12-2017

Faculty Experiences with Instructional Innovations: A Phenomenological Study of Faculty Use of Instructional Video

Timothy Patrick ONeal

Follow this and additional works at: https://commons.und.edu/theses

Part of the Educational Leadership Commons, and the Instructional Media Design Commons

FACULTY EXPERIENCES WITH INSTRUCTIONAL INNOVATIONS:
A PHENOMENOLOGICAL STUDY OF FACULTY USE OF INSTRUCTIONAL VIDEO

by

Timothy P. Oneal

Bachelor of University Studies, Middle Tennessee State University, 2002

Master of Criminal Justice, Middle Tennessee State University, 2005

Educational Specialist, Middle Tennessee University, 2006

A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

In partial fulfillment of the requirements
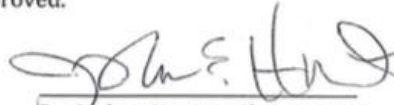

for the degree of

Doctor of Philosophy

Grand Forks, North Dakota

December

2017
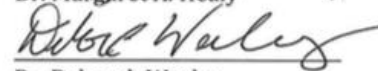
This dissertation, submitted by Timothy Patrick Oneal in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

Dr. Joshua Hunter, Chairperson

Dr. Margaret A. Healy

Dr. Deborah Worley

Dr. Lori Swinney

Dr. Wendelin Hume

This dissertation is being submitted by the appointed advisory committee as having met all of the requirements of the School of Graduate Studies at the University of North Dakota and is hereby approved.

Grant McGimpsey
Dean of the School of Graduate Studies

November 29, 2017
Date

PERMISSION

Title   Faculty Experiences with Instructional Innovations: A
               Phenomenological Study of Faculty Use of Instructional Video

Department   Educational Leadership

Degree   Doctor of Philosophy

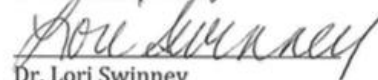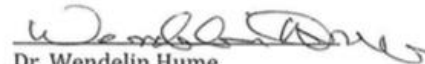   In presenting this dissertation in partial fulfillment of the requirements for a
graduate degree from the University of North Dakota, I agree that the library of this
University shall make it freely available for inspection. I further agree that permission
for extensive copying for scholarly purposes may be granted by the professor who
supervised my dissertation work or, in his absence, by the Chairperson of the
department or the dean of the School of Graduate Studies. It is understood that any
copying or publication or other use of this dissertation or part thereof for financial gain
shall not be allowed without my written permission. It is also understood that due
recognition shall be given to me and to the University of North Dakota in any scholarly
use which may be made of any material in my dissertation.

                              Timothy Patrick Oneal
                              December 14, 2017

TABLE OF CONTENTS

LIST OF TABLES

ACKNOWLEDGEMENTS

There are many people who were instrumental to me in conducting this study that I would like to take the opportunity to thank. Without their support, encouragement, and advice I most certainly would not have finished this endeavor.

First, I would like to thank my advisor Dr. Joshua Hunter for all of his advice and guidance throughout the dissertation process. Josh put in a lot of hours of reviewing my work and getting detailed responses to me very quickly. His detailed notes proved invaluable when editing the final version and I appreciate his genuine willingness to go above and beyond for his students.

I would also like to thank the members of my committee Dr. Margret A. Healy, Dr. Deborah Worley, Dr. Lori Swinney, and Dr. Wendelin Hume for all of their long hours of reviewing my work and giving me copious amounts of detailed feedback. I would also like to thank my committee for making special arrangements within their schedule to accommodate defense deadlines, your willingness to work with a tight and hectic schedule made all of the difference.

Finally, I would like to thank all of my family and friends for the support they showed me through this journey. Especially my wonderful parents, without their encouragement and support, I might not have finished this degree.

ABSTRACT

Colleges and universities create learning environments that strive to optimize

strengths and minimize weaknesses of learners. Media rich environments have

changed the current generation of learners just as it is now changing higher

education. There is currently a need to examine the experiences and perceptions of

instructors when adopting innovations such as instructional videos for use in their

media enriched curriculum delivery. This study used a phenomenological approach

to discover why and how faculty at a 4-year public university use the innovation of

instructional video in their classrooms. The phenomenon studied was the adoption

process and the motivation of the adoption process through the experiences and

perceptions of the participating faculty. The theoretical framework for studying this

process was Rogers's Diffusion of Innovation Theory. This theory is based on the

idea that innovations in technology and practices change over time and the adoption

or rejection of innovations is based on several factors that are discoverable.   A

phenomenological interview process was used to discover the lived experiences of

tenured and tenure-track faculty members in relation to their adoption of the

innovation of the use of instructional video in their teaching. Each participant

expressed that their use of the innovation of instructional video enhanced the

learning experiences of their students. They used social networks to share

knowledge about innovations like technology and instructional videos. They used

instructional video produced by others as well as some self-produced videos. They

did not have a more extensive use of self- produced instructional video because

their workloads did not provide the time to devote to professional levels of

instructional videos and their skill sets were not of a level to produce professional

results. The results of this study provide important data to examine when

developing approaches and policies that encourage innovations such as the

increased use of media rich environments such as instructional videos.

