedia educational opportunities, specifically how to utilize technology within USF's smart classrooms, led me to present the prototype multimedia video tutorial I created.

Displayed on my laptop, we watched the ten-minute video together and continued our conversation at the video's conclusion. When the video ended, Dr. Lambton shared:

> It could be faster [referencing the video's pace], cause I think most people using it [as she mentioned earlier], want to get right to the point… but I like that you applied it to in class things, and you showed, you know, you actually showed the device as they would see it. Rather than a manual that would apply to, any classroom that it looks like, [and] I think doing it in USF classroom [was of value]. I liked it; I liked the visual. I liked the sound. And I liked, you know, the bar that was easy to use. And, you know, this is exactly what I would have loved to have had before I stood in front of 80 students and had to, futz with it myself.

We conversed about using such a tool and how slight improvements could be made. She explained her interpretation of the video and how she could see it used and adjusted.

From my conversation with Dr. Lambton, I was able to reinterpret ways technology may assist adults learn. Through the foundational categories of text and mimesis the below section seeks to match hermeneutic theory with themes developed during conversation. Dr. Lambton's stories reveal her experience with learning, educating, and technology. The medium of conversation provides opportunity for stories to become our text (Herda 1999). In an attempt to reach a new understanding through my interpretation of our narrative, this section presents the interweaving of critical hermeneutic theory and the collaborative voices of research partner and I emploted in text.

Text

The current state of technology allows for adults to learn through various mediums beyond books and the traditional paradigm of text, words on a page. Ricoeur (2007: 158) asserts, "[t]o read is, on any hypothesis, to conjoin a new discourse to the discourse of text… Interpretation is the concrete outcome of conjunction and renewal." When Dr. Lambton was asked for her understanding of text, she briefly stated "Words on a page. Or words on a screen." Seeking elaboration I asked her opinion considering a picture or an image as text, where she explained:

> I don't usually consider that a text, but more as a supplement to text, another way of looking at something. Something that you can say in words, but a picture can solve the explanation more simply… some students learn better by reading text, and some people are visual learners, so they seem complementary, but also somewhat opposite.

Playing with this concept of text, we reinterpreted the meaning of text considering imagery, which led our conversation down a path it otherwise may not have headed.

There is a dynamic element to interpretation in both reading and conversation that may lead to new understandings. Interpretation is intentional appropriation of text in the present moment; although, intentionality and subjectivity of interpretation may lead to unintended meanings not always anticipated by the author (Ricoeur 2007). Formal academic understanding strives for a specific interpretation during education; however, the nature of creating meaning from text and arriving to new understandings only occur in reference to the understanding of self (Ricoeur 2007). Dr. Lambert demonstrates this when she explained her past challenge of learning about kidney failure:

> I would say probably listening to someone describe kidney failure, was more memorable, to me at the very start. Seeing a patient with kidney failure, I never forgot it, and then reading about kidney failure was probably the least accomplished way for me to learn about it. So hearing and seeing, I think were orders of magnitude better for me then actually just reading text about it.

Without experience and a foundational understanding of kidney failure, she was not able to interpret meaning. Not until an educational experience with kidney failure, learning through multiple modalities including audio and visual opportunities for interpreting beyond text did she come to new understandings. She understood what the concept of kidney failure was through the metaphor of the disease and self-reference; understanding self, led to understanding others with kidney failure, thus creating meaning.

Mimesis

During the course of our conversation Dr. Lambton shared past experiences of learning new information related to technology. One story of learning involved her experience with programmable mannequins, which the School of Nursing planed to use as educational simulation practice for their students. Dr. Lambton explained:

> [w]e had the representatives… of the company, from whom we bought the actual mannequins and they know the technical stuff, 'push this button to get the patient to breath.' Or 'push this button to have the blood pressure drop, or program it this way,' but that's all they new. They knew how to operate the equipment, what we had to do was to create scenarios to use that technology. So we had to take curricular issues and make that mannequins work for our curriculum. But to actually learn the technology, it was demonstrated to us by the representatives of the people who made it.

This in-person demonstration was helpful; however, she continued explaining situations where reading text and attempting to create meaning from text only, were challenging.

Expanding on this idea, Dr. Lambton specifically addressed her experience and challenge of learning new technology in light of the continuously evolving fast paced industry of technology development:

> I think the real issue about learning new technology is that if you are not invested in it early on, if you were not part of a focus group, if you weren't part of a reason why that technology was adopted, it's harder to learn about it… it's like, well, this was hoisted upon us, so I am going to have to learn it and we know that it is

> DonsApps® today and it will be something else in a few months, and we'll have to reorder our thinking. And I think that the problem, or one of the problems of the speed at which technology is being developed it's sort of like the Moore Law, right the Gordon Moore, it's just happens so quickly so fast, that by the time you learn a technology and feel really comfortable with it, something else is coming up. And one of the problems I think a lot of us in medicine and nursing have, certainly in education, is newer technology, is it really better, or is it just more bells and more whistles and more things that someone thought would be really cool, but don't deliver any better learning or patient care then prior use.

Such unsatisfactory experiences investing time and resources into learning new technologies without gaining additional functionality is not a good use of time. Dr. Lambton's past disappointments have shaped her current identity, informing her relationship between technology, learning, time, and narrative.

As an educator and foremost a nurse, learning technology became a job requirement. Ricoeur (1991: 435) asserts, "[t]his pre-history of the story is what connects the latter to a larger whole and provides it with a background." Reflecting on past and present experiences with technology, Dr. Lambton's metaphor below concerns an experience with migrating to a new e-mail account at USF:

> ...for my purposes I just thought it was going to be in total, you take a group of people unchanged [referencing her e-mails being unchanged], now I know they have to adapt to their new environment, but there is still the same people [e-mail] and so for me I thought my system was going to be the same but sort of [on] a different server. But in fact I've had to learn different things about it, that I didn't [think I'd] have to learn, and I am using the same [e-mail program] Thunderbird®. So it's not like I changed, as you say e-mail clients, I am using Thunderbird® before DonsApps® and Thunderbird® after DonsApps®, and [yet] it's different.

Connecting previous experiences and past experiences with e-mail, her past shaped her present and future concerns with e-mail at USF. Experiences, Ricoeur (1988: 246) explains, shows how "refiguration makes this life itself a cloth woven of stories told."

Referencing one's past in light of the present and future, Dr. Lambton's past narrative connects to her current understanding and future aspirations of using and learning technology. As stated above in the Research Categories section, purely text-based learning is limiting when attempting to learn new concepts, especially ones different than current experience. Dr. Lambton identified the use of imagery, video-clips, and audio-clips as valued reinforcements during education.

Written text is a value in education; however, when concerning technology differentiated from past experiences, text alone is not adequate. Beyond the independent use of visuals or audio tracks to assist adults in learning, Dr. Lambton finds a fluid simulation and explanation including video, audio, and text helpful. Though in-person one-to-one educational opportunities have set the educational ideal standard, financial and personnel resources affiliated with providing personalized training are deemed unrealistic and a new medium beyond the static text tutorial guide is needed. Video based multimedia tutorials combine multiple modalities and may serve to optimize learning when in-person options are not available. Presenting the world through videotext introduces opportunities for new understandings, as Ricoeur (2007: 142) asserts:

> [t]hrough fiction and poetry, new possibilities of being-in-the-world are opened up within everyday reality… Everyday reality is thereby metamorphised by what could be called the imaginative variations which literature carries out on the real…fiction is the privileged path for the redescription of reality….

Using her imagination when viewing the multimedia tutorial, Dr. Lambton used past experiences to envision a future where new contemporary understandings of technology are formed through experiencing multimedia video.

Reflections on Pilot Project

The recorded conversation and text created with Dr. Lambton provided opportunity for me to review and reinterpret the multimedia videotext in a new light. For example, following this experience I had a new understanding of the tutorial's introduction section, which was originally delivered too directive and wordy. Dr. Lambton alluded to the first slide being restrictive, and suggested that, presenting the video, as something that may be watched in full or in part, based on her needs, would better serve her learning. To this point, she explained, "[s]o in other words you're not insulting the person, by saying you gotta listen first to the definition of a smart [classroom], and then see how to use the key." By altering this short introduction section, the video may have an inclusive tone for a diverse audience of new and seasoned faculty members. I continued with my guiding questions and research categories as used in my pilot, which served me well in the further work with my dissertation. Under the categories of text and mimesis, along with subcategories of metaphor, and Ricoeur's threefold mimesis, opportunities for dynamic conversations continued to unfold with research participants throughout my dissertation data analysis.

Pilot Study Summary

From the pilot study emerged a once imagined and now present world of adult learning through the medium of technology, fulfilled by multimedia videos. As opposed to reading instructions, multimedia videos provide an interactive interpretive medium for learning. Using interpretive participatory research carried out in the critical hermeneutic tradition, Dr. Lambton and I co-contributed to this community effort pilot. By way of the threefold mimetic process, she shared her preconfigured (m_1) learning style, expressing

how she has come to understand and use technology. Furthermore, Dr. Lambton shared her imagined future (m_3), envisioning new ways of learning to use technology. After viewing a multimedia prototype videotext, we continued to imagine and reconfigure how multimedia videotext may assist in future adult learning opportunities at USF and beyond, which set the stage for additional data collection.

Background of the Researcher

I struggled with learning throughout the earlier part of my academic life and traditional education methodologies previously posed great obstacles for me. I attended public school from kindergarten through high school. During fifth grade, I was placed in a special education pullout program called the Resource Specialist Program (RSP), due to a learning difference. As a result, I have had to continually work at an intense level to bridge a discrepancy between my math and language abilities, eventually I figured out a way to absorb and comprehend academic material within all environments, most notably educational settings. Originally I thought I would fall victim to the same fate as my father and never be able to finish college, I have overcome adversity and succeeded in earning two previous degrees from USF.

I initially embarked on a career in youth education; I studied psychology as an undergraduate followed by earning a multiple subject teaching credential and Master of Arts in teaching. During the process of earning my masters, I worked as a student-technology specialist within USF's Classroom Technology department. In this position I gained hands-on experience of using educational technology and assisted faculty and staff use classroom-teaching equipment. This sparked a newfound hobby, educating others within the realm of technology.

Following my master's degree I taught math, science, and technology at a kindergarten through eighth grade private school. Though the experience was rewarding, when an opportunity arose to shift my career into the field of technology, I transitioned from a junior high school teacher back to USF, where I rejoined the ITS department fulltime as a Client Services Specialist. Working for the university's Help Desk I assisted and educated students, faculty, and staff with overcoming their technical and computer related challenges. This experience informed my thinking and led me to recognize a developing need related to how adults are educated to use technology. When I started my part-time work in the technology field in 2004, to learn a new technology function, I had the option to read about it or seek help having someone demonstrate a series of steps to me in-person. I began to interpret a connection between the two, interested in capturing a personal learning experience on video that was accessible to be viewed online. This imagined learning experience would provide me and other learners an opportunity to watch and re-watch the lesson again and again in an attempt to reach mastery. This idea led me to discover the developing concept of multimedia streaming video and imagine the possibility of learning by way of technology.

Summary

Chapter Three, Research Theory and Protocol, begins with a review of the Conceptual Background and Protocol used in my investigation. The Research Categories that guide this ontological study are presented and explored – Text and Mimesis, along with subcategories: metaphor, $mimesis_1$, $mimesis_2$, and $mimesis_3$. Conversation Participants are introduced and the critical hermeneutic field-based protocol (Herda 1999) of Data Collection and Text Creation, in addition to Data Analysis are examined. This

Chapter concludes with an overview of The Research Pilot Project and Background of the Researcher in light of multimedia video use in adult learning. Chapter Three sets the stage for Chapter Four, the Presentation of Conversations, where the narrative journey of my research with conversation partners originates.

CHAPTER FOUR

PRESENTATION OF CONVERSATIONS

Introduction

My pilot study conversation with Dr. Lambton provided direction and informed the beginnings of my research, however, additional conversation partners were needed to create an expansive narrative and thorough exploration. My narrative journey begins as "…the speakers are separated from what they said" in an interpretive critical hermeneutic tradition, whereby each conversation is transcribed into a fixed written document, or initial text (Herda 1999: 127). My research conversations led to the creation of my eight transcribed texts, each text created "…in concert with participants" (Herda 1999: 127). Chapter Four transcends these initial texts and serves as space for deeper exploration in the form of a second text. The second text unfolds as the researcher creates a shared narrative drawing upon quotes from each transcription; in other words, the Presentation of Conversations create a story configured as "a totality out of scattered events" (Herda 1999: 127) whereby a new shared story emerges.

During late spring through summer of 2010, I set out to find USF faculty members willing and interested to join my research as conversation partners. I came in contact with eight willing participants during my work as a Client Support Specialist for USF's ITS Help Desk. My position presented opportunities for discourse to unfold with faculty, as I assisted all members of the community with their technological related needs. I narrowed my perspective research participants to eight willing partners. I contacted each faculty member in e-mail extending formal invitations to participate in my research (see Appendix B: Letter of Invitation and Research Questions); I responded to e-

mails of interested individuals, arranged appointments and provided digital confirmation letters (see Appendix C: Letter of Confirmation to the Research Participant). E-mail communication is widely used at USF and often the preferred style of communication, which allowed me to easily send a brief overview of the study, a conversation introduction, and my formal Institutional Review Board (IRB) documentation (Appendix B and C).

Conversations took place at USF in the respective building and office of each research partner. I arrived at each appointment early with my audio and video equipment in hand. Not all participants were prepared to be video and audio recorded; however, each participant provided his or her consent to one or both methods of recording and I setup my equipment accordingly. In reflection, it was interesting to note how each conversation began surprisingly similar, although, individual responses to my guiding questions where often uniquely different. Research unfolded as I entered each office with my participant graciously awaiting my arrival and inviting me to sit. As I entered the room, a conferrable guest chair was offered, the door would shut, and we chatted together as I configured my technology. Following a few minutes of reacquainting ourselves with one another, our conversation began.

Conversation Introduction

The paragraph that follows describes the general way I started each conversation. Though wording may have altered with each participant, the theme and spirit of each conversation was similar in nature to the flow as articulated with Kelly Carey Cooper below. To begin each conversation in this way allowed an opportunity for me to center myself and present each research partner with a reminder of our purpose.

Thanking Kelly [my first participant] for her time and agreement to join my research I formally recognized recording had begun and explained I could stop or delete any of our recorded conversation at her request. She mentioned her experience and comfort with being recorded, and confirmed her agreement with participating. Briefly reiterating my purpose, I highlighted my interest in education and technology in the learning process. Identifying our time together as a research conversation, as opposed to an interview, I indicated a few guiding questions were prepared; however, I explained I looked forward to the possibility of our conversation carrying its own direction. I invited Kelly to participate openly throughout our conversation raising questions freely.

Conversations evolved from this guiding introduction as each participant brought their unique narratives to the forefront. Data emerged following my research categories of text and mimesis. Below I present a new emploted narrative developed with research partners. This narrative is guided by two research categories, Text and Mimesis.

Text

Following my short guiding introduction, I began each conversation asking my research partner, 'what does text mean to you?' The concept of text was explored in this broad manner to present each conversation partner an opportunity to reflect and share his or her understanding of text. When Mathew Mitchell heard this first guiding question he immediately responded, "[t]ext? I think you're going to need to give me a little more." In hopes of clarifying my intent, I explained that while some people think of "text" as "words on a page… other people elaborate and, depending on how you interpret the term, coming from your background, it could be images [too]. For me when I see an image, movie [et cetera]… text it's something that is open for the viewer or reader to interpret." I

continued to explain that I view text as an opportunity for individuals to "derive meaning from." Reflecting on my comment, Mathew said, "I'm probably thinking of it in a slightly different way. It seems to me partly of what you're describing is storytelling… [which can] take on a lot of different formats. It can be written word, or hearing somebody talk about things, seeing something…."

Upon hearing this same question of 'what does text mean to you?' Deneb Karentz instantly questioned and clarified by spelling out the word "T-E-X-T?" She continued sharing, "well, initially I would say words written down. Sometimes people use the word text to refer to a textbook so they would say, you know, 'These chapters in the text.' But I think my initial reaction would be that it refers to visually seeing words." Wondering if she considered imagery a text as well, Deneb said, "I would consider that, yes. There are pictures and figures in textbooks but I don't think, at this point, I would look at a figure, photo, or a picture and say this is text." Mark Miller also struggled with this broad guiding question, "[t]ext. As in written words on pages?" Though he would consider the image/text connection, it was not a concept that had occurred to him before this conversation. Martha Schaffer explained,

> text to me mean- I think of both oral texts and written texts. I have a background in Linguistics, so I think of text as being comprised primarily of language with other factors entering into it. So for a spoken text I think of gestures, facial expressions, [and] the surrounding environment. And for written text, I confess I probably have more traditional views of what a written text is, which would be words represented graphically, alphabetically.

Starting each conversation with this broad guiding question was intriguing for I could not anticipate what my research partner may say or how our conversation may unfold.

Not all conversation partners' initially interpreted text as explained above. Fr. Thomas Lucas shared that, "…as a visual person, I've come to broaden the

understanding….” Continuing his story he shared the roots of his Jesuit education and recognized text as words as well as imagery explaining

> …as an educator and as someone who is fascinated by teasing apart art and literature and philosophy for meaning, I find texts everywhere… the book of the world and it's the great mystery to me. The book of our lives, the book of our experience, reading [interpreting] those through a variety of different lenses and of experiences, that's what keeps me going and I love the work.

In my conversations with Kelly and Susana Kaiser, both interpreted text beyond the bindings of a book considering movies, pictures, and even demonstrations as examples of text. For example, Kelly mentioned “I like to look at the broader use of text, as a way to interpret and find meaning and understanding in relationship with other people.” Having opportunity to express our varying interpretations of text in conversation was essential to explore how texts assist in the learning process.