CHAPTER I

INTRODUCTION

The primary goal of colleges and universities is educating students but this goal can only be reached by understanding contemporary learners. Colleges and universities create learning environments that strive to optimize the strengths and minimize the weaknesses of the learners. Technology has changed the current generation of learners just as it is now changing higher education (Oblinger & Oblinger, 2015). This study will focus on the traditional college aged learners from 18-22 years of age.

The current generation of learners is referred to as the Net Gen (Oblinger & Oblinger, 2015). From a young age they have been exposed to many forms of media. Prensky estimates that this group will spend twice as many hours playing video games as they do reading traditional text materials. Much more so than earlier generations, this is a visually literate group that is much more comfortable in an image-rich environment rather than a text only environment (Prensky, 2001). Although reading text materials is much preferred by faculty, librarians and other academics, the majority of the population, including their student learners, does not prefer it (Prensky, 2001). This current group of student learners retains about 30 percent of what they see but only 10 percent of what they read (Manuel, 2002; Tsur, 2014). They get bored if not properly challenged, but if challenged, they come through in creative and innovative ways. They learn by doing, not by reading

instructions or listening to lectures (McNeely, 2005). They also prefer on-line videos to reading for homework assignments (Herreid & Schiller, 2013).

The generations of students in school today live in a world of digital technologies such as cellphones, smartphones, tablets, and laptops. These technologies have transformed the world of education. Students live in a technological world with their portable devices connected through the Internet (Friedrich, Peterson & Koster, 2011; Al Lily, 2013; NASBE, 2012; Marzilli et.al, 2014). No longer can a teacher use a blackboard, some overheads, and textbook to engage students from kindergarten through college (Kolikant, 2010, Prensky, 2001). The Pew Research Center conducted a poll in which 60% of the experts and stakeholders surveyed agreed that higher education would make innovative changes by the year 2020. Included in these innovations they mentioned "cloud-based computing, digital textbooks, mobile connectivity, high-quality streaming video and "just-in- time" information gathering" (Anderson, Boyles & Rainie, L., 2012, p. 4).

Researchers point out that today's college going population learn differently than previous generations (Kelly, 2008; Lessig, 2008; Kaufman& Mohan, 2009). They think this is because today's students and their technology uses are ahead of their teachers in the way they relate to the world around them and the tools they use (DeGennaro, 2008). Boyer (1990) stated "teaching should be a dynamic endeavor that involves all of the analogies, metaphors, and images that can build bridges between the teacher's understanding and the student's learning" (p. 23).

Teachers must innovate in order to keep their students active in the learning process (Snowden, 2012). Even former President Barack Obama recognized the need for innovation in education in his 2011 State of the Union address by saying that we need to out-innovate, out-educate, and out-build the rest of the world. He stated that encouraging American innovation would allow us to win in the future (White House, 2011).

One of the common ingredients in the new technology that the youth are using is video. *Wired Magazine* founder Kevin Kelly and Creative Commons founder and Stanford law professor Lawrence Lessig interpret the cultural shift as from book literacy to visual literacy where video is the new norm is a "world beyond words" where not only books but television, movies, and all audiovisual work will have tables of contents, indexes and abstracts, with the ability to be searchable in real time and be able to access the past as well as the latest evolution of technology. Lessig suggests that the trends today are as dramatic as the change 2000 years ago from the scroll to the codex (Kelly, 2008; Lessig, 2008). Most researchers are in agreement that media, and video in particular, are in an intense, unrivaled period of transformation. This transformation is attributed to technology changing the procedure of media creation, distribution and consumption more quickly and inexpensively than in any time in history. Also, the pubic expects to be able to consume and exchange media freely whenever they please.   New companies are offering revolutionary advances to technology on a regular basis (Kaufman & Mohan, 2009).

Since the 1920's countless millions of American students have been subjected to various versions of innovations such as instructional videos. Whether it be via film projector, video cassette recorder (VCR), digital video disc (DVD) player, or streaming over the world wide web, virtually every generation over the last three quarters century have been exposed to instructional videos. For the purposes of this study I will refer to all types of instructional media that incorporate both moving images and recorded sound as instructional videos. This is due in part to earlier forms of the media being referred to as film up until the mid 1960's when video was introduced as the new dominant format (Orgeron, Orgeron, & Streible, 2012).

Unlike today, early innovations like instructional videos suffered from a severe lack of accessibility to the audience. Educational institutions fortunate enough to have projectors were plagued by a lack of variety in terms of content. The majority of instructional movies in circulation at the time were produced for military purposes due to their efficiency in assisting in training during World War II (Orgeron, Orgeron, & Streible, 2012).   The 16mm film stock they were printed onto had a relatively short lifespan and was often discarded after use-value began to wane (Orgeron, Orgeron, & Streible, 2012). It wasn't until the mid 1960s when the invention of videocassette recording devices helped to drastically reduce the cost of media production that the United States saw an insurgent of movies being produced for educational purposes (Orgeron, Orgeron, & Streible. 2012). Today millions of instructional videos are made accessible to virtually anyone with an electronic device and a capable broadband Internet connection (Orgeron, Orgeron, & Streible.

2012). Many of the instructional videos created in the early to late part of the 20th

century have been achieved and transferred into a digital format that has found a

permanent home on the Internet (Orgeron, Orgeron, & Streible. 2012).

Educators have incorporated innovations such as instructional videos into

their curriculum almost as long as the format has existed. Almost all of the

principles that apply to the traditional classroom delivery also apply to learning

from instructional videos (Passerini & Granger, 2000). Instructional videos make it

possible to overcome constraints of the "real world" of the classroom and explore

possibilities in the digital world (Giannakos, et. al, 2014). Videos create

multisensory learning environments by engaging auditory and visual channels in

presenting material (Hibbert, 2014).

Today's learners are accessing videos from sources unavailable until the last

few years. The new platforms used include the free video hosting services such as

YouTube and Vimeo. You Tube has grown to the point that they are posting 13

hours of video every minute (Kaufman & Mohan, 2009).   The Khan Academy has

had amazing success with their YouTube videos as their instructional videos have

been viewed over 300 million times (Guo, Kim, & Rubin, 2014; Kahn Academy,

2015). Use of video increases the ability to retain facts and figures. Forrester

Research has estimated that one minute of video is equivalent to about 1.8 million

written words. Further, about 90% of the information received by the brain is

visual and visual information is processed 60,000 times faster than written text.

This suggests that visual learning through videos can increase the rate at which we retain information but also improve overall learning (Tsur, 2014).

In addressing technology and classroom innovation, The New Media Consortium believes merely presenting content is no longer enough stating: "Students expect learning that matters; learning connected in timely ways to the real world; learning that engages their interests; and learning experiences that see them as entire persons, not just consumers of content"(New Media Consortium, 2013, p. 2).

Innovative videos have been successfully used to enhance learning whether they are distributed via the Internet or delivered as part of the classroom presentation. Herreid & Schiller (2013) in their study of "flipped" classrooms, found that the majority of teachers, as well as their students, preferred on-line videos over reading material in preparing outside of class for active in-class learning.

In "flipped" classroom settings, these audio-video files are distributed in a digital format for use by the students on their laptops or other mobile devices and are referred to as video podcasts (McGarr, 2009). These videos are designed to support traditional classroom learning, not to replace it. Studies to date, have found that videos have positive impacts in student learning outcomes. A study by Allen and Smith (2012) comparing live demonstrations to video podcast demonstrations for doctoral physical therapy students, found that podcasting was just as effective as live demonstrations for presenting basic skills. There were no differences in exam scores between those who watched live demonstrations and those that watched the

podcast. Another study dealing with the teaching of statistics found that computer assisted video tutorials are an effective and efficient tool for enhancing student learning as compared to traditional lecture techniques, especially when teaching higher order conceptual statistical knowledge (Lloyd & Roberson, 2012).

A study of an introductory American Government class involved using a web-based multimedia supplement including interactive graphics and videos in addition to a textbook and other traditional classroom pedagogies over a period of three years with 14 sections. They found that if the multimedia presentations were consistent with interactive media best practices, that student learning improved generally. The greatest improvements were in written test results, especially with students who struggled early in the course (Rackaway, 2012).

Innovative videos have been shown to be particularly helpful as a tutorial device for science, technology, engineering and mathematics (STEM) courses. One study examined the use of video tutorials in an undergraduate analytical chemistry course. The instructor uploaded video explanations of particularly difficult problems to his web site. The results were that these video tutorials were a valuable, flexible, and cost-effective tool in helping students master the problem solving in this chemistry class (He, Swenson, & Lents, 2012).

The concept of the "flipped/inverted classroom" is an emerging trend among institutions of higher education. Flipping the classroom is an academic approach and process that replaces the traditional classroom lecture with a video lecture and

supplemental videos sources such as You Tube demonstrations that are viewed by

the students before they come to class and the class period is reserved for more

learning activities and interaction with the professor (Hughes, 2012; Estes, Ingram,

Liu, 2014). Students complete asynchronous video lectures outside of the classroom

on their own time and engage in active, group-based problem solving exercises

during scheduled class meetings (Bishop & Verleger, 2013).   This means that events

and activities that have traditionally been facilitated within the classroom are now

taking place outside of it (Lage, Platt & Treglia, 2000).   Researchers state that this

unique approach to the traditional classroom can aid in areas from student

retention to helping instructors to utilize class time efficiently (Estes, Ingram, Liu,

2014).

The emergence of the flipped/inverted classroom requires instructors and

instructional designers to reverse the traditional thinking in regards to curriculum

instruction. It also requires that new, innovative technologies to aid in the delivery

of instructional content to the student (Berrett, 2012; Zhang, Wang, &Zhang, 2012).