In challenging my research partners to rethink their paradigm of text I wanted them to reflect on the past and consider, “how do texts assist you in learning?” Caught off guard by the question, Susana inquisitively responded with “I never thought about text assisting me in learning, for learning what, for instance, anything?” Before I could respond, our conversation shifted to her educational past and her childhood in Argentina. This unfolded into memories of learning as a child and back to the traditional paradigm of text where she explained her fondness for reading and that “I used to read a lot when I was a kid. I grew up in a crazy family, which my father thought that if we had television that we would not read, which was silly I don’t agree with that at all. But we read a lot.” Mark also felt reading text is valuable and essential in learning, as an adult and in his past “I mean when I was a little kid I used to read like crazy.” Reading and interpreting text does present a path to learning, but I was interested more specifically in how this new

understanding resonated with each individual. Further, I wanted conversation partners to consider how an individual moves from not knowing something, to understanding something new, and consider how texts assist in this process.

Other conversations dabbled into this "how…" space, Mary Wardell expressed that text assists her own learning in a variety of ways, where "pictures help me with comprehension. So I can be reading something and pictorial representation of a text or whatever, just helps me to better understand perhaps what it is that sender [author] is trying to convey to me." Deneb also finds value in pictures for there are instances where the information conveyed "would require both words as well as diagrams, figures, photographs," but the act of reading text – words on a page – is what benefits her most. She explained, "I would say reading about the work that other people have done… reading information is how I would learn things. In addition to talking to people, but you don't always have that option." By experiencing new or different information from text, or even in relationship with another, an individual may challenge current understandings based on past experiences. Text is a medium presenting this interpretative process whereby an individual may be led to rethink a temporal concept leading to a new understanding (Ricoeur 1994[1990]).

In conversation with Fr. Lucas, he immediately and reflectively addressed the "how does" of this question articulating

> …literally, we [humans, or I] make reference. We have reference books. We don't have to tease apart the meaning of life and experience all on our own, but rather we're able to refer to the experience about people, and isn't that what culture is about, for heaven's sakes.

Mathew continued in this spirit, as he explained how learning is situational, and to learn a person needs to engage them self – text could assist in this space. He shared how "some

really powerful learning situations are when people are having a conversation or dialogue; so that might be a form of text, but it's not static, you're going back and forth between one another." Kelly elaborated on this quality of learning from text beyond the linear thinking of reading where she addressed how interpreting text unfolds the possibilities of texts as a path "bringing people into relationship, and bringing people into the learning process." As we continued talking I realized the "how do…" of learning becomes a relationship built with another person shared by way of narratives or stories. Relationships are created with another person, author, artist, et cetera, through an interpretative process learning unfolds. Ricoeur (1994: 164) explains, "the art of storytelling is the art of exchanging experiences… not specific observations but the popular exercise of practical wisdom… experiences which the narrative performs." Fr. Lucas understands this journey of learning and the process of becoming educated in community, where we are "joining in the search and listening to the many voices… who can save me if not the struggle. At least [my relationship with others] can save me some of the pitfalls that others have gone through." By listening to, reading, viewing, and interpreting the texts, Ft. Lucas and all research partners learn in relationship with others evolving from a current understanding to a potential new one.

Mimesis

Considering current views of text and learning opened our conversation into a deeper space of past, present, and future learning. I transitioned the conversation from text-centered learning, to memories of meaningful learning. Often meaningful learning is formed during a struggle or challenge, and to recall past events I asked research partners

to think back, identify, and consider "within your general learning experience, what was a challenging learning experience for you?"

Susana mentioned "technology is really difficult for me. I use it all the time…[but] technology is really complicated, but it's complicated because I think it is not well explained." She recently bought a new camera and shared the trials of learning it's functions, "you start reading the instructions, and you think that you need to be a rocket scientist." Susana was dumbfounded by these instructions, they often make "no sense" - it was as if she demanded to know the answer to her rhetorical question, who writes these manuals and how do companies determine the qualifications needed to be a technical writer?

Mary also finds challenges with technology, "this whole thing of trying to make sense of instructions, like written instructions and trying to figure out how to make… a new TV work." She thinks it would be simpler than it is, however, functioning a newer TV along with all the components, cable box, disc players, remote controllers, et cetera, is not easy. Mary shared, "I've always had challenges around those things, and I don't know if those are learning deficiencies or lack of just the patience to go through and read things fully." Realizing there is a "…technological element to all those things" she is perplexed with where the issues reside, perhaps the "poor design in hardware" or perhaps "the technology that's driving it, or a combination thereof."

Deneb brought up technology as well, however, her interpretation differed from that above. She shared "…learning how to write on the computer was actually quite a challenging transition." The shift Deneb attested to was something I had not understood in this way before. Elaborating she explained:

> I'm old enough where, when I was in school, there was no such thing as a computer, and so, when I had to write papers, and even when I was in graduate school, when I wrote, [or] we wrote manuscripts, they were written by hand numerous, numerous times before anybody sat down at a typewriter and typed them to make a document.

I began to realize this may have been an experience many adults needed to overcome; however, in light of on my own transition and comfort of completing a document or essay without the need of a hand written draft was easy. The personal computer had made document creation simple for me and I initially had a challenging time recognizing her struggle. In reflection, Deneb shared she would never want to roll back to her pre-computer days. Deneb explained, "when I first learned how to do word processing, it was in Unix and so that meant that every formatting change required a separate line with a command on it." I began to realize the challenge this had been for her. As a current graduate student myself, needing to create a dissertation by way of a new medium of document creation would be very challenging. I thought to myself, I would not want to use only an iPad® to create my dissertation and be forced to use a touch screen and not use Microsoft Word®. Learning to use a computer was a challenge for Deneb, "I didn't go to a class [to learn]. I think people that had been using the system helped me get started and then most of it was self-taught by using the manual."

A different learning challenge surfaced for Mathew in his experience and struggle of attempting to build furniture by way of "bad IKEA® instructions." He did not elaborate, though I imagined he had to assemble a product, like a dresser, with only the use of thoughtless printed instructions, which were missing a few steps and he had no other guidance. For Fr. Lucas, his challenge was beyond the realm of technology. He shared, "I suppose the most challenging experiences I've had have been trans-cultural

experiences." Before traveling abroad in the early '70s with the Jesuits, Fr. Lucas only knew his "American Culture." As a young man placed in a new and different culture he was presented with a language barrier. Though he had been educated, taken some French, but did not know Spanish, when Fr. Lucas first ventured to Mexico with the Jesuits. He reminisced on his struggle, "you know, I'm never going to be a poor person because of the education that I have, but being reduced to, you know, 'How-are-you?' And then not being able to understand the answer was a hugely difficult, but also a challenging experience." Mathew and Fr. Lucas each recalled a different learning challenge; although different, the similarity of each experience was the fundamental struggle to understand another person – author or culture – in language. The author of the IKEA® instructional manual was not clear and Mathew could not assemble a product easily, whereas Fr. Lucas was challenged by the language difference and could not comfortably communicate or establish a relationship with non-English speakers in Mexico.

Almost all my conversation partners were able to share a clear memory related to a challenging learning experience. A connection that surfaced between the differing stories was in understanding someone else's work, language, or a technology – as I already pointed out with Mathew and Fr. Lucas. Regardless of the content of each struggle, I wanted to continue conversing of memories past and transition to technology. I was eager to understand how technology seeped into the life of each conversation partner, and asked the guiding question, "How did you come to learn about technology?" Similar to my question on text, this question on technology shifted the direction in each conversation. Mark reminisced, "I guess a pencil and paper are technology, [laughing] but like computer type stuff… my freshman year in [college] '92 I had an eight-inch

black and white screen on a Mac Classic II®." Then thinking even further back he mentioned a summer camp as a kid where he was introduced to a computer, in addition to in school "…my sixth grade year we had some computer programming class, but it was mostly like you draw a Christmas tree out of like Bs or something like that." Mark was one of the younger research partners I met with and was introduced to computer technology at an earlier age.

Mary's earliest memories of technology were also emploted with computers, for "every time I think of technology I can't help but think of when I was introduced to computers. And the first computers that I was introduced was those Apples®, I don't know, maybe in middle school." Ironically Mary had an Apple® computer on her desk during our conversation as well. She continued, "…it wasn't until computers that I can even remember hearing the word, 'technology' as a kid. Computer equals technology… it's like introduced in school. You know? 'This is a technology advancement, it's called a computer'." We talked about Velcro® shoes as an alternate example of technology in the past, yet laughed together as we were in agreement that computers "automatically mean technology" to both of us.

Mathew explained his prominent introduction with technology occurred before his doctoral studies in the late '80s early'90s. He recalled "[i]t was just a nice tool at the time because technology was really just a computer; there weren't nice digital recorders, or affordable… video cameras, and all of that at the time." Mathew found the "real attraction of computers" was editing papers in graduate school. Previous experience typing papers on a typewriter reminded him of the hours he spent retyping final copies over again; he elaborated how, with a computer he could "make many mistakes [and] it

didn't matter… you can go back and correct things, [it] was wonderful. So actually my introduction to technology is pretty simple it made it a lot easier to write papers." The spirit of providing meaningful and simple solutions for people by way of technology attracted me to computers as well. Beyond the typing aspect of writing papers, I found the grammatical and spelling assistance a computer provides to be extremely valuable for me. Each time a computer program recognizes a grammatical or spelling error I have made, contemporary programs like Microsoft Word®, Firefox®, or Internet Explorer® will underline the issue in question as green or red, and present me with an experience to learn instantly from my mistake.

Martha recalled an experience, when "I had an old Sony® reel-to-reel tape recorder and reels of tape- that was a hoot. I remember my first cassette player, which I bought in Europe and I could walk around in The Alps gathering information from Romance-speakers, that was really exciting for me." As both of us imagined this vision we found amusement in light of recording equipment available now. Similar to my research and recording data with others, Martha carried out her research in the linguistics space when Sony® created one of the first mobile reel-to-reel recorders. The ability to be mobile and travel to distant places and record other people on audiotape was a freeing and autonomous experience for Martha. Looking at my pocketsize Olympus® digital voice recorder that rested on the table and recorded our conversation, Martha explained mobility in her past was very different than now, back then "…I probably had 12 big old fat [D] batteries in it [my audio recorder], but it still makes such a hilarious convenience to me at the time." In recognition of past experiences with technology as shared above, each research partner and I had opportunity to recall previous events in light of present

technological encounters, and entertain how we learned and may continue to learn new technology skills in the future.

Extending the conversation from the past, to present time and space, I asked each conversation partner "how do you apply this understanding [of technology] in your work today?" Mathew applies his understanding of technology inside and outside of the classroom focusing on his use of technology as an instructor. Technology is essential to Mathew's instruction where his teaching schedule is configured in four and a quarter hour sessions where students are only present in live classroom every other week. Mathew explained,

> …in the live classroom setting about the only thing I'll use is sometimes a webpage for our course website… [a]nd I have a scanner [which I bring to class] so I have groups doing activities and when they are going to do some sort of presentation, [they can quickly scan pictures and] it goes onto, basically the screen [for all to see].

Mathew does have a use for technology within live class sessions; however, the priceless benefit of technology on his instruction is evident beyond classroom, where it is "…outside of the regular classroom I'm using it a LOT." Instead of spending precious live class time on lengthy presentations and instruction, "I deliver those presentations with the use of audio books and handouts that students download, so they have that." Over the years he has created a plethora of multimedia presentations that students have access to outside of class and in-between live class sessions. Mathew's instructional process has created rich meaningful learning opportunities for his students. His teaching techniques are contemporary and address many needs of today's learners. He shared a story to provide more details:

> I am teaching a class called cognitive psychology this semester for all our first-year students and they get presentations on the concepts that were learning about

> as an audio book, but they get a separate audio book, that goes through learning about how to read research. So I have a series of audio books, which I call 'research alouds'. This is one article that I have taken apart [presenting the article to me]. They read the article on their own, but I am pointing out key things in the article bringing out some key concepts in going through that. So they're getting a presentation on whatever is the theme of the next class - could be something like cognitive load - but they're also getting some presentations on some research articles… so that is one way I use it [technology] to create multimedia experiences so they can be getting basic instruction outside of the live class.

I was impressed and complimented him on the multimedia presentations each of his class websites provide. Mathew's websites are a space for student discussion to unfold and they "have some pretty extensive [discussions]." Each course Mathew teaches has a dedicated website where he guides learning outside of class. Each website organizes and hosts three essential learning areas: pertinent presentations for downloading, hyperlinks, and the discussion space. These websites are a place for Mathew to guide and stay informed of student learning, as he explained: by "following their discussion I see what they really understand, what they don't, [and also identify] what are just some things that need to be followed up in class." Mathew's insightful use of technology has changed the way he teaches creating a "hybrid class" with hybrid learners within School of Education's Learning and Instruction department.

Deneb also finds technology and her work inseparable for "just about everything that I want to do requires a computer…whether it's just doing email or almost all the instruments that I use now in the lab are connected to computers." Deneb emploted her technology use through her role as researcher, focusing on technology used within her labs and learning to function new instruments. Though she has increased her abilities through her experience over the years, she explains there are times when "I do have a lot of trouble with instrument software and part of it is because the documentation is very

poor and whoever writes the manuals isn't writing them for people that have never used the instrument before." Deneb is not alone in this challenge of attempting to learn from the old paradigm of documentation, and Susana attested to this point as well.

Susana attempted to apply technological elements in her courses and instruction but explained how time limitations often conflict with other responsibilities. In Blackboard® she sought to utilize additional features available in the online space that she had not yet learned, Susana explained "you try to do your best to learn it, [but] I mean, I don't have time to [always] do one-to-one learning of things." She attempted to use a downloadable user guide and online wiki instructions to assist in learning Blackboard®, but "[w]hen I have to follow instructions I usually go crazy, I figure it out at the very end but I go crazy. I go crazy because it's all over." In times when she has sought guidance from online help to assist in her technology struggles, she feels as if she is missing something. She considers perhaps it is a language barrier, and attempts to grasp the information from a different interpretation reading the English, Spanish, and French versions, though still she often finds herself confused. After years of struggling and attempting to learn independently from written instructions Susana shared,

> …I don't think that technology is that difficult, I also think that technology lately, instructions are really given to people [created for individuals] who are, much younger people, who were born using technology, in a way. So there are things that they [technical writers] don't even tell you, because it is obvious that you should know that… assumes, you have gone through technology 101, 102, [et cetera].... So those are things that are challenging in learning.

Susana's experience accessing content online and attempting to learn has been a challenge. One way she overcomes this challenge is working with another person individually. For example, she receives one-on-one technology support from Ken in CIT. Susana explained, "Ken is fantastic here [at USF] for instance. I sit with Ken, and he is

always kind of like, works like a Valium®, [laughing]. He should be recommended when you are like 'aahhh!' nothing is working!" The reality of working in a profession bound in technology is the constant obstacle of finding a way to overcome the current challenge. Perhaps the path to success is alongside a support specialist person - as Susana shared.

Kelly had a different view in figuring out how to overcome technology issues. As an adjunct faculty in addition to a technologist, Kelly created innovative uses of technology in the distance learning space. She presented successful multimedia learning experiences for her online students; although, the creation of each multimedia lesson coincided with many technology challenges. She explained how technology presents obstacles in her work all the time,

> …it's important that people understand that's the culture of this [technology]. All the time my code doesn't work. All the time my computer doesn't work. All the time my video doesn't work. All the time, all the time, all the time. How much time do I spend a week on trying to figure something out or make things [the technology I use] work, I don't know, maybe 30% of my time, maybe 40% of my time, after 15 years of doing this fulltime. That's the nature of it.

Kelly's instructional style is similar to Mathew's where she presents learning opportunities online by way of multimedia experiences. Kelly is in a completely different situation from Susana's story, for there is often no live person to turn to for support. When Kelly is confronted with a technical issue she usually will "play with it and get it to work." For Kelly, her abilities for innovating in technology equates to solving her own problems regularly; she does this by occasionally turning to online forms or an index, where some aspects may be explained, though solutions usually surface as she appropriates each experience. She explained that "I read technology well, all I need to do is bam, bam, bam through it, you know, because that's what I've been doing for [years]." Kelly painted a clear picture of technology benefiting her work and her learning, for in

the struggles of using technology she learns more about herself, technology, learning, and how to create meaningful experiences for her students.

Conversations evolved from interpreting technology and learning in our present, to imagining beyond summer 2010 towards a new future of technology and learning. Guiding each conversation in this direction I asked research partners, "how do you envision technology used in teaching and learning? [Depending on the response and conversation that surfaced, I may have also or instead asked] How do you envision learning in the future?" Kelly, Fr. Lucas, and Mathew all mentioned mobile computing as a learning benefit to emerge in the near future; however, each participant had a slightly different interpretation in how mobile computing and learning may unfold. Fr. Lucas explained, "I think five years from now everybody's going to have something that looks like an iPad® in their hands, without a doubt." Mathew elaborated sharing that "if all students don't have computers… they may not all have iPhones®, but they are going to have an iPhone® or something like it, a phone with the android operating system that allows you to have multimedia and all that on it." Kelly is also in this same space clearly and stated "I am not learning anything on the web anymore, it's all mobile." She does not think the web is going away, but rather instead of students, faculty, and individuals utilizing desktop computers to access the Internet, people will get access by way of small laptops and mobile devices outside of their house. She explained:

> [e]ven here on campus, when you go into the cafeteria, when you go into the student area, take a look around at how many people are - in that moment - on their laptop. And my guess is they come in and get on the laptop in the classroom. There will still be, because of the size needed, be some of that. But, I think moving forward [computing and learning] it's not going to be on a desktop. It's going to - some of the time be on the laptop, and more of the time be on a handheld device of some sort, whether that be a mobile or an iPad® type of device.

I agreed with the mobile computing trend. As of 2010, there are two current roadblocks that limit the capability, bandwidth, and framework on mobile devices in streaming rich Internet content like multimedia videos. Until mobile phones can stream interactive multimedia, similar to a desktop or laptop by way of Adobe Flash®, Microsoft Silverlight®, et cetera, mobile computing will continue to be limited. As research partners agreed, it is only a matter of time before this technology roadblock is hurdled, until then desktops and laptops are the standard and present platform that provides access to interactive multimedia streaming videos.

Each conversation partner and I slowly created an understanding of text, learning, and technology together as we shared our ideas, stories, and interpretations. During our discourse of technology and learning I shared my interests in learning by way of multimedia instruction with each conversation partner. Conversation shifted as I explained to each person, "I wanted to show you something that I created to assist in learning… to assist faculty and students with learning how to use [technology] equipment within the classroom." On my laptop I presented to each participant a recently configured multimedia video tutorial I created that reviewed smart classroom technology at USF. The interactive video segment was less than ten minutes long whereby partners and I transitioned from conversing about future directions in technology at USF to viewing one example. Following the tutorial presentation I asked each partner, "where do you place yourself in this video in terms of your own learning?" Depending on the conversation partner's response, I may have also asked "how do you see multisensory media like this being part of your own learning and teaching life?" These guiding questions opened conversations to new directions I could not have fully anticipated. Though I had my

guiding questions ready, often it was initial interpretations and a response by my research partner who led the post video conversation.

After watching the video with Fr. Lucas, before one of my guiding questions could be asked, he shared with me,

> …this is great; this is very straight forward; I like this very much and stuff like this where it moves along… what's great about this is you can stop it, you can replay stuff if you don't get it but you don't beat it to death. I've been through way too many of these things where they go so slowly. This is great, this is clear, straightforward smart stuff, I like this a lot.

I agreed with Fr. Lucas and mentioned to him, that I too found it "…helpful on a variety of levels; one level specifically being for the professor who is adjunct and is coming in for the first day, and [may question] 'well what room am I in' and 'how do I use the technology in here'?" As our conversation unfolded Fr. Lucas explained he would use this multimedia video in a "heartbeat" although then elaborated:

> I'll be candid with you, I will go and play with the room first because that's how I learn. My sister is constantly screaming at my brother-in-law and me because we're both just tinkerer's… we'll play with something until we figure it out and then when we get to the point where we can't figure out, God forbid you go to the manual, you call up one of your buddies who knows the program and say 'How do I do this?

I understood Fr. Lucas's approach from his story, and have utilized similar strategies in the past. I have asked friends or colleagues for assistance before I ventured to the traditional manual for help; however, we are in a time where technology and learning are evolving and multimedia, video, and mobile communication are challenging and changing the way people are learning and getting help.

Deneb viewed the multimedia video tutorial with me and was already familiar with many features reviewed. She had previously mentioned how she preferred written information and reading traditional text to viewing multimedia videos; however, she

explained there are times when viewing a multimedia video can benefit her learning:

> I think, in cases where there is a lot of manipulation of instrumentation required, that it would be really useful to have something like that, to be able to see where the connectors are, which connector goes where, and what kinds of possible troubleshooting or solutions there might be. So, yes, I definitely can see a need for that and it being useful to me.

To further explore this concept, I posed a scenario to Deneb. If she encountered a learning need where written text did not provide enough information or a clear explanation, then could multimedia videos serve as a meaningful learning alternative? Reflecting on her past, She thought of a time when a similar multimedia experience had assisted her in learning:

> [w]hen I go to the Antarctic, one of the things that we have to do is - if we want to drive any of the vehicles down there - you have to go through a training program and, before they do the actual hands-on training, we do have to sit down and we have to watch a PowerPoint® that does exactly that. It shows you the inside of the truck engine and where the different parts are that they've modified so that the vehicle can drive in the cold weather. So, yes, I guess I have done that. And that's helpful because I don't drive a pickup truck at home and so, being able to see the inside of it before I have to go out in the cold and actually do the practical part of the driving… I already know what things look like and where things are located.

Our conversation transitioned from her experience back to the context of classroom technology, as I shared my original idea that led to the creation of this smart classroom multimedia video tutorial. I imaged instruction being placed within a visual format and available online, where I could demonstrate a concept by way of video and audio instead of explaining instructions to each new or confused person time after time. Plus, if a person wanted something to review at home, all that was available for reference was a – flat, downloadable, words on a page – written text manual.

Kelly related to the multimedia learning experience I had imagined in the early 2000s. She explained her own path of realizing the power of multimedia video and web

learning as it unfolded in her own instruction as she progressed in technology from images to video,

> …what happened was the images [I'd provide] still don't say anything. So I started including PowerPoint®, where I'd have text and images and audio, and then the learning took place a little bit better. Then along came video… if I could show something quickly - that a person [my students] can do… [and] it became possible with the web… to incorporate more video then learning took place even more.

In view of Kelly's experience within the technology, distance learning, and multimedia space, reflecting on the multimedia tutorial I presented to her, she shared with me, "I thought it did exactly what it was intended to do, and I think it did a great job. I think the strength of it was a combination of the video and then the ability for people to be able to spot the one point" within the Table of Contents that interests them and plays the video from there. "I thought that was very strong. Because then people can [say to themselves], 'I don't need to watch the whole thing, I just want to go to this piece, [or] I just want to go to that piece.' I think that it's a good product. I think it's perfect." Though Kelly found this classroom technology video to be meaningful for her, not every conversation partner felt the same way.

Following my review of the video with Mark he admitted, "I don't use PowerPoint® ever," and he does not use technology much within his instruction either. His classes are discussion based and he rarely presents any media for his students in class, so viewing the smart classroom tutorial for its content was not meaningful for him at this point in time. As my conversation with Mark evolved I asked about other areas of learning, specifically what if the subject matter in the video had reviewed a topic of interest, like a new area of technology he needed to use within his work, how would multimedia benefit him? Mark explained, "I'd definitely watch that. Up to 15 minutes

that's wonderful. A short video is great. Like if it was over an hour I wouldn't be so happy. But up to an hour I'd be okay. Fifteen minutes would be spectacular." Mary was also not sure of how this smart classroom technology tutorial would benefit her directly, for she takes advantage of USF's CIT and has meet with Ken – the Graphic Media and Training Specialist. Although, she was not sure if she would use this specific tutorial, she did explain, "I like the multisensory presentation of information. I really like it a lot. That's probably why I like movies." She also could imagine this classroom technology tutorial benefiting others in the USF community.

Mary serves USF in an administrative position in addition to adjunct faculty and she realized this is unique; not many adjunct faculty members are as familiar with campus, or have the same access and relationship to CIT as her. Though already familiar with the USF Level 1 Plus smart classroom – the content of the multimedia video – she did find the tutorial a meaningful learning experience. She explained, the use of "picture[s] makes things much more clear… [the] video specifically, would it help me to learn? Absolutely." Before we had started to watch the video I asked Mary if she used the Keyspan Presentation Remote® – she had no idea what I was talking about. I attempted to explain more, articulating this was a remote she may have used as a wireless mouse or to advance slides in a PowerPoint® presentation within a USF classroom, however, she was still not clear if she used the device. After viewing the tutorial together, Mary recalled my question and said "you asked me did I use that thing [the Keyspan® remote and], I was like no, then I saw a picture of it, I'm [thinking to myself] like oh yeah I do!" She continued to explain, "you know so that's a perfect example" of how this type of medium benefits learning, only with visuals did the context resonate with her.

Similar to my pilot research, the multimedia – smart classroom – video tutorial was well received by each conversation partner in different ways. Before I asked Susana one of my guiding questions, she shared with me, "[although] it's almost impossible to really have everything, if I look at that [this] video, it's very, very clear and very good, of what you will encounter within a smart classroom; it's good." Not all of Susana's post video thoughts were praise. She shared frustrations of using classroom technology in the past and raised the question, "how do you… carry this video [with you] here when you are in the classroom? You'd have to start taking notes to try and remember [everything, especially if] you don't have a little handheld." Susana was correct, if she wanted to watch the video within the classroom, she would need to bring her laptop with her, or take notes while watching the video and bring those with her to class.

Martha brought up a concept in our conversation about extending this multimedia tutorial to students, in addition to faculty. I had considered this possibility when creating the tutorial too, though listening to her story solidified the option. She explained, "well I think this is a good thing. Why wouldn't you want students, just freshmen, just say 'you know you're going to be making presentations in class, you know this is something you should read.' I mean, how's that for a slip? [laughing] I mean something you should view." Students are familiar with technology, though using their computer in combination with a projector and presenting in front of class is a new space for many of them. Having this tutorial online and available for the community would be meaningful for all USF. Martha agreed explaining, "yeah, I think it would be good to have because they [students], they're good at computers but the presentation mode is something entirely different." If the information is available online and accessible for students and

faculty there is no reason for not being prepared; anyone who enters a USF Level 1 Plus smart classroom could learn how to use the equipment with the assistance of this multimedia streaming video tutorial.

Summary

Presented in Chapter Four is a shared journey of past, present, and imagined learning experiences in light of technology. The research category of text explored beyond the traditional paradigm of words on a page, and a new interpretation of text emerged to include pictures, imagery, multimedia video, and beyond. Participants reinterpreted past and present learning experiences and challenges, followed by imagining new possibilities to learn by way of multimedia video technology. Conversations explored how technology and multimedia video tutorials may present new learning opportunities for the community, and encourage relationships to form.

In Chapter Five I continue this narrative but from the perspective of the theory. The primary voice in Chapter Five is mine integrated with critical hermeneutical research categories text and mimesis, and the four subcategories: metaphor, m_1, m_2, and m_3. I draw upon the above narrative in addition to further comments from participants not recorded in this chapter. The primary purpose of the narrative presented in Chapter Four was to set the stage for the theoretical analysis that follows in the next Chapter.

CHAPTER FIVE

DATA ANALYSIS

Introduction

This Chapter, Data Analysis, is configured in light of conversational data presented in Chapter Four and emplots a new narrative beyond literature, actual events, and research conversations. I discover the plot of Chapter Five as critical hermeneutic theory weaves with data gathered during research conversations and creates a new narrative in the form of a third text. The shared story I configure emerges within the two critical hermeneutical research categories of Text and Mimesis and four underlying subcategories: Metaphor within the category of Text, and $Mimesis_1$, $Mimesis_2$, and $Mimesis_3$ within the category Mimesis. By way of the interpretive process and narrative function, I attempt to reach new understandings as collaborative voices of research partners and I reconfigure a new text.

Text

Text is critical in the context of interpreting how we – each collective individual – learn. Humans use text to communicate, document information, and learn across space and time. Ricoeur (2007: 43) explains text within hermeneutics as "…the theory of the operations of understanding in their relations to the interpretation of texts." In other words, to interpret a text is the attempt and process to construct meaning by way of another's intentions. To read, see, and experience text and then construct meaning for oneself is the hermeneutical process, and as Ricoeur (2007: 43) indicates is the "…working definition of hermeneutics."

Research conversations attest to a deeper understanding of text beyond the realm of printed words. Kelly explained:

> [f]or me text means words and images; for a lot of people text means words. In theory text is both words and images, they can be still images, movie images, however it is that we communicate; however it is that we share and reflect with each other. And I like to look at the broader use of text, as a way to interpret and find meaning and understanding in relationship with other people.

I interpret text in a similar fashion and create multimedia videotext tutorials, as a contemporary example of text fixed beyond words on a page and the paradigm of reading. Kelly transitioned from discussing her views of text to interpreting a multimedia videotext tutorial with me. This provided Kelly and I an opportunity to see, hear, and be in the presence of a multimedia videotext played through a laptop and to continue our conversation post experience.

The presentation of multimedia videotext is drastically different than traditional text as words on a page. The context of multimedia learning provides additional opportunities to access information by experiencing words in conjunction with images, video, and audio, presented harmoniously. Ricoeur (2007a: 167) explains a challenge in the interpretation of traditional text, when he asserts,

> [a]s the model of text interpretation shows, understanding has nothing to do with an immediate grasping of a foreign psychic life or with an emotional identification with a mental intention. Understanding is entirely mediated by the whole of explanatory procedures that precede it and accompany it.

In other words, when it is difficult for an individual to grasp an understanding of technology by way of traditional text, multimedia videotext is an alternative learning opportunity in light of all previous and imagined life experiences unfolding in the present. Multimedia video provides visual and auditory support to explain and show an intended meaning, or in the case of my research, the functionality of specific technology.

Mary agreed with the difficulty to learn technology from traditional texts, "like a pamphlet that is small, [and] bound." She explained, "…those instructional guides for technology, pieces, hardware… they figure that there's somebody in the house that will figure it out, I don't know what they think, but they're a little difficult to follow." To articulate this point Mary shared a story about her new TV:

> [t]hat flat screen I still turn it on just fine and the cable guy came to set it up and it's a really beautiful picture but once in a while it gets on a wrong setting and its like, 'nobody touch it, only change the channel, don't touch anything.' Because it gets on a wrong setting and it's no longer the picture… I swear I can't go back. You know it's like 'don't touch it! The only thing you can do is turn it on or turn it off, turn the volume up or down or change the channel, do not touch anything else on it.' Because I never feel like I can go backwards, once it's set… if you dare hit one [unknown] button then nobody knows what to do and it's frustrating to me.

Mary laughed and confessed to me that when she is confronted with a difficult technology situation and does not have a clear answer, she avoids it. To learn independently from paper pamphlets confuse and frustrate Mary; she shared, "…my own way of responding to my lack of confidence in my ability to learn [technology] and to figure things out [by way of reading only]… is don't touch it!" We laughed together and she confirmed how it is easier to stick with the technology functions she knows.

Mark's interpretation of text was initially difficult to identify. He explained text in relation to teaching:

> [t]he way I teach usually, is talking about how, when you really understand something what you do is, you know the parts in relation to each other, in relation to the whole, the kind of old definition of wisdom… the letters are related to each other to form words. Words related to each other to form sentences. Sentences related to each other to form paragraphs. Paragraphs related to each other to form the whole text… a text is a way to have a conversation with people separated from you by like time and space.

Mark and I explored this concept further as we discussed texts that assist him to learn. I wanted to challenge Mark's temporal thoughts on text and move beyond traditional written text to consider a visual text. I explained how I create knowledge for myself via the medium of text, whereby information is not dynamic – as it is in conversation – and how textual information is one-directional, whether as images, words, or video. I asked Mark, "how do texts assist you in learning?" and he asserted that text is

> …one way to learn something, for the most part, is starting out with experience. Like in theology, mystical kind of stuff are still kind of experienced. If you read the scripture or you think it's the beginning of knowledge for religion or something like [that], you still have to read the scripture. Then the next thought is once you have your experience you have to understand it's, the first step [of] experience. The second step [is] understanding… [a] bridge between an understanding and experiences is a question.

Our conversation did not unfold in a direction where I understand how texts assist Mark to learn; however, once he related text to a personal hobby I begin to understand. He explained, "I like design and quality and craftsmanship so I'll read stuff about mostly clothing, but [I'll also read about] like woodworking, leather working, architecture or something like that." The conversation shifted as we investigate one of these concepts – craftsmanship – in more detail and the use of pictures as text to assist in his learning process to understand joint construction. Mark shared that

> …to see the diagrams of how the different constructions are done, it was helpful because sometimes a table can be so complicated you don't know what you're looking at exactly… the pictures are very, very helpful.

Ricoeur's (2007a: 109) explains text in relationship with the world, for each affects the other, where text is connected to "the subjectivities of the author and the reader. We think we know what the author of a text is because we derive the notion of the author from that of the speaker." However, each individual interprets what the author intends based on

who we are and the space in which the text was created. An author creates written text to convey a message and in the case of education, as in the woodworking example, when an author chooses to include a picture or visual, the text becomes rich with additional opportunities for the interpreter to access the intended meaning presented by the author. As the conversation with Mark unfolded, he agreed that visual texts assist in his own learning process.

Individual interpretations of text vary in each conversation. Fr. Lucas explained his views of text by way of past experiences that influence his present:

> I suppose, as a visual person, I've come to broaden my understanding. I mean, I came out of an old-fashioned classical education. I was sort of in the last gasp of the old wave of literally classical education where you learned Latin and Greek in high school and languages were immensely important… about half of my major was in writing classes, so I came to really value precision of language and clarity of text. My writing teacher, his favorite word was 'loose' and if something was loose, you suffered for it…. I've become not just a person of the word, but a person of the image, I have certainly come to see text… in the broadest sense, not just of narrative but of the sense of the conveying of idea of passion, emotion, interest, knowledge; I see that happening throughout the visual world as well….

Intrigued with Fr. Lucas's thoughts of text, our conversation drifted into how text may assist in the learning process. Fr. Lucas shared:

> [a] lot of what I have to do, as an interpreter of art, and as a maker of art too, is to bring my own experience into this weird kind of hermeneutic… interpretation, and that's one of the hardest things to teach the students about because there's either a right answer or a wrong answer, you know, that's the way we're educated, when, in fact, there frequently is no right and no wrong answer. There are just different approaches that come from different people's reading of the text.

Experience has led Fr. Lucas to appropriate meaning with reference to text, and led him to new interpretations of texts he had previously created in relationship with art, manuscripts, and beyond. Put another way, Ricoeur (2007: 56), explains, "understanding is not concerned with grasping a fact but with apprehending a possibility of being.... To

understand a text, we shall say, is not to find a lifeless sense which is contained therein, but to unfold the possibility of being indicated by the text." Ft. Lucas shared that it is a challenge to teach an appreciation of texts beyond facts to undergrad students,

> …I always push my students towards taking that first moment of wonder, which is the beginning of philosophy, it's the beginning of the aesthetic experience. I would argue it's the beginning of religious experience too. Taking that moment of wonder unfiltered and, you know, when you stand and you're knocked over by how beautiful something is or how terrible something is or how achingly true it is… we begin to interpret the text. We reflect on the experience and then if we're really serious about understanding - standing under the experience - then we see what other people have to say…. That's why we go to see how other people have reacted to this work of art, to this piece of literature, to this kind of experience. And I think if we're really awake, then we're able to go from that step of getting the underpinnings to seeing what my experience brings into the equation. And then… I learn about what it is to be a human being in this circle… being ready and perhaps even more attuned to the possibility of that experience opening up for me in a different way.

In his narrative, Fr. Lucas articulated a 'moment of wonder' similar to Heidegger's being-in-the-world (Heidegger 1962[1927]), where interpreting texts provides opportunities for reflection and, in turn, possibilities for new understandings. Ricoeur (2007: 56) expands the disclosing opportunity of interpretation as a "…revelatory experience, a link to reality more fundamental than the subjective-object relation." The human condition, or "standing under experience," as Fr. Lucas explained, is an essential phase of learning.