Video based asynchronous instruction is emerging as a popular media format for

the flipped/inverted classroom. This is due mainly in part by how effective video

can be for the transference and retention of information to students. In fact,

according to several studies, video lectures outperform in-person lectures and

interactive on-line videos do even better (Cohen, Ebeling & Kulik, 1981; McNeil,

1989; Zhang, et. Al, 2006).

Teachers that have employed the flipped classroom learning style have found improved student engagement. They have also reported challenges in carrying out the new format of directed study than for the traditional readings "required" before lectures. Under the new classroom model, the professor must be prepared to handle impromptu questions from the class after they have the lecture presentations before. Finally, there often are issues of technology and media creativity in the preparations of the pre-class videos and even some concerns about the technology access of the students (Estes, Ingram, Liu, 2014).

One of the more recent innovations in higher education is the creation of the Massive Open Online Courses (MOOC). MOOCs are massive virtual classes that allow students from around the world to enroll in specific courses at a university, typically at no charge and with no institutional credit earned. MOOCs rely heavily on the use of pre-recorded video lectures to help deliver course content to students. Historically, educators have been producing instructional videos ever since the technology became accessible. It hasn't been until recently that they have had a medium in which to store and distribute it. Online streaming sources such as YouTube, Vimeo and Kaltura are all video hosting services that allow educators and institutions to warehouse uploaded instructional materials for their students and the public (Guo, Kim, & Rubin, 2014). The majority of MOOC programs try to produce high quality instructional videos that incorporate both video of the instructor but also, on-screen text and animated illustrations.

Although MOOCs are still very much in their infancy they have seen large insurgencies of students signing up for classes. This innovation is currently only being implemented at some of the more prestigious schools with large endowments and brand recognition (i.e., Harvard, MIT, Stanford, etc.). Currently, the majority of the schools engaging in this innovation have the resources necessary to develop that type of multimedia content in the abundance needed for the wide array of course offerings. The heavy usage of video has been effective but extensive use of video production is also expensive. This extensive use of video might prove more difficult for an institution with fewer resources to allocate towards video production.

According to a recent article on the best practices of creating video based course content; videos make it possible for educators to use digital environments to transmit complex ideas and concepts through a series of real moving images, animations, and audio (Brunvand, 2010). The consensus among experts and scholars at the moment is unanimous when naming the Khan Academy as setting the standard in this field. The Khan Academy got its start when it's founder Salman Khan, an MIT engineering graduate, began making tutorial videos about math and science to help his nephews and nieces better understand their elementary school course material. What Khan discovered was that this type of instructional media was very effective in terms of the results it yielded for his young family members. He then decided to make additional instructional videos and made them accessible to the public at no charge under the umbrella of the Khan Academy (Khan, 2015).

What started out as a few instructional videos about basic math and science has now erupted into a complete series of curriculum based modulated videos from just about every subject imaginable in the K-12 arena. These videos observe current theories and research about the human attention span and typically do not exceed fifteen minutes in length. They also have built in quizzes that test the knowledge of the student at the end of a lesson module before permitting them to continue on to the next (Noer, 2012). According to Marc Prensky "what the Khan Academy represents is the first comprehensive realization of a dream that many have had since the inception of computers and online videos: that every student could have access to a great explainer, and, moreover, could watch that teacher's explanation over and over, as often as the student needs" (Prensky, 2011).

The eighteen to twenty-two year olds currently in higher education learn better from media rich environments. Many professors in higher education need to adopt teaching techniques that will engage this current crop of students in a media rich environment (DeGennaro, 2008).   One very important technique in establishing a media rich environment is instructional video. How to get faculty to adopt new teaching techniques like instructional video is an ongoing concern for administrators that want their students to have the best learning environments. The leading theory in the spread of new ideas is Rogers (2003) Diffusion of Innovation theory.   Rogers defines diffusion as "the process in which an innovation is communicated through certain channels over time among the members of a social system"(p. 5). Rogers defines "innovation" as "an idea, practice, or object that is

perceived as new by an individual or other unit of adoption" (p. 475). The question is: How do we get faculty to innovate by using media rich instructional videos incorporated into current curricula by faculty of varying levels of expertise?

If the students are better prepared, they will learn better. Innovations like instructional videos have shown that they help students better prepare and learn whether it is in class or preparing for class. The professorate needs to upgrade their pedagogy to include instructional video as part of a media rich environment.

Statement of Problem

There is currently a need to examine the experiences and perceptions of instructors when adopting innovations such as instructional videos for use in their media enriched curriculum delivery. The analysis of these variables could prove to be invaluable when developing approaches and policies that encourage the increased use of media rich environments such as instructional videos (Surry & Farquhar, 1997). According to Stockdill and Morehouse (1992), the main factors that impact an instructor's tendency to adopt new curricular approaches include educational need, user characteristics, technology considerations, and organizational capacity. The variables related to the adopters' needs must be considered in the adoption process to help increase the odds of a successful adoption. Little research has been conducted on the variables about how instructors adopt and use media rich innovative approaches such as instructional

videos in the course curriculum. More research is needed to provide guidance to academic leaders as to how they can develop policies and actions that facilitate and stimulate faculty to improve the learning environments of their students through the use of instructional videos.

The innovation of instructional video has been used in classrooms for the last half century but only as in-class presentations supplemental to or in lieu of lectures (Orgeron, Orgeron, & Streible, 2012). This practice is tried and true but ignores the reality of the media rich devices such as cell phones, tablets, and laptops that students currently use for most phases of their lives (Prensky, 2001). Gikas and Grant found that mobile devices and the use of social media create opportunities for interaction between faculty and learners. The devices enabling social media provide opportunities for collaboration between students as well as allowing the students to engage in content creation and communication (Gikas & Grant, October, 2013). These video based devices can be used by college professors to enhance consumption of instructional content.   College professors need to use these new media delivery devices to add to the learning in their classrooms. Faculties need to be encouraged by their leaders to "innovate" in the way they deliver classroom content.

Purpose of the Study

This study used a phenomenological approach to discover why and how faculties are using instructional innovations such as instructional video in their

classrooms. The phenomenon studied was the adoption process of using

instructional video and the motivation of the adoption process. This phenomenon

was explored through the experiences and perceptions of the participating faculty.

The theoretical framework for studying this process was the diffusion of innovation

theory that will be discussed in detail in Chapter 2. The target audience for this

study was the faculty of a 4-year public university.

Research Question

This study explored the use of innovation through the lens of videos for

instructional purposes by faculty members and instructors at a 4-year public

university. It examined the variables that shaped their utilization of instructional

videos for instructional purposes. This study focused on the following qualitative

research questions:

1. How do faculties perceive and experience technological innovations in their

   teaching practice?

2. What are faculties experiences using the innovation of instructional video?

Definitions

The following are operational definitions used in this study. They are

defined here for better clarity.

1. Academic Leadership: For the purposes of this study academic leadership will

refer to Department Chairs and Academic Deans. Department Chairs are defined as

those who serve as members of the full-time teaching faculty that have been

appointed to a managerial role of overseeing their departments daily operations (Bowman, 2002). Academic deans are defined as the "director or highest authority within a certain professional school or college of a university" (http://www.fulbright.pt/index.php?mod=files&action=download&fileid=70).

2. Adopter Categories: According to Rogers' (2003) there are currently five adopter behavior categories in regards to innovations, innovators, early adopters, early majority, late majority, and laggards (Sahin, 2006).

3. Diffusion: The process in which an innovation is communicated through certain channels over time among the members of a social system. (Rogers, 2003, p.5)

4. Faculty Members: Full-time members of a college teaching staff. For the purposes of this study only full-time tenured or tenure-track teaching faculty will be interviewed.
(http://www.fulbright.pt/index.php?mod=files&action=download&fileid=70)

5. Flipped Classrooms: A modern innovation in which learning events (e.g. lectures) that would traditionally happen within the classroom during class happen outside of the classroom through the use of prerecorded video presentations (Bishop & Verleger, 2013).

6. Innovation: "An idea, practice, or project that is perceived as new by an individual or other unit of adoption" (Rogers, 2003, p. 12)

7. Instructional Media: Visual, audible, or textual communications whose sole purpose is to transmit information (Orgeron, Orgeron, & Streible. 2012).

8. Instructional Technology: "The tools, media, and methods developed to facilitate the teaching or learning" (Anderson, Boyles & Rainie, 1998).

9. Instructional Videos: Videos that are used with the sole purpose of delivering knowledge, ideas, and concepts to learners (Orgeron, Orgeron, & Streible. 2012).

10.   Massive Open Online Classes (MOOC): Massive virtual on-line classes that allow students from around the world to enroll in specific courses at a university, typically at no charge and with no institutional credit earned (Guo, Kim, & Rubin, 2014).

11. Online Courses: Classes that use transmissions via the World Wide Web to create a virtual learning environment (Coswatte, 2014).

12. Participants: Participants in the study who are classified as full-time tenured or tenure-track faculty or academic leaders (Creswell, 2013).

13. Streaming Video: Video that is accessible to viewers via the Internet (*PC Magazine*, 2016).

Summary

In the first chapter of this dissertation, the idea that the learning styles of the traditional aged (18-22) college students is evolving. The focus of this new group of learners is personal technology that has a heavy emphasis on video content. In order to stay current with student learning, college professors must evolve their

pedagogy to continue to engage their students. How and why professors adopt

these new innovative technologies have implications for academic leaders in their

role of supporting innovation. Chapter 2 will include an in-depth review of the

literature and research pertaining to the adoption of technological innovations by

faculty members in colleges in the United States including contextually related

studies conducted on the adoption and use of classroom technologies. There will

also be an in-depth description of the theoretical framework that will be used for

the purposes of this study. The methodology used in this study will be described in

detail in Chapter 3. Chapter 4 will present the findings and the analysis of the study.