Fr. Lucas described each interpretative experience with a text as a continual opportunity to reinterpret current understanding that may lead to new learning. Distanciation is another way to think of this concept, whereby Ricoeur (1988: 147) asserts "…on the one side, change, where one occurrence comes to replace another; on the other side, the atemporality of the act of thinking." By way of distanciation an individual could form a relationship with a text that evolves over time; moreover, as I

evolve so may my understanding of the text. Multimedia enters this discussion of text in the distinction between text as printed words and text as any experiential fixation; written words, pictures, graphics, video, and beyond. Multimedia videotexts provide additional multisensory opportunities for the construction of meaning independent of conversation. In the context of multimedia videotext and learning Mathew explained,

> …what I'm thinking about, is a little less the form, and [more of] how I have to take it in [and interpret the text], through my eyes. [Or] …there are other kinds of what you may be calling text taken in [interpreted] through my ears - someone's narrating the story. So for me the crucial difference will be how one is taking it [the information] in.

Regardless of the medium an author uses to fixate an intended passage or message and create a text, by way of multimedia or beyond, writing calls for reading as video and graphics call for viewing (Ricoeur 2007a: 107). In both cases there is overlap and an inevitable call for interpretation.

To create a text for another "…is a realization comparable and parallel to speech, a realization that takes place of it and, as it were, intercepts it" (Ricoeur 2007a: 107). Although, not all texts are clear, multimedia may provide opportunities for a richer experience. Deneb reflected on a challenge she had attempting to learn by way of reading a manual, for "I do have a lot of trouble with instrument software and part of it is because the documentation is very poor and whoever writes the manuals isn't writing them for people that have never used the instrument before." Often she is not easily provided support from the vendor beyond the manual, "…so I do find that I feel like I'm battling software quite often." In this situation multimedia videotexts may provide an alternate opportunity and explain the vendors intended meaning. Ricoeur (2007a: 107) reminds us text does not take the place of dialogue, for "[d]ialogue is the exchange of questions and

answers: there is no exchange of this sort between the writer and the reader. The writer does not respond to the reader." Though traditional text does not offer writer/reader exchange, multimedia does present a form of question/answer simulation with reference to a reader/writer exchange. Further, unlike traditional text, multimedia is a dynamic medium with potentials for new developments in this technology-based text not available in written text.

Metaphor

Research partners often explored multimedia text in context of metaphor. Ricoeur (2004: 156) explains metaphor as "the outcome of a debate between predication and naming; its place in language is between words and sentences." Narration and text, configured in metaphor as "eyes and ears," for Mathew, provided multimedia videotext a context, referencing two modalities that may absorb new information during multimedia learning. Susana explained a benefit of multimedia videotext in "…the image and the voice, it would be like a one-to-one meeting with someone. It already gives you two different things." These two things, "image and voice" that Susana mentioned represents a dramatic difference in multimedia videotext from traditional text, whereby multimedia offers additional opportunities to create a relationship with the author/creator not available in written text.

Multimedia video assisted Kelly to create meaningful new relationships with her distance learning students – I am aware that I have used the quote below previously, but I take liberty to use it again to make the point. Kelly explains:

> …about 10 or 12 years ago I started incorporating screenshots and images into [text] and I saw that the images enhanced the learning process, [and students would say] 'oh, I see what she means.' Then what happened was the images still don't say anything. So I started including PowerPoint®, were I'd have text and

> images and audio, and then the learning took place a little bit better… along came video - originally very short videos, 30 seconds, 60 seconds, QuickTime®, big hog on a computer, hog on the internet. But if I could show something quickly, that a person can do… [and] it became possible with the web, based on different applications and technologies, to be able to incorporate more video… learning took place even more. And what happened was the inclusion of different modalities of text more and more brought the learning closer and closer to a relationship, closer and closer to almost a face-to-face encounter….

Kelly described the dialectic in human experience that requires relationship in order to learn; a relationship formed with the text or another person. By way of multimedia video, Kelly may present herself, her identity, and an experience online in a multimedia videotext for her students. Mathew shared a similar experience using multimedia and an interactive online discussion board within his classes. Though the discussion board space was not originally indented to assist in building student to student, or student to teacher relationships, it did. He mentioned;

> …the students have said that one of the huge benefits [of]… these discussions that we have [online], is they feel more connected to other students. Because when they [my students] are only coming to class every two weeks they may feel less connected, it's not really a normal rhythm.

In context of understanding oneself in relation to another, Ricoeur (1994: 18) asserts "[n]ever at any stage, will the self… [be] separated from its other." This "other" Ricoeur is referring to could unfold by way of another person, text, or beyond. To find meaning in human experience Ricoeur (1994: 21) proposes one "…belongs to the triple dialectic of reflection and analysis, of selfhood and sameness, and self and other." Kelly exemplified this concept in narrative as she explained meaningful relationships created via multimedia video and the online space:

> …now when I am at school and someone comes up to me and they're touching [me] or they want to hug me or they are standing right next to me; at first I was off-put a little bit, but now I smile to myself, because I know what it is, I know these are my online students. Because of text, images as text, video as text, audio

> as text, and the conversational modality that I can bring to that; joking around a little bit, asking them questions, looking for a response… exchanging text with me then through other uniform chat-type environments, the difference [in learning opportunities] is profound. In that the written [fixed] language is me presenting something to someone. And the expansion of text into language, images, voice, video, and… an interactive type of modality, gets as close as possible to in-relationship that text can be. And those students interpret that we're in relationship, if they didn't they wouldn't respond to me in person the way that they do.

The virtual relationships Kelly created via multimedia videotext online are examples of meaningful and contemporary technology based student and teacher experience. Multimedia video streamed over the Internet may enhance opportunities for distance and online learning, which could present individuals an alternative to the traditional learning and academic space. If dedicated faculty like Kelly and Mathew continue to provide thoughtful and comprehensive online learning opportunities for students on-demand, meaningful relationships may continue to blossom along with the transformation of expectations in instructional curriculum.

A non-linear linkage between relationships, multimedia, and discourse; both written and oral, is the human capacity of metaphor. Ricoeur (1976: 46) explains metaphor in the capacity that "brings an explicit and an implicit meaning into relation." Moreover, metaphor holds a generative rhetoric art form in language that may lead an individual to recognize similarities in relationship with another person, and arrive with new understandings (Gadamer 2006: 429). Beyond language, metaphor also holds generative possibilities whereby the "…non-verbal double-meaning" in symbols hold value within interpretative theory and the process of understanding self (Ricoeur 1976: 46). To analyze text and metaphor in light of self-understanding, Ricoeur's threefold mimesis emerges.

Mimesis

Ricoeur's mimesis unfolds in language as m_1, $_2$, and $_3$, a threefold process present throughout each research conversation. Ricoeur (2007a: 217) explains, "…language is a sort of action. We do something by speaking: this is called an illocutionary act." Though each story is unique to the respective conversation partner, all narratives unfold in poetic fashion intertwining aspects of past, present and future – or m_1, $_2$, and $_3$ – in the initiative act of language (Ricoeur 2007a: 208-222). What follows is a new narrative that traverses and emplots mimesis$_1$, $_2$, and $_3$: the prefigured/past, the configured/present, and the refigured/future into this new story.

Mimesis$_{1, 2, 3,}$

Prior to my conversation with Martha, I prejudged faculty not using technology innovatively within their instructional practice as unaware of the new technological horizon rich in possibilities. Gadamer (2006: 299-306) explains how a person may evolve beyond a current understanding or obstacle in relation to otherness and the horizon that is always present and ahead. Moreover, Gadamer (2006: 304) asserts "[t]he concept of 'horizon' suggests itself because it expresses the superior breadth of vision that the person who is trying to understand must have." As I reinterpret Martha's story I realize she saw the horizon of possibilities years ago, and she still imagines grand opportunities in the future; however, she cannot appropriate new uses of technology in learning and instruction alone. Martha shared how she previously strived to be innovative in technology use though ended up frustrated from her repeated failed attempts. Martha had an innovation technology based idea and actively sought out assistance hoping to

collaborate with other departments and divisions to bring her concept to fruition. After numerous failed attempts her creative fire burned out, she explained:

> [w]hen I came here [to USF] I tried something, I wanted to do an electronic bulletin board for the Spanish-speakers on campus. Something that would bring together people in History, and there's some Spanish faculty in other department, in other schools, like the Business School and things. And I thought that would be enriching for our students. But that was sort of like pre-appropriate technology. And it was just an outrageous burden to get this Tablet *Trinico* for our students and other Spanish-speakers on-campus to work.

Martha elaborated on this experience and attested, to take a risk and attempt to be innovative by way of the University's technology leads to a dead end;

> I had just sort of mentally decided I just can't; it's one thing to be at an institution where everything is supported and made easy, and it's another thing to be someplace where you actually have to just push, push, push, push, push constantly. I don't mind some initial pushing, if it's worth it, give me the support if it isn't, say 'No' [laughs], you know, and leave me alone. And so I just sort of mentally – that for me was a moment when I thought 'I just can't,' you know, there are better ways for me to spend my time than fighting for the next generation of possibilities. So I really pulled back after that point, that for me was a big failure, a big waste of time and a big waste of effort. I still think it was a really good idea and it would've really helped, it would've helped make a community for all of us.

I reflected on this story in my research journal and arrived at a new understanding of how USF's ITS relates to faculty and provides guidance and support. I started asking myself, 'how does my division, ITS, relate?' I realize the Help Desk is available to assist with technical issues and question, and CIT provides technical training, but where is the cross-divisional embracing community? As a staff or faculty I can attend a CIT training, though training is one directional, where is the creative space for faculty and technical specialist to collaborate, converse, and imagine new learning experiences for our community? As the community provider of technical support and guidance, ITS can be active in relationship with the community, hold conversations to understand present and past

struggles as to discover the horizon of possibilities ahead. Gadamer (2006: 304) explains "[t]o acquire a horizon means that one learns to look beyond what is close at hand – not in order to look away from it but to see it better, within a larger whole and in truer proportion." The role of ITS in education is to look beyond the present and understand the community's mimetic learning and instructional past and future relationship in light of technology. ITS ought to be a champion of technology and serve the community in this evolving technological space.

As of 2010, I recognized there is no space, there is no dynamic medium, and generally there is only one-way directional information. All members of the community are invited to attend training in CIT, or call the Help Desk for support or guidance; however, in either case the result could lead to a dead end. If assistance is sought by way of the Help Desk, whereby a Client Support Specialist is available to respond to a technological need, the final response made by the support specialist may be 'I am sorry, but what you are talking about is not supported.' Similar to Martha's story above, this type of response may lead to a dead end. A new alternative to this fictional scenario, informed by Martha's experience and other stories in this research narrative, can be the creation of a new space for learning and innovation online; a space where faculty and staff who actively seek community may participate in conversations, create relationships and learn with one another by way of language, text, technology, and beyond. Perhaps a USF ITS online discussion board, and monthly learning technology lunch sessions may provide opportunities for cross-divisional relationships and interests to emerge from both in-person and online spaces. Ricoeur (1994: 30-38) explains the medium of language provides endless opportunities as one's identity may be shared with others in narrative

form; the exchange of stories and past experiences retold in the present give rise to new possibilities for the future where one may reinterpret oneself as another and provide a glimpse of a new horizon and way of being. In conversation, by way of "self-reference" (Ricoeur 1976: 12), any faculty may participate online via a discussion board, or in-person during a scheduled luncheon and share an experience, question, or intention in future technology use within a communal space. Faculty may reinterpret one's current use of and image new possibilities in technology use, instruction, and learning that may become meaningful and lead to appropriation.

Deneb touched on new learning possibilities when our conversation led us to consider our past learning scenarios as we challenged current learning experiences. Deneb explained:

> [w]ell, for me, learning how to write on the computer was actually quite a challenging transition… going from writing on paper to thinking in a way where you could just sit at a computer and type your document in, was actually, it was a challenge. But it was something that I recognized that it would… be ridiculous for me to sit down and write everything out and then sit at the computer and type it…

In reflection of this experience I imagined her transition from physically writing on paper to typing on a computer, which was a similar transition I too made in my own life; however, this transition occurred for me in grade school, where for Deneb it was in graduate school. Over the years I chatted informally with many faculty and adult learners who expressed a similar scenario and need to learn computers skills later in life; although, Deneb is the only person I recalled who explained her transition as "something I forced myself to learn." This comment revealed her work ethic, and in light of my previous support sessions with Deneb, she had always taken an active position in her own learning and technology use. When I provided Deneb technical support in the past she

asked in-depth questions and expected sound technical responses. Deneb is versed in technology and by pushing herself to adapt to technology in graduate school and beyond her current use of technology unfolds with similar self-motivation and dedication. She learns and appropriates the technology skills in relation to her job function and role as a professor and researcher.

Kelly has similar self-motivation qualities to Deneb and addresses a need for current faculty to recognize the active role an instructor, professor, and researcher must take in appropriating technology use. By way of her own mimetic process, Kelly explained this realization as:

> [m]aybe we need to use metaphor and talk about writers, or talk about creators, talk about designers, talk about engineers, scientists, et cetera. They don't take a two-week class… [or] a one-weekend seminar, and then know it all… it's a continual learning process. And that's where text and video comes in.

Video and text, multimedia, provide a new medium to demonstrate and explain complex technology operations in a meaningful way. To learn a new skill is difficult; to become proficient and eventually talented in a skill takes time, practice, dedication, and experience. To use technology is no different. Kelly's present process of learning to use technology unfolded as;

> …if I am writing a novel, I am going to be reading other novelists. I am going to be reading all the classics. I am going to be in continual learning mode. It's the same here. People need to understand that's the most difficult part of the learning process, is to understand once I learn this I am going to keep reading the classics; I am going to keep reading other authors. I am going to keep practicing…. It's this constant learning process when we create. And I guess that's one thing that we do incorrectly. We think with technology that we implement; we don't implement with technology, we create. And in all creative processes, whether that be cooking, singing [et cetera], in all creative processes, we continue to evolve, we continue to explore, we continue to critique, we continue to prepare, and to learn.

Current faculty expectations in learning and using technology need to be reconsidered. Kelly explained an essential capacity in learning that as I revisited her words I begin to emerge with a newfound meaning. In other words, to coincide with any use of technology within the educational space by any instructor, faculty, or beyond, ought to be a vow of dedication to the creative process of technology. As a creator of multimedia, to stay current in this space comes the requirement of learning new skills. Furthermore, within the educational space as technology continues to spill into instruction, any instructor who creates experiences for learners may want to reconsider technology use as a creative process in light of one's dedication to improve one's technology skills. In this context of learning new technology and the options available in 2010, the topic of text resurfaces.

Traditional written texts alone do not meet the needs of all learners. Education may be better served as a structured process that assists individuals interpret meaning from experience. Life provides many experiences for learning and interpreting, though not all lead to appropriation. Ricoeur (2007: 164) unravels a difference between appropriation and interpretation as concepts that are not synonyms, rather, instead, by way of interpreting an event one may appropriate; "[i]t lies at the extremity of what we call… the hermeneutical arc; it is the final brace of the bridge, the anchorage of the arch in the ground of lived experience." As the technical era of 2011 emerges, an appropriation of the lived experience in consideration of technology is the creation of multimedia opportunities as alternative and complementary mediums to assist individuals create meaning from texts.

From a technical support and educational standpoint, a learning medium is successful when a learner discovers ones own path to appropriate new information from

experience. Ricoeur (1988: 159) explains learning by way of experience as mimesis$_3$ "…the intersection between the world of the text and the world of the listener or the reader." This unique intersection of past experiences opening to new and temporal understandings require what Ricoeur (1988: 159) describes as "…the confrontation between [these] two worlds, the fictive world of the text and the real world of the reader." In this dialectical space the reader or learner may consider the persuasion proposed by an author in each text in light of one's own past, present, and imagined future, which may lead to an appropriated new understanding (Ricoeur 1988: 159-160).

To assist learners appropriate from past experiences to new understandings multimedia may be meaningful in this process. In reference to my own experience, past and present, and conversations with research partners I began to understand multimedia video assisting instructors and students individually and in their relationships with one another. Susana experienced a challenge with technology in the classroom and the instructions were sent to her via e-mail. She was informed by way of "this long e-mail with all these instructions, of all these things I have to do – 'so here is where it connects' [et cetera].… I print the e-mail and I [then] go to check all the things I have to do [and] when it doesn't work – it's impossible!" She finally arrived with a resolution when a student in her class assisted her. Susana explained, he quickly comes up and "says 'you just unplug and plug' and I say thank you Michael [laughing]. It's very easy if it doesn't work you just unplug and plug again and it works [which I learned thanks to Michael]… But [before that] we were going crazy." Susana shared a few meaningful experiences when students who also work for ITS have been in her class, and creating a relationship with technology savvy students has been beneficial in her own technology use. This led

me to discover the benefits multimedia video may hold in evolving students and faculty relationships, in addition to learning opportunities. Put another way, in light of technology used in the classroom for instruction, the multimedia video tutorial created for faculty to learn the usage of technology in the classroom could also be available to students. In conversation with Susana, I explained:

> [i]f this [multimedia video] was available for every classroom and at the beginning of the class [the instructor could say] 'hey there are these video's [available online], if there are any tech individuals in the class, if you haven't seen the video and would like to be someone I can call upon or anticipate a need that I may have [with technology] that would be fantastic. All the information is online, here's the link.'

In the creation of this smart classroom multimedia video tutorial, I invited faculty to participate in the development of their technology craft. As my conversation with Susana unfolded we both realized the benefit in extending this invitation to students. Martha also shared "…this is a good thing too… [I could] …say [to my students] 'you know you're going to be making presentations in class, you know this is something you should view." Students may learn to help themselves use technology and also be available to assist the instructor, and in assisting the instructor the relationship between instructor and student evolves.

To learn a new skill or task a relationship is present; a relationship with the self and relationship with another (Ricoeur 1994). Gadamer (2006: 303) explains the dynamic of relationships as "…the individual is never simply an individual because he is always in understanding with others…." Gadamer (2006: 347) continues as he asserts, "[a] conversation is a process of two people understanding each other." This necessity for community and need for others unfolds in a threefold mimetic cycle – student/instructor, instructor/student, technologist/instructor, et cetera. The relationships we form and

maintain in ongoing conversations with one another create our present understanding that is informed by the horizon of the past (Gadamer 2006: 305). Each conversation could evolve an individual's present understanding and future horizon in this dynamic relationship we choose to create.

In reference to the relationship Mary hoped to create in her technological craft, I asked Mary how she envisioned learning in the future, and she explained:

> Well I think people grasp information auditorily, visually, through their senses, [and] obviously from reading. I think those things will always be at play, you know, because that's just how we're designed as human beings. Yet those kind of basic functions on how humans grasp information will be expanded, I think technology has a capacity to… further expand in all the basic ways that we learn.

Mary shared this explanation before seeing the multimedia video tutorial prepared for our conversation. As I reinterpreted Mary's narrative I see multimedia learning as a modern attempt at expanding the basic ways human beings learn; in Mary's words, "auditorily, visually, through their senses." For Ricoeur (2007: 293) this basic human ability to learn and appropriate meaning unfolds in a poetic fashion, as "…any poetic work, narrative fiction arises from an *epoche* of the ordinary world of human action and of its description in ordinary discourse." Discourse may unfold in conversation, or in text, either way the learner references one's past and imagined future in light of the other. One way Ricoeur (2007: 295) explains this is in "the dialectic between the alien and the familiar, the far and the near, at the very heart of the interest in communication." When an in-person conversation is not available, and reading a text leaves the learner confused, multimedia may emerge. As new and innovative as the multimedia video seems, I realized all learning mediums are designed, as Mary identified, for the human senses; unless there is a paradigm shift in the way human beings interpret experience, multimedia is the

contemporary term and process to provide a multifaceted experience beyond static written text.

Related to multimedia, communication online is an additional experience where technology has provided new dynamic opportunities. Mary identified Skype® as an example of a newer technology she found valuable in the space of future learning and communication. She explained:

> I have to think of Skype®. Skype® alone – 'how do we talk to people?' – [this] technology totally changed that, particularly around time, space and distance. I just think that technology is going to just take our basic modes of collecting data. Whether we see it, whether we hear it, whether we read it, whether we touch it, whether we smell it, whether we taste it, whatever it is, however we go about collecting data, and you know putting it through our internal central processing unit, whatever that is… technologies [are] going to just continue to make all those things I just said even, maybe more explicit… [in] just ways we hadn't thought of [yet].

Skype® is an excellent example of a technological shift in real-time communication. Similar to iChat® and Google Chat® these mediums allow people to collaborate and visually see video of one another in long distance conversations. Multimedia also accomplishes this visual connection at a distance with streaming video. Multimedia streamed online may be live or achieved; however, live presentations may be achieved and in the end both options provide opportunities for review. The on-demand multimedia experiences provides learners the chance to review and interpret a textual experience again, where one could play, pause, review, and re-watch over again.

Multimedia video streamed online is a technology based experience that provides power-in-common, which may enhance learning in new multifaceted ways. In collaborative action, two or more people have the capacity to work online across time and space. Individuals may choose to join together in a common good for the betterment of

humanity and accomplish what one individual is not able to accomplish alone (Ricoeur 1994: 194-199). Being able to pause, play, and control multimedia experiences online transcends traditional learning and provides virtualized human interaction within an individualized space.

To learn by way of multimedia in the year 2010, is still new for many people and not always thought of as a primary option. In reference to a challenge Deneb experienced with learning to utilize new instrument software, which she used in her research and laboratory, she shared a current struggle in computer related software:

> …today, just about everything that I want to do requires a computer and that, whether it's just doing email, or almost all the instruments that I use now in the lab are connected to computers. And I have to say, they're not easy to use and so I just feel that, every time I go through and try to work out how the instrument interfaces with the computer and figure out what this software does and how the software works, then the next one that I go to is maybe just a little bit easier because I kind of have the experience from before.

Beyond flat text, multimedia videos may elaborate and demonstrate the use of such software functions that might be meaningful for Deneb, as they are for others and myself.

As our conversation continued, Deneb mentioned for her own learning, "[m]y preference would be to have written instructions." She recognizes the benefit of using multimedia in learning, especially to "inform the general public about scientific discoveries." Though, when it comes to learning new technology she identified an overall issue in written technical documentation in general, which is an interpretation shared by all research partners. Deneb articulated:

> I just think it's very poor; the presentation of the information is not done in a way that's practical for the user…the actual help information that's included with the software could be a lot better and I don't understand what the qualifications are of the person who writes that help software… it just always seems to me there's a pretty big disconnect.

I have experienced this disconnect as well. Often, individuals with backgrounds in education, teaching, or learning do not write technical documentation, I am one of the few people I know in this space with a formal degree in teaching. I desired to create quality mediums in written text and multimedia to assist others in learning that may transcend the current paradigm and dominate choice of in person learning opportunities or flat written text. I understood Deneb's preference of traditional text and printed handouts, which can be "flipped through" like a book to assist her when learning new technology. I agreed, a variety of options should always be available to complement multimedia learning opportunities in a medium desirable for the individual.

The opportunity to watch a multimedia video with Deneb and then converse over the meaning it held for each of us informs our mimetic identity. Deneb or I may pass over and reinterpret this experience again in the future; however, we will both be in a different space and time than where we were. In reference to our individual threefold mimetic cycle and our complementary narrative identity, Ricoeur (1984: 60) explains this new space and time as the "…everyday praxis [that] orders the present of the future, the present of the past, and the present of the present in terms of one another. " What we knew, thought we knew, or imagined we might know evolves over time and is evident in the narratives we share. Put another way, regardless of the learning medium Deneb or I preferred in summer of 2010, to experience a multimedia video together and imagine the value it may have for either of us individually and for others, evolves our own identities by way of mimesis$_{1, 2,}$ and $_{3}$ (Ricoeur 1984).

Summary

The creative process of authoring text is a dynamic act where one's threefold mimetic identity emerges as a fixed narrative (Ricoeur 1988: 244-249). As each text unfolds the author's narrative identity, an identity not stable or seamless, is configured and reconfigured in poetic fashion reflective of both truthful and fictive experiences (Ricoeur 1988: 246). Individual experiences of text, in reading, viewing, listening, or a mixture, present an opportunity to appropriate a new meaning and human action reflective of mimesis$_1$, $_2$, and $_3$ (Ricoeur 1984; 1988). An imagined action emerged from this research in the continued creation of learning opportunities within the multimedia space.

In this research, multimedia video surfaced as a meaningful adult learning process. Conversation partners shared their present and past experiences in learning to use technology and attest to difficulties of understanding how to use aspects of technology by way of traditional text. To consider multimedia video as a text was new for some research partners, though as conversations unfolded the influence multimedia video may hold in future learning opportunities for faculty, students, and the USF community was evident. Opinions did vary in how often each conversation partner may use multimedia to assist their own learning and understanding of technology; however, the implications of multimedia video to influence the community to understand technology, new concepts, create and maintain relationships, and beyond, informed this research narrative.

Each person learns by way of experience, conversations, and the interpretation of texts. Multimedia video provides individual adult learners a new space to evolve

understandings in technology and beyond. As additional multimedia learning opportunities are created within organizations, as in the Smart Classroom Tutorial informed by this research and created with and for the USF community, new meaning and new understandings may emerge for individuals that reflect a shift in the process of learning within a respective organization.

CHAPTER SIX

SUMMARY, FINDINGS, IMPLICATIONS

Introduction

Chapter Six is the final segment of the research project. This Chapter presents five sections: The Summary, Findings, Implications and Actions, Suggestions for Future Research, and concludes with my Personal Statement.

Summary of the Dissertation

The exploration of adult learning in light of my research categories text and mimesis, presented the possibility for multimedia video to unfold as a meaningful learning experience at USF. Prior to my research, the opportunities available for USF faculty members to learn to function with new technology were inadequate. The demands of faculty schedules associated with limited training opportunities were in conflict. USF along with ITS, were challenged to provide a new technological medium to support community learning and combat training issues – the issue at hand in my research was to investigate how multimedia may assist adults to learn the functionality of new technology. Multimedia videotexts were examined in this research as a way to present an educational experience by way of audio and visual imagery delivered through a personal computer.

To provide context for this research site, my personal experience at USF as a student, alumnus, and employee in ITS was reviewed. An emploted narrative informed by my eleven years with students, faculty, and staff at USF established the direction of my research. When implementation of new technology at USF is presented to the community, many faculty members are confronted with new instructional technology that

they are not yet accustomed to, and not fully competent in, using. Deeply rooted technology support issues have surfaced in the space between implementation and full community utilization. Technology used within USF classrooms has consistently improved; however, prior to this research, the opportunities that adults were offered in learning to operate these improvements were limited beyond in-person training, or a traditional text user manual. Developments in online technology in the mid to late 2000s gave rise to new learning opportunities in multimedia streaming video. Unlike the attendance of an in-person training session, the multimedia video medium is available 24 hours a day, and provides a learning opportunity beyond a traditional text manual.

Using the example of understanding the functionality of smart classroom equipment, my research started with the creation of a short prototype multimedia video tutorial. This tutorial was envisioned and comprised of many past conversations with USF faculty and my own experience assisting the USF community function technology in the classroom. My interpretation used in forming this learning medium came from exploring my own identity in relation with others (Ricoeur 1994). I arrived at understanding how I learn best, through experience and conversations with others on how they approach learning. When I demonstrate the functionality of a given technological process with another, the dialectic to-and-fro of conversation provided opportunity for a valuable learning experience to unfold.

The incorporation of metaphor was used to explain new technology features. Metaphor may have emerged in past conversations as followed: based on my pre-understanding, time allows for the reconfiguration of various past explanations to become a scripted story within my mind. A script is then recreated in a present conversation, in

light of anticipated use. The prototype multimedia video is a temporal text, informed by various narratives of USF community members, and created based on my mimesis$_{1, 2,}$ and $_{3}$. My research proposed a multimedia video as a learning medium that may assist faculty in technology use at USF. By way of interpretive participatory research and the stories shared in conversation with research partners a new narrative of multimedia video use in adult learning emerged; additionally, a completed multimedia streaming video tutorial and website for use by USF community members was created (see Appendix E: Multimedia Streaming Tutorial Webpage).

Building up to, and beyond my research, various faculty of USF and I have created a relationship with one another that strives for innovation by way of conversations. From an ontological interpretation, my research is based on human understanding that occurs and exists only in relationship with others (Ricoeur 1994). Coinciding with individual reflection, an individual is only oneself because of the others around him (Ricoeur 1994). The relationships formed and maintained within the community become the medium for new understandings to unfold. Conversations with one another create a context that determines how we can best learn with each other and may inform new educational mediums not yet in our horizon.

Findings

By way of conversations, text analysis, and our shared narrative three primary findings emerged from this research project.

1. **Multimedia video tutorials are a meaningful process to present technology instruction to adult learners at USF.** In 6 out of 8 conversations, participants found multimedia video to be essential in learning the functionality of new technology

independent of in-person training. Although 3 of 8 participants preferred in-person training to multimedia video tutorial options, all 8 participants recognized the learning, financial, and accessible benefits of on-demand multimedia streaming videos. All participants were in full agreement that traditional text based – words on a page – user guides are generally difficult to understand, not well written, and often confusing; whereas short multimedia videos assist in the explanation process. Further, all participants identified a strength of multimedia streaming videos when used in conjunction with contemporary downloadable user guides with words and images, and in-person training opportunities.

2. **Multimedia video tutorials are essential for repeat, or re-watchable, learning opportunities.** All participants recognized multimedia video use as an ideal and valuable learning medium for repeat viewing. Moreover, a person may re-watch or relearn a technology concept or feature not originally understood during one's introduction to the technology; multimedia videos that explore technology are valuable for repeat viewing. In 4 of 8 conversations, participants would attempt a multimedia video option before asking for assistance.
3. **Faculty members interpret multimedia video tutorials as an essential learning medium for student learners.** All 8 participants found multimedia video tutorials as essential for contemporary student learning. YouTube® videos and or webpage's are used by all participants, and the integration of video tutorials would be an added value. All participants agreed that the specific multimedia video created in this research would be of value to their students.

Implications and Actions

Three primary actions surfaced in light of conversations, text analysis, and our shared narrative. These three actions are reflective of the three research Findings.

1. The pilot multimedia video tutorial created in this research should be completed and available for the USF community. A dedicated webpage may assist and introduce this new learning opportunity to the community. The presentation, exploration, and explanation of technology by way of multimedia videos are of value. Additional multimedia streaming videos created as new learning opportunities in technology and beyond should emerge.
2. The transformation of live in-person presentations, seminars, and educational trainings may be recorded, edited, and reconfigured for online use. The creation of multimedia streaming video opportunities from live-recorded sessions provide continued learning options for the whole USF community and are not confined to a scheduled time, date, or place. If USF is not able to transition live recordings to multimedia streaming videos, and if current internal human resources are not able to create additional multimedia video tutorial options, then new avenues should be pursued; the university may look to outside contractors and vendors to fulfill this multimedia learning need. The field of online education and multimedia learning opportunities continues to evolve and external vendors may provide collaborative solutions with USF that the university is not able to attain independently.
3. As multimedia video learning opportunities continue to emerge at USF, the integration of multimedia streaming videos in and outside the classroom is essential. Faculty may create, or seek assistance to create, multimedia tutorials to capture

essential concepts students often struggle to understand. Multimedia videos may be stored within a respective faculty member's Blackboard® course for students to review on-demand. Successful multimedia content may also be reused in future courses; however, multimedia video content should be reviewed yearly and updated at least every two years as applicable to instructional context.

Suggestions for Future Research

Informed by participant conversations, text analysis, and the shared narrative of this research project, four primary Suggestions for Future Research surfaced.

1. Faculty interpreted technology focused conversation along with divisional, cross-divisional, and student/teacher collaboration to be of value in the innovative future of USF. Future research may show us how new collaborative opportunities may unfold at USF and other university settings. All 8 participants found the medium of conversation critical in the technology space, whereby conversations provide ample opportunities to grasp new technology concepts. It would be good to know how faculty, staff, and students in university settings imagine new interactive opportunities, online or in-person, to create new collaborative relationships.
2. In light of suggestion number one, Faculty explained a lack of opportunity to create community beyond the silo of a respective department. In 4 of 8 research conversations, faculty expressed the difficulty of creating cross-divisional relationships that may lead to cross-divisional collaboration, curricular projects, and beyond. It would be useful to know how the use of online discussion boards, blogs, tweets, and other social networking spaces may assist in the creation of cross-divisional collaborative relationships at universities.

3. Expanding upon both suggestions one and two, specific to the context of technology, the engagement of IT employees, faculty, and other university employees may be of value in the investigation of multimedia video use. The overlap between online collaboration and in-person collaboration started to emerge in my research. An investigation of how these two spaces complement one another to create a hybrid environment, in addition to, how multimedia streaming videos may be used to enhance relationships outside of in-person sessions, would be good to know.
4. In appropriation of all three suggestions above one final recommendation materialized from this research. A dedicated center focused on the development of technology use in research and instruction excellence would be valuable to the USF community, specifically addressing faculty and staff technology innovation. Technology in education and instruction is a craft; a new center for instruction excellence that examines appropriate use of technological resources in teaching, while providing an opportunity to build relationships with colleagues, will serve as an essential combination for shepherding a mature adult learning community.

Personal Statement

Multimedia education has become a meaningful process of learning for me, where I now seek out learning opportunities that use multimedia video techniques. This was not always the case; when I started my fulltime career in technology, multimedia video options were not available and only since 2009, have these learning resources surfaced all over the public Internet. In 2007, I started my pursuit of learning how to create multimedia learning mediums. Now, in 2011, my background in psychology, teaching, and technology has assisted me in refining my craft and creating multimedia learning

opportunities others may benefit from. My interest in this research was to work with my community to understand current needs and consider how multimedia tutorials and new emerging technologies may unfold, create community, and present meaningful learning opportunities. My personal journey, prior to this inquiry and in anticipation of my future, is meaningful to me. This journey is reflected in the story below as a "Reflective Narrative."

Reflective Narrative

Mimesis 1

As a high school student, the learning options generally available to me were presented in the form of written materials to read, or verbal information to listen to – occasionally a combination of the two; however, both mediums posed comprehension challenges for me. Despite my academic learning struggles, there was one high school teacher, Dr. Taylor, whose exams I could ace; although, obvious to me now, at the end of my research, the exams I would earn excellent scores on where based on movies shown in class. Dr. Taylor was my RSP teacher, and he earned a doctorate in Special Education from USF's School of Education a couple decades ago. In refection of his exams, and my research, I reinterpret Dr. Taylor as an educator who utilized a contemporary and innovative instruction process. Dr. Taylor would configure a theme and assign an appropriate motion picture for the class to watch over the course of a week. Further, he would provide relevant readings in light of the movie, guide a daily discussion group focused on the topic at hand, and test the class at the end of the week. In sharing this story, I realize he provided a multi-modality, multimedia experience over the course of an academic school week that fostered my learning. I did not ace the exam because I

enjoyed movies; I earned outstanding grades on his exams because I excelled in the learning opportunities he configured. Dr. Taylor used in-person multimedia techniques pre contemporary multimedia research, which promoted and provided access to various learning styles.

My quest to unravel multimedia learning started in high school though did not emerge as a topic of interest until years later once I entered the technology space. Before online technological resources could support on demand streaming options, my imagination carried me to postulate visions of learning via video clips, and I felt this would serve as a major benefit to my own learning. For example, I envisioned this medium showing me how to fix computer hardware failures, and automobile repairs, et cetera; although no options were available at the time, I began to see a need in other areas as well. The context of instruction by way of on demand video technology, sparked my obsession for alternative learning opportunities that eventually lead to my research in multimedia learning.

Mimesis 2 and 3

As I reached to apply the findings that surfaced in my research, I began to recognize connections present in my current ITS position. Under the guidance of an innovative director and an autonomous atmosphere, I was provided leadership opportunities to guide new creative endeavors within ITS. Informed by my research, I implemented my Findings and Actions, from Chapter Six, into my current position as ITS Security Administrator. In honor of Cyber Security Awareness month, October 2010, I configured 'Stop-Think-Connect' an ITS Information Security Awareness seminar. At the one-hour presentation, Walter Petruska the Information Security Officer and I,

presented seven steps to safer computing to a live USF audience; however, weeks prior to the event, I arranged for this seminar to be video recorded. The recorded video provided me the live footage and audio required to transition this presentation into a multimedia opportunity (see Appendix G). By way of reconfiguring the live presentation into an online learning opportunity, USF: faculty, staff, students, alumni, affiliates, and all USF friends and family, were provided an online option to partake in this seminar free from time and location constraints. Many individuals and departments throughout campus, and from a far, mentioned to me both in person and via e-mail, that the online accessibility of this security seminar was appreciated. I was told the information security video's content, accessibility, and availability was extremely useful. This learning opportunity was promoted by ITS via the Security Services Twitter feed, ITS Blog, on poster boards, and digital signage around the university.