Chapter 5 will present implications and conclusions of this study.

CHAPTER II

REVIEW OF RELEVANT LITERATURE AND RESEARCH

This study was created to help better understand how faculty members a 4-year public university adopt and implement innovations such as instructional videos for instructional purposes into their classroom curricula and to examine the variables that influence that adoption. This study used the diffusion of innovations theoretical framework as described by the works of Everett Rogers (2003). This chapter consists of a review of relevant literature.

David Krathwohl (1993) created an itemized list of goals pertaining to literature research, they read as follows:

- To assist in conceptualizing the problem, refining it, and if necessary, reducing it to a feasible size and scope.

- To determine major variables of importance to the phenomenon.

- To understand the relationships among these variables.

- To understand the frontier of research on the problem.

- To place the conceptualized problem in the context of previous research, showing how the problem relates to it yet goes beyond it. (p.103)

The first section of this literature review will examine the theoretical framework on the diffusion of innovations as laid out by Everett Rogers (2003). A review of contextually related studies will be reviewed and examined. The last section of the

literature review will consist of a determination of the important variables relating to faculty adoption and use of instructional videos for instructional purposes.

Diffusion of Innovations

The Diffusion of Innovations is a theory that seeks to better understand how innovations are adopted within certain populations. The study of innovation diffusion took off in the United States during the 1920s and 1930s when agricultural technology began to rapidly evolve and researchers needed a way to determine how farmers were implementing innovative techniques, equipment, and hybrid seeds (Rogers, 2003). It wasn't until 1962 when a sociology professor by the name of Everett Rogers wrote a research paper that synthesized over 508 diffusion studies across multiple fields. The study would lead to the theory that explained how people adopted new methods of doing things as well as knowledge about new tools created to help them achieve their objectives.   The theory of Diffusion of Innovations examines three major insights into the process of social change (Robinson, 2009). 1. What makes an innovation spread? 2. The importance of peer networks and conversations.   3. Understanding the needs of different user segments. Over 6,000 research studies have implemented these three insights and are considered to be among some of the most reliable in the social sciences (Robinson, 2009).

Diffusion of Innovations is quite different from other sociological theories about change in its approach. Rather than focusing on the persuasion of change, it

views change as a "reinvention" of behaviors and products as they evolve to better suit the needs of the populations/demographics they serve. It is the innovations in technology and practices that change not the people or their interests (Robinson, 2009). Diffusion of Innovations examines why certain innovations fail while others are adopted successfully.

There are currently five qualities that Diffusion scholars recognize when determining the success of a certain innovation.

1) Relative advantage: This is the degree in which a particular group of users deem an innovation as being a superior way of doing something, more so than what superseded it. This is typically measured by the group in terms of social prestige, economic advantage, satisfaction, or convenience. An innovation is more likely to be rapidly adopted by a group if it is perceived as a relative advantage (Rogers, 2003).

2) Compatibility with existing values and practices: This is when an innovation is seen as complying with the values, needs, and past experiences as its potential adopters. If an innovation that is incompatible, the norms and practices of the group will struggle to find rapid adoption within that group as opposed to one that does (Rogers, 2003).

3) Simplicity and ease of use: This relates to how difficult an innovation is to understand or implement. Innovations that are simplified and easy for the users to understand are much more likely to be adopted rapidly into practice than those that require users to develop new skill sets (Rogers, 2003).

4) Trialability: Innovations that allow for the user to experiment with before adoption are more likely to be implemented as it represents less of a risk (Rogers, 2003).

5) Observable results: When an innovation's results are easier for a potential user to see, it is more likely they will adopt it. The productive visibility of an innovation makes it more likely for the facilitation of peer-peer conversations about the innovation and the likelihood that it will be adopted by others in the community (Rogers, 2003).

Peer Networks and Peer-Peer Conversations

Commercial marketing can do a lot in terms of bringing an innovation to an individual or groups attention, but when it comes to the adoption of an innovation its conversations within groups and communities that have the most influence. This peer involvement is mainly due to the fact that adopting new behaviors or products involves a level of risk to the user. Individuals look for credible testimony through the experiences of people they know and trust within their communities.   The exceptions to this rule tend to be those classified as "early adopters". These are individuals that will often implement an innovation into their routine with no more than reading an article about the product or behavior. Early adopters tend to be more apt to take risks due to being more personally informed, confident, and/or financially secure, whereas everyone else is more cautious about negative consequences surrounding failure (Rogers, 2003).   As early adopters results

become more visible with the rest of the community they become the first line of communication with potential adopters as they decide whether the product or behavior is safe and prosperous enough to adopt. According to Rogers (2003) peer-peer communication is tremendously more effective than mass communication (marketing campaigns) when convincing potential adopters to engage.