Cross-divisional collaboration surfaced between ITS, Human Resource (HR), and Business and Finances (B&F) in late 2010-2011, where the integration of multimedia streaming video content with Blackboard® was used to create a grassroots USF Drivers Training Course. The online educational experience provided relevant content to support USF licensed drivers in reviewing crucial drivers training tips that adhered to the USF Drivers Policy. ITS piloted this training program, recognized the sound record keeping, accountability, and transparency this medium provided across the division. Informed by my research, I designed and created the course, integrated a quiz, and outlined a process to signify successful completion annually. Administrative duties were outlined and provided to the Business and Vendor Management department of ITS for ongoing maintenance. The success of the online Drivers Training course in ITS, lead to interest,

conversations, and eventually adoption in other divisions. In spring 2011, B&F and HR collaborated with ITS to utilize a clone of this course for implementation campus wide.

Success of the USF Drivers Training Blackboard® in ITS, spawned interest of a second online training course to be created, which focused on Emergency Response Team (ERT) training. In an effort to provide consistent guidance to the Lone Mountain North building, where both ITS and B&F organizational units are located, I volunteered for the USF LMN Building Marshal team. Shortly thereafter, I was recognized to bring my online education expertise and talents to the forefront and lead the creation of an online training course. USF's Public Safety, and the Disaster Preparedness Coordinator were identified to provide guidance and materials to this new training course, and plans were set for an internal launch summer 2011. The scope of the project is to serve as an example that other USF Building Marshal teams may choose to follow.

My intention in this research was to examine the possibilities of multimedia use to promote learning at USF. The result of this endeavor has presented opportunities to apply my growing knowledge in a variety of ways, which has opened to the continued reflection, and reconfiguration, of multimedia and technology in adult learning.

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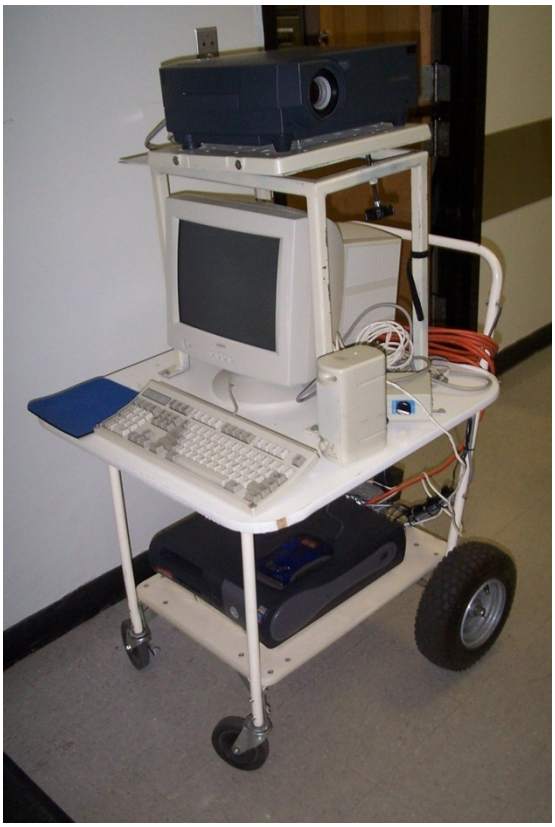
APPENDICIES

Appendix A: Mobile Computer Cart



USF Classroom Technology:
Mobile computer cart

Appendix B: Letter of Invitation and Research Questions

Date:

Participant's Name
Participant's Organization
Participant's Address

Dear (Name of Participant),

I am a doctoral student at the University of San Francisco in the Organization and Leadership Program. I am conducting my dissertation research on past and present experiences with technology as well as future hopes of continued learning and utilization of technology for academic purposes.

My research is grounded in interpretive theory and has a participatory orientation. In place of formal interviews or surveys, I engage USF Faculty members in conversations using guiding questions directed toward learning and technology utilization. Upon your approval, the conversations are audio and/or video recorded and transcribed. You may request the audio or video recorder be turned off at any time during the conversation. I send you a copy of the transcription for your review. At this time, you may add, delete or change any of the transcribed text. Upon receipt of your approval, I will analyze the data. Please note, participation in this research, including all data, name and affiliations are not confidential. Before participating in this research you will be required to sign a consent form.

I am particularly interested in gaining insight about how you learn as well as your experience utilizing technology within academia and beyond. Below are some questions I may use to guide the conversations:

1) How did you come to learn about technology?
2) What was a challenging learning experience for you?
3) In the future, how do you envision technology used in teaching and learning?
4) How do you envision learning in the future?

If you are willing to participate in this research, please let me know. I can be reached via email at [redacted] or by phone at [redacted].

Thank you for considering this request.
Sincerely,

Nicholas P. Recchia
Doctoral Student, Researcher
University of San Francisco
Organization & Leadership Program

Appendix C: Letter of Confirmation to the Research Participant

Date

Participant's Name
Organization
Address

Dear (Participant's Name)

Thank you very much for allowing me the opportunity to have a conversation with you exploring learning and technology. I would like to confirm our appointment on _____ at _____. Please feel free to contact me if you would like to arrange a different time or meeting place.

With your consent, I will be recording our conversation through an audio and/or video device transcribing it into a written text, and providing you with a copy of the transcripts for your review. Additionally, with your approval, I will take your photograph. After you have had a chance to reflect on the transcription, you may add, delete, or modify the transcript as you deem appropriate. Conversations are an essential element in my research; please take notice that all of the data for this research project including your name are not confidential. Additionally, I may use your name in my dissertation and subsequent publications.

I appreciate your contribution to this research and look forward to speaking with you.

Best regards,

Nicholas P. Recchia
Doctoral Student, Researcher
University of San Francisco
Organization and Leadership Program
E-mail: [redacted]
Phone: [redacted]

Appendix D: Thank You Letter

Date

Dear (Participant's name)

Thank you for speaking with me on _____and exchanging your thoughts and insights about learning and technology.

I am including a copy of the transcript of our research conversation for your review. The transcript is a very important piece of my research. Kindly review the transcript for accuracy and make any notations on the transcript including changes, deletions, or additions you would like to make. I will follow-up with you in a couple weeks to discuss your comments and any alterations to the transcript. Once the review and editing process of the transcript has been finished, and upon your approval, I will use the revised transcript for my data analysis.

Again thank you for participating in my research study. Your unique perspective about this topic is a valuable contribution to the research material I have collected.

Sincerely,

Nicholas P. Recchia
Doctoral Student, Researcher
University of San Francisco
Organization and Leadership Program
E-mail: [redacted]
Phone: [redacted]

Appendix E: Multimedia Streaming Tutorial Webpage

Pictured below is the original website informed and created in light of this research. The quick link provided to the community to access this online webpage was 'classroomsuccess.usfca.edu'.

The UNIVERSITY *of* SAN FRANCISCO
INFORMATION *and* TECHNOLOGY SERVICES

3 Steps to Smart Classroom Success

CIT & Learning Technologies are now providing their first streaming tutorial series beginning with this self-contained **Level 1 Plus multimedia streaming tutorial**. Follow the 3 steps below and become more successful with classroom technology.

Students - Faculty members often benefit from technology savvy individuals in class. **Master this information and become a knowledgeable tech assistant in class today!** Plus, as a student, you'll be using this equipment during graded presentations; being prepared is wise.

1, Watch tutorial video - Learn the various aspects of technology in a Level 1-Plus Smart Classroom (click image below).

2. Take notes while watching the video.

3. Practice using classroom technology before using it in front of an audience.

FAQs:

1. What if I want a written (PDF) version of the Level 1-Plus Smart Classroom information?
If you'd like to read the information in addition to (or instead of) watching the tutorial video, download the tutorial PDF here .

2. What if I'd like additional support?
Contact the ITS Help Desk if you have additional questions or would like to schedule an additional in-person training.

ITS Help Desk- contact information:
Phone: 415-422-6668
E-mail: itshelp@usfca.edu

**Remember, using technology to maximize learning outcomes is a craft. For an individual to increase one's abilities, dedicating time and practice to one's craft is essential. A writer does not write a Pulitzer prize on her/his first time, an Artist does not create a masterpiece without a lifetime of practice and trashed drafts, and an educator never stops refining her/his ability to *educate minds and hearts to change the world.*

Appendix F: Excerpts From Research Journal

August 25, 2009
I saw these old instructional videos from the 40's, that someone has put online. It was intriguing, because in one sense, I was surprised how what I am doing has in some regard, just reinvented the wheel. When I reflected further, it is like the hermeneutic circle that comes across the same again, but this time is now at a different altitude – contemporary on-demand streaming video as opposed to projector and film.

May 26, 2010
I just had my conversation with Deneb today. I was surprised with her liking to read information via traditional text, as opposed to watching the video. I was thinking more about the need to have the different modalities available for users, and I think having a downloadable text along with a videotext is the way to go.

June 7, 2010
I am part way through transcribing my text with Susanna, about 51 minutes in, I started thinking, now with the video so clearly laid out, I could, or Classroom technology could, create a wiki or online form where a tech could write questions and answers for the community to answer. Maybe a blog? For instance, 'I am confused about Part V, section a, what do you mean by....' Then someone could answer, either a tech or a community member... 'I think what the step is referring too is... ' and then if the tech see's it, he or she too could reply, 'you got it, that is exactly what was meant by that.'

June 10, 2010
As I am re-listening to my audio conversation with Mathew, I am realizing, that what I mentioned already [July 7th] is similar to what Mathew has set up for his class. Obviously the context of his discussion board on his courses assigned readings, and question prompts, but he is really on to something. I wish more instructors utilized this concept.

June 15, 2010
I have probably listened to my conversation with Kelly 3 times already. It is not as fun to read it, as it is to listen to it. I get something new out of the reply every time. She brings up the concept of technology as a craft; I like that metaphor.

June 30, 2010
I find it difficult to hold a conversation right after work. Especially since I have not spent time with my data or project in the past few days, I can feel a lapse in connectedness with my research during this last conversation.

July 2, 2010
I find it amazing how my initial interpretation of how a conversation went, and my thoughts after listening to it are drastically different.

July 7, 2010
I think engaging students is instrumental. This has come up a few times already in formal conversations with faculty. If we can get a page for them, or link them to the page, like

with a preface, then they can become accustomed to the room themselves, and really assist the faculty members. Which lightens the load on the Help Desk and CT. Plus gives the community autonomy. Imagine 25 students, at least a few of them may have thought to learn how to use the technology in the room.

July 13, 2010
Now that there is a new provost, depending on how this concept is received by ITS, or other areas, we could get the finished videotext linked on main page at the start of school - new Provost new direction of online learning?

July 18, 2010
As I am starting to analyze my conversations with Professor Schaffer, I have been reflecting on the concept of student envelopment, and perhaps marketing student access to this Smart Classroom tutorial.
She vocalized experiences where students were not able to use the equipment in the class. They arrive not prepared, some think they're equipped, but when they are not, then the issue falls on the lap of the Faculty. It seems like Prof. Schaffer knows it's the student's responsibility to present, and that includes use of the technology, but when the whole class seems incompetent, she appears to inherit some of the responsibility. When this video is made available to the community and the students, I am very interested to see if it will be as meaningful for them as I think it will be.

July 20, 2010
This whole Idea of an online in-house faculty discussion board, where faculty members, who use Blackboard® can share ideas, struggles, and successes with one another. Currently there is a Wiki, but only the admin contributes content. If all faculty, and USF community members were able to contribute their thoughts and interpretations to the rest of the community, regarding Blackboard®, and other USF tools etc, this experience could benefit the community in a variety of ways. It may take pressure off the administrator of a given service, who currently answers questions directly. But if another faculty member for a different college already has the answer, or a better solution, or way of solve the same request, then s/he can share it with the community. It's a win, win scenario.

July 27, 2010
Another reflection following my conversation with Prof. Schaffer, and a topic of interest in other work related conversations is the idea of academic honesty, and a USF program which informs students of being academically aware and honest in their work. If there is not a class that all students must attend, or a workshop etc, how is every student to be aware of such information to ensure s/he is academic honest? With speaking with my supervisor, and within my new role as Security Administrator for the school, there should be a medium where students are informed to be academically honest. If each student was to pass a short quiz regarding academic integrity, all faculty can start from there, for they are aware each student has completed an online course and each student is clearly aware of the rules, beyond just signing a consent for in the school's FogCutter.

August 27, 2010

The whole topic of interdepartmental, intercollegiate collaboration is very intriguing to me. Where students from different colleges investigating different paths and careers can benefit one another by working for and with one another. Speaking with Prof. Schaffer, we chatted about Media Studies students working on a project for her, creating a multimedia project that her Language students could use. I think this cross-curricular endeavor may assist all students. If faculty were to use discussion boards and share ideas, and hook up with one another to plan and provide cross college or department collaboration, students could not only achieve academic goals, but also get real world experience of project planning. Plus when they see that their projects are assisting the community beyond just getting a grade, students may put in additional effort for they can see how their work is assisting others, which is the mission of the Jesuits.

August 30, 2010

Analyzing my conversation with Mathew, I have come to realize my conversation with him started me down a different path with where, and how, I understood Faculty using online discussion to benefit faculty needs. Mathew speaks of the benefit his students experience by way of the online discussion space, and how, because of the distance and time between face to face interactions, this online discussion medium has created community and enhanced the learning of his classes overall in a way which the real class could not provide. The ability to visit, revisit, content at your convenience, when you the learner are ready to address it, then post it for others to read at their convenience, is amazingly beneficial for all. Plus the every two week interval of meeting face to face, allows for all students to stay on track, for each student is held accountable. As the instructor, Mathew can interpret a student's evolving thought process and growth of comprehending the material via the questions asked online and in class, as well as through written course work. Further, if Faculty were to utilize a similar structure for their own community, maybe even at the AJCU level, this could really transition the way in which Faculty, interact and collaborate across the world. This is an area that may truly take off if handled with care.

Appendix G: Information Security Seminar

Pictured below is the Information Security website where the online version of 'Stop-Think-Connect' was hosted in Fall 2010 through Fall 2011. The quick link provided to the community to access this online webpage was 'infosec.usfca.edu'.

The UNIVERSITY *of* SAN FRANCISCO
INFORMATION *and* TECHNOLOGY SERVICES

Security Services

ITS strives to ensure physical, information and computing security in collaboration with USF Public Safety, One Card, and General Counsel.

ITS works with the schools, colleges, and divisions of USF to help them comply with the university's Information Security Policy. Services include educational presentations; one-on-one consultation and training; desktop/laptop encryption and security; desktop, laptop and departmental file server back-up; and destruction of sensitive or confidential data. For more information, please contact infosec@usfca.edu.

- Desktop Security
- Information Security
- Network Security
- Security Awareness

Watch the Stop. Think. Connect. Security Awareness Seminar

Your free annual credit report; it's Quick, Easy, and Secure

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Appendix H: Transcript of Pilot Conversation

Conversation with Professor Lambton
JL= Judith Lambton
NR= Nick Recchia

NR: To get us started, I want to talk about the concept of text. So, what does text mean to you?

JL: In terms of just words on a page? Or in terms of an electronic text?

NR: It can be, however you interpret it.

JL: Words on a page. Or Words on a screen.

NR: And, what about images or pictures?

JL: I don't usually consider that a text, but more as a supplement to text, another way of looking at something. Something that you can say in words, but a picture can solve the explanation more simply. So perhaps, I guess it is just, because some students learn better by reading text, and some people are visual learners, so they seem complementary, but also somewhat opposite.

NR: Can you think of any examples?

JL: Explaining for example a kidney failure.

NR: Totally.

JL: That takes a lot of words for students. So I might say to the student, the patient will have anorexia, [and] they will develop uraemia, those are very difficult concepts just textually, but if I show them a picture of a patient in renal failure, that often really cements their idea of what that looks like, so using a visual, diagram, a picture, can sometimes complement, the difficulty of explaining something, or it can reach a different type of learner.

NR: And given your learning style, how did you learn about kidney failure for example?

JL: Both.

NR: yeah.

JL: Reading and seeing something visual.

NR: Using that as an example, do you remember, I don't know, going to the text book when you first hear of it, or am, I guess, I am trying to imagine how you learning that concept, if hearing it, works for you, what is the initial start of that process?

JL: I would say probably listening to someone describe kidney failure, was more memorable, to me at the very start. Seeing a patient with kidney failure, I never forgot it, and than reading about kidney failure was probably the least accomplished way for me to learn about it. So hearing and seeing, I think were orders of magnitude better for me then actually just reading text about it.

NR: I am similar in the way that I learn as well. Is there a point of time when you realized your own reading style? And what way worked better for you?

JL: Probably not in grammar school, not in high school, but by the time I got into nursing school. I think that's where it really, how I had to learn, how I needed to learn made me more aware of how best I learned. So as the material got more complex, or more was asked of me, in the classroom as a participant, rather than just in high school where I was more lectured to, as I became more of a participant in my learning, I think that really determined my learning style.

NR: You brought up kidney failure, is there another concept, that maybe you were struggling with that you remember?

JL: Here is an example, immunology problems. Seeing a patient with an immunological problem, doesn't necessarily, there is not good visuals because that is a system that is mostly done on the cellular level. Unless you're looking at someone with cancer or aids or something like that, but most immune problems are hidden, if you will, so there is not a good visual for them.

NR: Externally.

JL: Externally.

NR: Yeah, Yeah.

JL: So text, so some concepts of text, can only be done by reading about them, verses seeing them. So that would be an example of one that does not really lend itself to a visual as well as other more complex concepts.

NR: and transitioning from text and integrating like technology is there a point where you used text to help you learn of how to utilize technology?

JL: I think that's what's the most difficult part of it. Because most of the time when I read about a new technology it's written in a language that's maybe more understandable to the programmer, or understandable to the tech people, than it is to the end user [referring

herself] so for the most part when it comes to learning a new technology whether it's PowerPoint®, Blackboard® or any of that I do better by having someone tell me about it, and having someone allow me to do it with them, but reading a text manual for most new technologies, it's like reading German to me.

NR: How did you first come to learn of technology?

JL: Well in medicine we use it all the time, so I think a lot of the new technologies that have always come up, have come up out of need. When I think of technology, I don't think of something that is just interesting, I think of something that is going to solve a problem, so nurses have to deal with technology all along of our lives, ventilators, pumps that control important IV fluids, patient safety systems that guard error, those are all technology based, so I think that medicine tends to embrace a technology pretty quickly, as long as it leads to something that the patient can use. So just in terms of my comfort with technology, whether it's taking care of a patient, or teaching, if it solves a problem I like it, but I am not so interested in it if its just technology for technology sake.

NR: Yeah, so once there is, you see a need, [you may think] 'oh what technology is available that can fill that need?'

JL: Exactly. And I think in medicine, we've learned a lot of things from, well, if it works in aviation could it not work in medicine? Simulation is a perfect example, NASA® and Airline pilots have been using simulation to learn not to crash planes for a lot of years, medicine has just now started to learn about simulation before we make mistakes on patients, so I think there are a lot of technology that starts in another fields, that we are very willing to adopt; if in fact it means that it would improve patient care. So I think most doctors and nurses are pretty comfortable with newer technologies as long as they have application.

NR: Interesting that you mention the simulation, because, is it this semester, or this past year that they [the Nursing school] started the simulation 50%…

JL: Yeah and I started that as chair.

NR: I think it was just this week that it showed your picture in USFconnect®.

JL: Exactly.

NR: Man, that's awesome.

JL: I think that is a technology that we adopted because what we are trying to do is have students learn very complex issues on manikins before they learn on patients. So that is an example of embracing a technology, [but only] if it means making a difference in there learning or our teaching [However,] technology for technology's sake, not so interesting.

NR: Totally. But once you have that need, and 'how do I learn how to use that…'

JL: Exactly, and the aviation literature was really important for us because they have been doing it to train pilots long before medicine thought about doing it to train doctors and nurses.

NR: When did you first realize the connection between the two, simulation and NASA® and integrating it in [nursing]?

JL: It's been sort of popping up in the literature, the articles that I started reading about how to educate people who need to do it with their hands and not just with their heads, so it started popping up in anesthesia journals about having people learn technical things with their hands and [indicate the] tremendous consequences if they make errors. So anesthesiologists where some of the first people to use simulation and as they started reporting it in their journals, and surgeons started saying, 'well if I can do robotic in a simulated setting then I can train interns how to fix the heart without making a mistake on the heart.' So the literature started coming up in the medical journals, anesthesia first, surgery second, and pretty some after that nursing.

NR: So when you're learning, when you first got all that new equipment in for the simulation or what not, and you wanted to learn how those functions worked [on the mannequins], how did you learn how to do that?

JL: We had the representatives of the person, I mean of the company, from whom we bought the actual mannequins and they know the technical stuff, 'push this button to get the patient to breath.' Or 'push this button to have the blood pressure drop, or program it this way,' but that's all they knew. They knew how to operate the equipment, what we had to do was to create scenarios to use that technology. So we had to take curricular issues and make that mannequins work for our curriculum. But to actually learn the technology, it was demonstrated to us by the representatives of the people who made it.

NR: Was that a group setting, or one-on-one?

JL: Yes, no, it was a group setting.

NR: When they presented it to you, was it like class based?

JL: It was, but what was interesting was that they were there to sell a product, so it was strictly about their company, their device and other things we could buy to interface with the technology but it was never about how manikins in general work conceptually, it wasn't a conceptual class, it was a, 'if you buy our product and if you push this button.' So understandably it was not so much about the technology, like the Internet. It would have been if Google® came and said 'our search engine works like this.' It was not about search engines, it was about Google®; so it was not about manikins, it was about that company. So we had to understand that, the company had a secondary motive, to sell us more technology.

NR: Financial.

JL: Yeah.

NR: So was that presentation, or demonstration was pre- you guys purchasing it?

JL: Actually no, it was at the time we [had already] purchased it. The purchase decision wasn't made by the faculty – which is often the case….

NR: Yeah I can imagine.

JL: It's bought by lowest bidder – people who make the decision who are not the educators. So we were sort of given the equipment and had to learn how to use it. Had we see a range of equipment we would have said, 'we like that one more,' [but] we really weren't given that opportunity. And that often happens in nursing as well, where the department of finance will decide to buy these IV pumps because they have the lowest bidder, but then the IV pump person comes in and shows you the technology and the nurses say 'I would have preferred a pump that did not do that.' So lots of times the end users of technology aren't the ones who are choosing it but they are the ones that have to use it. And I always see that as a problem, [just like] suddenly we have DonsApps® and we had no voice in that, or suddenly we have a technology that someone else decided for us but we're the ones that have to use it everyday. I think that is a real issue about learning new technology, is that, if you are not invested in it early on, if you were not part of a focus group, if you weren't part of a reason why that technology was adopted, it's harder to learn about it.

NR: Perhaps because there is no personal investment in that?

JL: I think the real issue about learning new technology is that if you are not invested in it early on, if you were not part of a focus group, if you weren't part of a reason why that technology was adopted, it's harder to learn about it… it's like, well, this was hoisted upon us, so I am going to have to learn it and we know that it is DonsApps® today and it will be something else in a few months, and we'll have to reorder our thinking. And I think that the problem, or one of the problems of the speed at which technology is being developed it's sort of like the Moore Law, right the Gordon Moore, it's just happens so quickly so fast, that by the time you learn a technology and feel really comfortable with it, something else is coming up. And one of the problems I think a lot of us in medicine and nursing have, certainly in education, is newer technology, is it really better, or is it just more bells and more whistles and more things that someone thought would be really cool, but don't deliver any better learning or patient care then prior use. So I think some of that technology issue is, sort of has a life of its own, and does it really offer that much utility. What comes to mind with new technology are dash boards in cars.

NR: Yeah, great example.

JL: Now there is like everything possible on the dash board…

NR: And on the steering wheel.

JL: Exactly! But now when you have to look for your hazard lights because you're broken down in the speed lane you have to look through all of these gauges that someone thought were really cool to have, but is not critical. And I think that is what a lot of students say, is this important for me to learn, or is this just something that is just nice to have.

NR: Yeah. And speaking in like a present scenario, if you realized 'oh, I need to video tape my upcoming class' and you purchase this camera [referring the camera currently taping the Prof. Lambton – how would you learn to use it]?

JL: Yeah, I would probably call someone who has used it rather than try and work through a manual.

NR: So in that case, would you figure out a camera that someone else already had, and then, so 'oh I'll go to you and ask all the question?'

JL: Yes, before I bought it. Like I use the Flip® camera a lot, and I saw it because a friend of mine who has a colleague who is a dental professor was uses it to show her students what they were doing and then e-mailed them. And they would have to look and see how their performance was and rate their own performance, which I thought was a great idea. So I said 'find me a Flip®.' So I would have never just looked through a magazine and say 'oh the Flip® camera that looks interesting,' but rather somebody who was using it, could really make a difference in teaching and would have application for our students, then I called and said 'how does it work, what's the resolution, etc.' then I got one.

NR: When you first got it, and opened up the package you're looking at it, do you play with it at all first? Did you already play with your colleagues?

JL: Yes, I played with it before I bought it, so I already knew how it worked, then when I needed to know more about how it worked, I went to their website and did a little bit of a tutorial, but again, it was not as helpful as someone just showing me, allowing me to manipulate it myself first, the manual tends to be again, the writing, the textual stuff on most technology tends to be written by people who speak another language, and so even just the terms that they use, everyone assume that we know what that means.

NR: You mention DonsApps®, and I think of e-mail client, and maybe that's familiar to you and maybe it's not.

JL: It wasn't, and when the instructions came out and it said, 'if you want to use an e-mail client,' and I am like, an e-mail client, what does that mean? That means something to the people who designed it, but to those of us [gesturing to herself] it's like, well if they had put parenthetically, like Thunderbird®, I would have known what that meant, but there was no exemplary.

NR: And they didn't in that one you read? Interesting because in the past I write a lot of those, and yeah, parentheses, Outlook®, Thunderbird®.

JL: [agreeing with me, she emphasized] Give me an example.

NR: So that [with the example] your mind can map to it.

JL: That is an e-mail client. But I think there are a lot of techno terms, and I am very sensitive to using jargon, because in medicine when we are taught about, ok so when you have to explain a complex thing to the average patient, you don't walk in and say, 'you have stage four bronchogenic carcinoma' and walk out. You have to say, 'you have a type of cancer it's in the lungs, it's in this part of the lungs,' you have to break it down otherwise you're just telling them nonsense. But I don't feel the tech manuals often do that, they tell me four bronchogenic carcinoma, and then turn the page. So one of the problems I have is that it has very little metaphor and I don't know what they are talking about, when they use certain terms. Even the initial Internet terms, upload, download, I mean they have become common phrases, but remember I have been around since the Internet started to be a conversation among scientists. And the terms upload and download, those were all created by, a different category of people then the category of people that first started doing them. And so I think the language of technology comes in, often the tech stuff is written in language that most of us don't understand and feel quiet frustrated that we have to figure out what an e-mail client is. Or even the term upload, download, I mean what did that mean, you know. That was a whole new jargon that those of us who were originally just using the Internet to go into Stanford's folio library, that's what we used it for. We just wanted to not have to drive to Stanford and access their journals. So, you know that was, as these terms came in and became popular, and then they got to be used more. But I think a lot of the tech journals just relied on jargon and they don't rely on an everyday explanation of what you're talking about.

NR: You mention DonsApps® and you mention that being somewhat of a frustrating learning experience, is there any points specifically that you can think of that were frustrating and how you overcame them?

JL: Well you helped me overcome them number one, but I think for example we got this notice that your USF e-mail was going to be migrated, ok, so what is migrating?

NR: [Smiling – They did not put anything] like in parenthesis?

JL: Right, what was migrated, does that mean that you are just going to take my current e-mail and move it over and nothing is going to change, right? I just need to click on like I've always clicked on, my email is going to come up, and that's the way it is. Or what does migrate mean to you verse what it means to me? Well it turns out migrate meant something more than just, you're just using a different thing, and that I am going to access it that way. Now when I am going to access my e-mail this DonsApps® screen comes in, and it doesn't really default to my inbox so I have to click on inbox just to get

my e-mail. I would have loved some explanation in saying, ‘you can change that to default to your inbox as soon as you open it up if you do this.’ But that didn't happen, so now every time I launch my e-mail I get this thing on my Thunderbird® that tells me I am in DonsApps®, and I just want to be in my inbox. So there are a lot of things that happened during this migration that now changes the way I have to do things, as in an extra step that really frustrates me. Or I wanted to create a folder, I was in my inbox, I just wanted to create a subfolder, which I have always done in Thunderbird. I try to create the folder and it won't create. Now I find out by accident that I had to be in DonsApps® not in my inbox to create the folder. So all of these kinds of little things that happen that are part of a migration, which somebody may see Gmail®, [and it] seems like a great idea, [but] to the end user it could be a series of frustrations. To me the term migration just meant that you took something and took it whole and put it into another thing. Like the migration of humans from Poland to America. I didn't think there was going to be that many, sort of little changes that I had to live with that was part of this process because I am still using Thunderbird®.

NR: Interesting that you bridge that whole moving to America example, cause all those people moving from one place to another, well climate is different, I mean a lot of like…. Which then you can bridge, in my thinking to interpretation.

JL: Right

NR: ‘Oh well maybe when I make a folder it's not going to be the same as….’

JL: In Poland.

NR: Yeah.

JL: Yeah, no, and, I totally get that. But, I just for my purposes I just thought it was going to be in total, you take a group of people unchanged [referencing her e-mails being unchanged], now I know they have to adapt to their new environment, but there is still the same people [e-mail] and so for me I thought my system was going to be the same but sort of [on] a different server. But in fact I’ve had to learn different things about it, that I didn’t [think I’d] have to learn, and I am using the same [e-mail program] Thunderbird®. So it’s not like I changed, as you say e-mail clients, I am using Thunderbird® before DonsApps® and Thunderbird® after DonsApps®, and [yet] it’s different.

NR: Yeah, so now thinking about that, so if that move from Poland to America was in an RV, and it's the same RV that you had there and now you are here, well how come it doesn't work the same?

JL: Right, right. That would be a better analogy. Yeah, I wasn't told in the information about migration that some different steps may need to be used, I had to sort of discover this on my own. Which just ends up with a bunch of expletives, or me calling you saying why isn't this working? Or, why is it so difficult to get on my BlackBerry®? Or, I know a lot of people were struggling with their iPhones®…

NR: Yes.

JL: and very few of us don't carry them because we, one of the things about today's student is that they want instant feedback. So they send you an email at 11:00pm at night and wonder why you have not responded… So a lot of us do carry BlackBerries® and Apple® devices to just be responsive to our students. So imagine the frustration when not only do we have a computer to deal with but we had to deal with our phones. And I think those are some of the – and you were so helpful in helping me do the BlackBerry® [she is referring to earlier in the week when I assisted her over the phone with her DonsApps needs, including her BlackBerry® and Thunderbird®] and I know other people came and actually physically helped some of the faculty recreate the system on their iPhones®. But I think those are just, and I think even with the instructions it was difficult. So having someone who is savvy, who can explain it is better.

NR: I would say on both ends, because….

JL: Yes. Yes.

NR: There were people that I was helping over the phone, who didn't have the same grasp as maybe you or someone else.

JL: Yes. Yes.

NR: And our communication just over the phone was not enough.

JL: Of course. And I think that as a different learner. Learner's come to you at different comfort levels, or different approaches. If you're talking to Greg DeBourgh, who is on the technology committee, he gets it. But then you talk to someone who is a professor who doesn't even use PowerPoint®, they're not going to get it. So I think that's also the difficulty from your side.

NR: So in the future, how do you imagine learning these different technologies that gonna keep changing, how do you envision learning it or doing it better?

JL: Honestly, I think if there was a 20 second movie, just with someone doing it, moving a curser, I think a visual and, a narrated visual, is probably far better for most learners not just myself, but for most learners to see it demonstrated rather than just read it textually. Because, and I think something that would be live and interactive, so you create this, I don't know, one minute movie about DonsApps®, and everybody can access it via Blackboard® or whatever, or however you want it to link. And then there is an open question and answer time, again using technology, a live chat thing. I am doing it now but I can't do this, and someone else pops in and says, well I have an iPhone® and this is what, even creating a community perhaps. Even for a short moment of time when you said from, the launch of a new thing, to the time in which you think you should have it adopted, for the next 24 hours, this kind of stuff will be available to you, just log on and

you know. Frequent questions and answers, but live, those kinds of things I think are really helpful. But to just give text is not always the most helpful thing, in my estimation.

NR: Yeah, definitely. You bring up a lot of good points. I guess I was thinking about specifically that chat feature, imagining how that may work, and then the comfort levels of the end users, or what not. But, yeah that would be, the instantaneous of, I am doing it now, I don't need to pick-up the phone and call…

JL: Exactly!

NR: Get back to me like. And then I imagine, oh well how long will it take, how could we provide them with an anticipation of, oh, I'll be with you within 5 minutes, like an automated.

JL: Right, right, right, otherwise I am calling x6668 [referring to the USF ITS Help Desk service phone number] hearing that whole thing, if you want blab blab blab hit one, and already now my frustration level right. And then I get you, because, you've also been helping like 25 people before me, who probably asked you very similar questions, if we have all been on one, for the next hour Nick will be available for questions. And if everyone is asking probably the same question, then, now I know not everyone feels comfortable with Chat, but I tell you I think more people will be less reluctant to wait in a line, you know about queuing theory right?

NR: Could you reiterate for me.

JL: Queuing theory is how long someone will wait in line before they just put their new blouse back and not buy it. So it's like a marketing device, right, so Nordstrom's knows exactly how long somebody will wait in a queue before they say I am not buying this, I am leaving; and they determine with queuing theory how many sales people to hire. Cause they know at certain point's people will drop off the queue and they'll lose business.

NR: Now that Christmas time is coming up, they tend to hire a lot more people…

JL: Yes, cause they know…

NR: they anticipate…

JL: they use queuing theory, exactly. So how long will someone wait in line before they leave. Well if you use queuing theory for calling x6668, about something about my BlackBerry® and my new DonsApps®, how long am I going to wait in line before I am just like, you know what, I am done, I am cooked, blank. Now I haven't got my question answered and I am even angry because I've been in a queue. So, could you say, knowing that people have a certain finite time in which they're going to sit in queue waiting for Nick to answer about the simple question that probably could have been done with a bunch of us all being on a chat at the same time. Then I think there would be maybe less

frustration with adopting certain things, then reading something, not understanding it, waiting in a queue, on a phone, listening to all that, you know, that voicemail that irritates everybody. And I know people already still, who's e-mail has been migrated who are simply frustrated and not using it. So a couple of the faculty probably have 800 e-mails waiting for them and they're just, they've been in the queue, they've waited too long, they've got to teach classes, forget it. Reach me by my other e-mail, and don't even use it. So then, how long do you have people who just then circumvent what you want them to because the solution took to long.

NR: So thinking of that, and then being available at 12 at night, when the Help Desk is closed, and they're ready to give a call, or ready to chat with someone, and they're not able to, what are they going to do?

JL: Right. See that's it, you know I mean, they would give students probably their alternate e-mail, the one that they got through iPhone® or through BlackBerry®, you know something from T-mobile®; so maybe they put an announcement on Blackboard®, from now on just call, e-mail me on my T-mobile account…

NR: My private account outside of University.

JL: Exactly, because like quite frankly I don't have enough time to prepare my lesson plan, to evaluate my exam, to see my students who are being advised for their spring semester, and learn DonsApps®.

NR: So thinking of that individual, at home at night, wanting to learn, ready to learn, wanting to talk to someone or what not. Doing something before just reading it, cause that's what was available. Not necessarily is it on DonsApps®, but let me show you an example…

JL: OK.

NR: of something that I have created here, that I would be really interested in hearing what you have to say. So imagining that, this is actually on Smart Classrooms…

JL: OK.