Adopter Categories

According to Diffusion researchers, a population can be placed into five different categories based on their potential of adopting a specific innovation:(Rogers, 2003)

Innovators: These are creative people who spend large amounts of time and energy into developing new concepts and inventions and they enjoy conversing about them. They often appear to be dangerously idealistic to a pragmatic community majority due to their fixation on their innovation. (Rogers, 2003)

Early Adopters: As stated above, these are people who are the first to buy into the ideas and gadgets created by the innovators. These individuals are risk takers, fashion conscious, and enjoy being seen as leaders of an emerging trend. People in this category tend to be more financially secure and rejoice in the opportunity to having an advantage over their peers. Because of this, their experimentation of a new concept or invention is more highly visible among their peers who anxiously wait to see the final result. (Rogers, 2003)

Early Majority: People that fall into this category are cost sensitive pragmatists who will not adopt an innovation without being convinced of the added benefits first. They're looking for reassurance from marketing terms like "industrial standards" and endorsements from people they feel share their social and industrial norms. Simply put, they are people looking for an easier, more effective way of doing what they've already been doing without substantial distraction to their time, energy, or money. (Rogers, 2003)

Late Majority: These tend to be pragmatic people who are highly uncomfortable with taking risk and are unsure about new innovations. The main driving force among them for not adopting specific innovations is the fear of being ostracized by others who are steadfast in their reluctance in adopting new ideas and products, even though it is paying off dividends for those who have. (Rogers, 2003)

Laggards: These are people who are the very last to adopt an innovation even when the benefits are obvious. They tend to be extremely skeptical and will often criticize those who adopt new products and behaviors. (Rogers, 2003)

Rogers (2003) estimated that innovators make up 2.5%, early adopters come in at 13.5%, early majority make up 34%, late majority also comes in at 34%, and laggards finish it off by accounting for 16%. Rogers goes on to say that no one can be classified as strictly a laggard or an innovator in regards to the adoption of all new innovations. Most people reside in the majority category and only venture into the realms of innovator or laggard on specific innovation implementation.

Innovation

According to Rogers (2003), an innovation is "an idea, practice, or project that is perceived as new by an individual or other unit of adoption" (p.12). Regardless of how long ago an innovation was created, if the potential adopters perceive it as new, it falls into the category of an innovation. The characteristic of the innovation being perceived as "new "is part of the three steps of knowledge, persuasion, and decision.

Rogers points to the importance of uncertainty as a roadblock to an innovations adoption. Uncertainty may be created by a consequences associated with the innovation. He states "consequences are the changes that occur in an individual or social system as well as a result of the adoption or rejection of an innovation" (Rogers, 2003, p.46). Uncertainty can be combated by clearly articulating the advantages and disadvantages of an innovation to potential adopters so that they may assess the consequences.

Communication Channels

Rogers (2003) states that communication occurs through channels between resources and is a "process in which participants create and share information with one another in order to reach a mutual understanding" (p.5). Channels are devices, which allow for the transference of messages from the source to the receiver (p.204). According to Rogers, communication is a specific type of communication that requires an innovation, two individuals or other units of adoption, and a

communication channel (p.19). Interpersonal communication (conversation between two or more individuals) and mass media (television, radio, and publications) are considered the two main communication channels. Rogers states "diffusion is a very social process that involves interpersonal communication relationships" (p. 19). Meaning that interpersonal channels have a greater chance at effecting an individual's views or attitudes towards an innovation. The communication within interpersonal channels may exhibit the characteristic of *homophily,* which is, " the degree to which two or more individuals who interact are similar in certain attributes, such as beliefs, education, socioeconomic status, and the like"(p. 19). However, *heterophily* is needed for the diffusion of innovations, that is, "the degree to which two or more individuals interact are different in certain attributes" (p.19). *Localite* and *cosmopolite* are the two categories of communication channels that allow for the communication of ideas between individuals of a social system and outside sources. *Cosmopolite* channels of communication connect the individual in the social system under study with sources outside the social system. Cosmopoliteness is the degree to which an individual is oriented outside a social system (Rogers, 2003). While interpersonal channels can fit both in the *localite* and *cosmopolite* categories; mass media communication is entirely made up of the cosmopolite category. This is due to the significant role that the characteristics of the mass media and cosmopolite channels play in the knowledge stage, while *localite* and interpersonal channels play a similar significant role in the persuasion stage of the innovation-decision process (Sahim 2006).

Time

The third element in the diffusion process is time. Rogers (2003) states, "much other behavioral science research is timeless in the sense that the time dimension is simply ignored or does not matter" (p.20). He feels that the inclusion of the time dimension into diffusion research articulates one of its strengths, but the measurement of the time dimension can be widely criticized. Rogers further argues that " the time dimension is involved in diffusion in (1) the innovation-decision process by which an individual passes from first knowledge of an innovation through its adoption or rejection, (2) the innovativeness of an individual or other unit of adoption compared with other members of a system, and (3) an innovation's rate of adoption in a system" (p.20).