NR: So that there is a variety, and we talked about one or two in the past I believe…

JL: Yes.

NR: So maybe you're a new Professor, or your going into a new room that you have not been in before…

JL: OK.

NR: You would go on-line, click one of the links and this would come up, and you'd press play. And we'll watch it, I think I say 15 minutes [referring what I say within the video], I think it's a little less. We'll talk more afterwards.

[Seven minutes of watching the Multimedia video together].

NR: So given that this is just a pilot video, and, that's all I have done so far.

JL: I like it. And you know honestly, if I had this when I first started, how I learned about smart classes was going in and not knowing anything about it. Chasing Susan Prion, calling Greg, calling you, and if I had known, for example – I always bring my own laptop when I use the little tail, but I had, when it would not work and I called at x6668, they told me that I had to turn the projector on first, then my laptop, because it couldn't find it. It couldn't read it. And I didn't know that. So I had plugged everything in and I had did all that, so now my classroom is waiting, waiting, and they are all getting frustrated because it's not working, and, so if I had, for example, we hire new faculty all the time. We have a faculty portal that explains how to get around USF….

NR: Is that specific for School of Nursing?

JL: It is.

NR: Oh, interesting, I did not know that.

JL: Yeah, it's great cause we have all kinds of little wonderful details about things, if we'd had this, that we can put on that, and you know sort of, cause all the classrooms are pretty much like this now. Then I think that's one more step for the faculty to have before they face a group of students. I like it. It moves a little slowly, but I, and so I think most professors would like, ok, get on with it. You know, sort of….

NR: Like the instruction is too slow?

JL: Exactly. It could be faster, cause I think most people using it [in my interpretation she is projecting about how she learns and how it would be optimal for her] but I like that you applied it to in class things, and you showed, you know, you actually showed the device as they would see it. Rather than a manual that would apply to, any classroom that it looks like, I think doing in USF classroom. I liked it; I liked the visual. I liked the sound. And I liked, you know, the bar that was easy to use. And, you know, this is exactly what I would have loved to have had before I stood in front of 80 students and had to, futz with it myself.

NR: Well, yeah, I am interested, really interested to hear what you have to say as well as other people throughout the University. I am curious if, if it was your first, if it was when you were first hired, do you think it would be to slow for you then? Or is it because you have experiences that it feels slow?

JL: No, I think it is just a little slow, cause, well if you are aiming at mostly professors, I think professors take it in pretty quickly, and they can always go back to the bar, if it were, you know. But I think just the time that, that you spent on that first slide, were all you did was see the laptop and you were explaining it, that could probably be truncated a bit. But I think, the fact that you have that bar there, that if they didn't get it they could got back, that I just, at some point I think, what you might see from some professors, maybe most of us, would be yeah, yeah, I want to get on with it, get to the part where I need to boot up the projector. But, you know, maybe less time explaining what a smart classroom is. I don't know if most of us would honestly, go to the website and look to see what key we needed. We probably really wouldn't take that kind of time. We would probably just say, get me to Lone Mountain. Or, more importantly who can deliver the key to me 5 minutes before my class starts. And maybe that's something that should be part of every faculty orientation, before you go to your classroom, you should, you know, look to see what key you need and go get it. But honestly I don't think, few of us would actually use that, go and look up our technology. We just want the key and we want it now. We want, we don't want to got to Lone Mountain and get it. So, you know, that's just a technical issue of, you know, we probably, I, most people I know probably would bother, to look to see what key, we would just, if we had to get a key we would go and say give me the key. And we'd probably be just minutes before our class started. So I would say, few of us would plan that far ahead. But other than that, I like it, I like that it is auditory and it's visual. And I like that I could have read it in my jammies, sitting the night before my class.

NR: Cool. Yeah, I, when, cause I've been at the University for about 10 years, as student, and staff or what not. And all rooms have changed tremendously during that time…

JL: Unbelievable! [Gesturing in agreement].

NR: How long have you been.…

JL: Since 1992.

NR: Okay, yeah, so even longer. And I think the expectations have changed, for both sides. Like the IT division, various departments, faculty, like the expectations that, speaking of which, Classroom Technology used to be at the bottom of this floor…

JL: I know!

NR: So it was easy to just drop down and ask, can you guys just.…

JL: Grab a key.

NR: Yeah….

JL: Yeah, or have someone run up and troubleshoot.

NR: To where, I guess, we kinda touched on it a little bit before, with that company selling the product to you. And I was almost seeing an interpretation of us almost being a company'ish, but were not really staffed to do like the idealized support, and like you mentioned the key and bringing the key, and where given strict instructions…

JL: Of course, don't do that.

NR: We can't do that, and me thinking that there is a problem. How could I potentially solve that? This being one way, sometimes a USF Program Assistant will grab a bunch of keys and have them. But, yeah, I keep trying to think and reinterpret the way that we could all get on the same page.

JL: Right. Like for example, we have this fabulous technology, this smart classroom that maybe a professor can't use because they forgot to get a key. Or, you know, just simple things, like I forgot, so many times I'll be over in the Lone Mountain building and I forgot the tail, to integrate….

NR: A VGA adapter?

JL: Yeah, and so in fact, I am up there; I am down stairs, across campus, to get a tail. So I call and I say, [referring to the ITS Help Desk] does anyone have an extra one, [ITS responds with] no we don't have one, we can't release one. So now my whole lecture is blown, because I forgot, from the Cowell building, all the way up the stairs, my little stupid connecter. Now I can't do it. I don't have it on a stick, and it's my fault, but the consequences happen to the student. And I think some of the issues around technology that I have, it's so great when it works, but if you forget that one little stupid adapter, and then you can't get one, or you forget to get a key, now what do you do? I think that is one reasons I don't like a lot of power point, because I use it, but, if there is a power failure, if something happens and I can't use things. I have seen major presentations that completely fall apart cause they can't get the technology to work. I am there to hear this expect, can't you just talk? But I think the more faculty depend on technology, as the lecture, and you forget the tail, and somebody can't bring one to you. Or you don't have a key. And you're not staffed. This whole wonderful set-up, your PowerPoint®, this smart classroom, is defeated by a key….

NR: Yeah the bottleneck.

JL: Exactly! So, I think technology is great, but I think it's these little links, that really make a difference. But I think if I had this, and I knew I was a new faculty, and I knew, I think that if we put it on an orientation web-site, that said, you know, as new faculty in the classroom, you need to see this straight away. But most of the time we rely on one another, call our friends, we grab somebody in the hallway and drag them in and we help one another; this might mitigate a lot of that need.

NR: Or then, 'oh, just go here.'

JL: Right – yeah, right.

NR: Yeah, we're, like obviously in development, and trying to, and my whole envision is when we talk to, our colleagues, and people throughout the university, we can get informed, on how may we do it together, it's like a community achievement.

JL: It is. It is. I think that's, you know, a good surgeon is only as good as the scalpel in their hands. So if you know, you can have all this knowledge, and all, your ready to take care of the patient, but no body brought the scalpel. Sometimes it's the little things. And I think if there was more of an exchange. If there were more of an exchange, between the end users and. So, you launch this and you have some kind of feedback mechanizes. This was too slow. You know, that's what we don't have as partners; we often have a one-way thing. Here is the new technology, it's DonsApps®. To bad, so sad if you don't like it. Learn it. Whereas, now we don't have an opportunity to say, ok, you gave us this new thing, that you say that is so fabulous. You're going to be able to do this, and that, this, and that – that few of us actually what to do. We want to answer our email and be done with it. We are not in love with it. We use it. It's functional. It's not the thing, it's the thing that gets us from the student, to their learning, to their connection, it's not about that, it's just a link, for us. So we don't really care if you can do all these fabulous things. We just want to answer our e-mail. So now, there's no opportunity for us to say, you know what, we really don't like this part, the way it was launched. There is no backward feedback. I think that happens with a lot of technology launches. We're buying these new cardiac pumps, you're gonna to have to learn them. To bad so sad if you don't like them. And I think your idea of a partnership can only work if you have a mechanism for people to say, the next time you launch a new thing, can you just try this first. And I think that's what's missing, it almost seems like the technology is brought in, whether it's DonsApps or a new IV pump, over which we have very little control. And yet we use it everyday and it can make or break our day. So maybe that partnership, should be more of a circle, of, OK, it's been a month, how did it work for you.

NR: And they actually are going to be sending that for the DonsApps® one specifically.

JL: That's good. But so far there was no indication that we will be soliciting our feedback as to how it worked.

NR: There was a post card sent out. Did you get that by any chance?

JL: I don't think so.

NR: Hmm, and you check your university mailbox?

JL: Yes.

NR: Weird.

JL: So there was a postcard that said, we will be….

NR: Yeah, I actually designed it. I was really excited.

JL: Oh, did you.

NR: Yeah, because of being staff, and what not, I mean, I always see it from that point of view. And I always hear, that this, and they say this is what was sent out and they send us a copy. There was an e-mail, like I don't know, a month prior, and there has been other ones, but it is a lot of text.

JL: It is.

NR: And that's where this [multimedia videotext] is an example of just smart classroom technology, but it can be used anywhere, with anything.

JL: Everywhere. Exactly. And I would tell you your end users would love this. Because if it were put some place, on USFconnect or something, and it just said, you know, I don't really want to know the theory behind smart classrooms, I don't want to know the binary code, I just want to know how am I going to use it because I have a lecture to give. And I think, if I were to click on something like that and I would just say, 'oh wow, ok.' For example, I like the old consoles cause they have a mute button.

NR: Oh, like the Level 2. Yes, I was thinking if I should do [this prototype video] on that room too, or should I do it on this?

JL: I love the Level 2, because they have a mute button.

NR: [You are referring to] display mute, correct?

JL: Right. So you don't have that in this – that kind of a mute [button]. So I project it and it's got my desktop on it.

NR: Or you can hit another source and it will produce the blue screen. Or you have to wait for it to power off.

JL: But no one knows that.

NR: Oh.

JL: You know what I mean, so I get there and I am looking for the mute button, because I don't want to have the student's to see my desktop, before it launches. Right. So I want to mute it. Or I want to mute it during my talk, because I want to stop and use the blackboard, I mean the old chalk blackboard. And I don't want students looking at a screen, I want them to take their eyes way, and I want a [display] mute button. Just gimme, where can I do that? Right, so now I don't know in these level 1 classrooms how I can do that. That was frustrating for me, cause I've been using the old console thing, and

the mute button, so I hit mute, I do some talking, I un-mute it and go back to the screen, cause I believe that students need a lot of different things to make them learn. Maybe a student asks a question and it's not part of my PowerPoint®. So I mute it walk over to the board answer the question with a drawing, go back. Those are the kind of things, level 1, level 2. I get a classroom, I have my computer, I go in, I am looking for a mute button. So if there is no mute button, can you please put a little thing on there, if you want to mute, do these little things, you know what I mean.

NR: Yeah, and I don't, I know there is the little guide there and I don't think it says anything about that.

JL: It doesn't cause I looked everywhere, to say how can I just mute it. I just want to shut it down for a minute. So there are just some things that if a professor had that, that would be, if they had the difference between level 1 and level 2, the kinds of equipment you see, the kinds of buttons you have, even if it were side by side and I can choose, I would like that. Because that would mean you are bringing it to my use faster. Because again, I don't really want to know about the technology, or learn about the technology, I want to use the technology, you know what I mean. I don't want to spend a lot of time messing around with it, the time I spend I want to be spending preparing and teaching.

NR: Yeah, a lot of the things you're saying make my mind, I am trying to choose which one do I want to speak on, part of it, I have kind of gotten the feeling that, it's when you need it, you want to use it. But like some of this is done in preparatory, but it's not until there is a need of oh, I am in the room, oh there's not a display mute. And then where is, how to deliver that [information]. So there have been talks of providing more information in the classroom, but then how is really going to read through that whole thing, it's kinda like that this expectance thing [expectance factor], and the oh it's not there. At this point, had we not had a chance to talk how would you have provided that feedback, back to the ITS department?

JL: I don't know how I would have. Maybe; here's the problem, I don't want to call the poor person who is answering the phone and say, why don't you have any! [Et cetera]. They are the least person that needs to be blamed on this, right. But I think that most professors, most people, you now, don't know the question until it's there in front of them, like oh, mute button. I would not have though preemptively that I would have needed to ask that question. But I think if there were some, if the IT people would say, what are the things you use on your console, and that might be different that you would use from classroom to classroom, and put that on a little tick sheet.

NR: Like, prior to constructing the new ones?

JL: Exactly. You know, what things do you use? A needs assessment?

NR: And would you, lets say in a year that they are building new rooms, and if that was sent to you in an e-mail, most likely sent out in mass and would come from USFconnect, and it's sent to you, would you respond to that?

JL: I think so. And I think what I would suggest would be, that there would be some kind of e-mail survey, that you could easily do, but not 80 questions, you know 5. Then opportunities for a focus group, if you were to design a room, what would it look like. What do you need and use most? Well I do audio because I want students to hear heart sounds. So I want sharp audio, whatever. I teach geography, or history and I need, but I think no one ever asks us. Then all of a sudden a smart classroom appears, and you go from using a transparency machine to a slide projector, to a smart classroom and all of that transition. It's not hard to use a transparency machine, and it's not hard to use a slide projector, on/off, forward/backwards. But the movement from using a slide projector to using a smart classroom is orders of magnitude different. And I think that's when the technology becomes much more complex, what do people need and want to use, needs to be asked more. But I think all of a sudden I hear the term smart classroom; I didn't know what that meant.

NR: When do you think you heard it?

JL: I think I heard it, oh, when someone was telling me my room assignments, Tom Wade said, oh you have a smart classroom, I am like what's that? [referring to Tom] Your in a smart classroom, [JL replied] well what is a smart classroom? I don't know what that is, what does that mean to me, I don't know?

NR: So that's interesting, to me, attempting to anticipate that, is why I integrated it into this [Video tutorial]. Imagining the new professor coming in.

JL: Exactly.

NR: So I guess now I am trying to wrap around, trying to, cause it is so subjective, and based on the individual and what the individual needs, I guess I am trying to think of what, how to integrate that, and I do more reflection later.

JL: I think your bar, if I am a professor at USF and I know what the term smart classroom is, I am going to bar down to OSX®. I don't need to know what a smart classroom is, I need to know, 'oh my god, I haven't used a Mac in years, I am a PC person, I am clicking on that.' So in other words your not insulting the person, by saying you gotta listen first to the definition of a smart, and then see how to use the key.

NR: And did you feel that a little bit?

JL: Yeah, I did.

NR: Oh, okay.

JL: But I've been using it. But what I would have done is said, yeah I know that, I know that, I forgot how to use OSX® thing. You gave me the option of moving to something that I needed to know. So in a way, you allowed multiple level's of comfort. In other

words, if I am someone who has never heard of what the term smart classroom is, or how to power up a projector, I would watch that. But if I've been through all that many times but I've been using a PC and I wanted to use the Mac® in there, I want to go to the Mac® screen, I want to know how to the Mac® screen, I would go to that. So you say up front, you know jump to the bar that answers your question.

NR: Thinking about it now, I put in there, if you want to reply a section, but I didn't say if you'd like to skip maybe.

JL: And that would help, you can just say, if you want to move ahead to the part where you need to know. I mean you know cause people are going to do that. People are going to say, get me to the part that I need to answer. At least in my opinion, I always think time is the biggest factor, in whether or not someone uses a technology. Do I have the time to learn it and do I care. Or will I just find a work around. Will I just work around it; I just won't use it, I won't have the time to learn it. But this case I can just jump and jump and jump and jump all the way through it.

NR: Well I am glad that it seems like that it will be of use and now with having a conversation about it I can go back and think of what improvements can be made to optimize. Thank you very much. I really appreciate your time.

JL: Its good. You're welcome, it was a total pleasure.

NR: I was thinking as a side note of this, being in person with you, there is other ways, if I don't say it now then I may never have a chance to say it to you, there are other ways to change the view on your, like when you want to mirror displays, that's the term of…

JL: Right, right.

NR: You don't need to shut down the computer, there is another way.

JL: Oh, well that would be nice to know too.

NR: If you had an external monitor I could show you right now if you want?

JL: That's okay, I mean I am used to [my current way].

NR: You know your own way to solve the problem?

JL: Yeah, but just the term mirror imaging was new to me until I called and they said, 'oh you want to mirror. And I am like what's that?' You know, I even had to change the size of some of my slides, a bit, cause it was too much. So there are just some technical things I would have liked to have known before I stood in front of 80 students and embarrassed myself.

NR: And I understand, even with this, preparing for it, I needed to adjust my screen so that the presentation that I made fit on there. What about like, there is something that is going on, where like, the responsibility of the individual to learn it, and then the information that's provided. And people come to that very differently.

JL: Yes, that's true.

NR: That's something I am very interested in, and still looking at how to explore. I don't know if this, outside of this I am still debating, but.

JL: It's true. Ok so I am in medicine, and I know you need to take this antibiotic. I can tell you that you need to take the antibiotic. I can tell you how long you should take it, how often you should take it, but you're the one that's got to take it. So in many ways medicine is about professional relationships with your patient, right. Here's all the things I want you to do, now I want you to go home and they either do them or they don't. Patients will come back and they will take that antibiotic when there has been a consequence. So suddenly their ear infection is still there, and now they should have taken that antibiotic like you told them too. So I think in many ways compliance, getting people to comply, often doesn't mean anything to them until there's a consequence, like now I am in the classroom and am really embarrassed myself, now I'll learn it. So that is a tuff one.

NR: That's were I think of, at that point where do you go from there.

JL: Exactly. And where can you go to get your answer straight away that doesn't impinge on the poor understaffed people at the end of the phone, while you wait. I think maybe that's something that would require asking your patient, what are the 10 things you need to know before I send you home.

NR: Yeah, I guess this in a metaphorical sense is my attempt to do that.

JL: Exactly, exactly, exactly. Before you get in there and really embarrass yourself.

JL: Yeah, good.

NR: Thank you. Yeah, there are times of like instant reflection, man, there is so, and it’s such a huge thing.

JL: It is but your starting it, which is good.

NR: Well thank you very much.

JL: You're welcome Nick, I am glad to do it.

-The End