Social System

The final element in the diffusion process is the social system. Rogers (2003) defined it as "a set of interrelated units engaged in joint problem solving to accomplish a common goal" (p.23). There are formal social systems with a hierarchy of individuals that give orders to those lower on the hierarchy. There is also an informal social system that "exists in interpersonal networks linking a system's members, tracing who interacts with whom and under what circumstances" (p. 24). The diffusion of innovations occurs inside of the social system; therefore type of social structure within the social system has a direct influence of the diffusion of innovations. Rogers also argues that the attitudes of

individuals within the social system impacts the innovativeness of the individuals (Rogers 2003).

The Innovation-Decision Process

Rogers (2003) presented a five-stage process that accounts for how the individual (or other decision making body) discovers, evaluates, forms attitudes, implements, and confirms an innovation. Before starting the process a reckoning of existing conditions must be made. The considerations include what are the current practices that need modification. Are there any existing needs or practices that could be addressed by the innovation? Does the individual or decision-making unit have a history of being innovative? And what are the norms of the existing social system?

The first stage of the process is knowledge gathering. This stage concerns exposing the decision-makers to the existence of the innovation. How the innovation functions is discovered and explored. Rogers (2003) lists three types of knowledge's for this stage.

The first is awareness-knowledge. This simply informs that an innovation exists. The second is "How-to-knowledge" which is information necessary to use the innovation. If the innovation is simple, then less information is needed. If the innovation is complex, more information is needed. If the decision-makers have less than adequate information about the innovation, there is a higher probability that the innovation will be rejected or if it is initially accepted it will be discontinued.

The final stage is "Principles-knowledge"(Rogers, 2003). This is the phase where the decision-makers gain understanding of the basic principles underlying the innovation. This is often thought to be more for formal education and theoretical understanding rather than the more practical "How-to-knowledge."

The Persuasion Stage

The Persuasion stage is where potential adopters form an either favorable or unfavorable attitude about an innovation. Rogers (2003) defines attitude as "a relatively enduring organization of an individual's beliefs about an object that predisposes his or her actions" (pp. 174-175). The mental activity at the persuasion stage is affective (feeling), whereas at the knowledge stage it is cognitive (knowing). Rogers differentiates the meaning of the term persuasion in regards to diffusion of innovations from that used by scholars in other fields. He states " our meaning of the persuasion is equivalent to attitude formation and change on the part of the individual, but not necessarily in the direction intended by some source, such as a change agent" (p.175). When deciding whether or not to try an innovation, individuals may mentally conceptualize the perceived benefits of an innovation. This requires the individuals to hypothesize and counterfactually contemplate: What are the consequences (positive/negative) of adopting this innovation. The uncertainty of an innovation along with social reinforcement from peer groups has a direct effect on the individual's attitudes, beliefs, and opinions about an innovation.

The Decision Stage

According to Rogers (2003) the decision stage of the innovation-decision process "takes place when an individual (or decision making unit) engages in activities that lead to a choice to adopt or reject an innovation" (p. 177). This stage is broken into two categories: adoption and rejection. Adoptions refer to the full use of an innovation by an individual, and reject refer to the decision not to adopt an innovation (p.177). Rogers says that innovations that allow individuals the opportunity for at least a partial trial have a higher rate of adoption than those that do not. However, rejection of an innovation is always a possibility. According to Rogers there are two main types of rejection: active rejection and passive rejection. Active rejection refers to individuals who considered adopting an innovation but ultimately chose not to, discontinuous of an innovation shortly after adoption would also fall into this category. Passive rejection happens when individuals who were not considering an innovation don't adopt it. Rogers points out that the two types of rejection have not been thoroughly distinguished or studied enough in diffusion research.

The Implementation Stage

Implementation occurs when an innovation is put to use by an individual. Up until this point, the innovation-decision process has been thinking and deciding mental exercise. Implementation differs, as it requires overt behavior change as the individual is now putting the innovation into practice. This stage typically follows

the decision stage immediately barring any logistical availability issues. Although

the decision to adopt has been made in a previous stage, there still remains a degree

of an uncertainty about how the innovation will ultimately perform. Rogers (2003)

states that adopters will have questions such as "Where can I obtain the

innovation?" "How do I use it?" and "What operational problems am I likely to

encounter, and how can I solve them?" (p.179). These types of problems of

implementation are more serious for organizations than that of individuals.

Individuals typically play a much larger role in the decision to adopt than those who

are part of an organization responsible for implementing a new innovation.

depending on the nature of the innovation, Rogers believes the implementation

stage could be lengthy in terms of how long it takes to become institutionalized as a

regular part of the adopter's operation.

Reinvention occurs when an innovation is changed or modified to meet the

needs and performance of the individual. Rogers (2003) argues that a higher rate of

adoption will occur for an innovation that has been reinvented by the adopter. He

also distinguishes the differences between an invention and an innovation. An

invention is defined as "the process by which a new idea is discovered or created"

(p. 181)whereas, an innovation is "an innovation is the process of using an existing

idea" (p.181).

The Confirmation Stage

During this stage the adopter looks for confirmation that the implementation of the innovation was a positive decision. If the adopter is exposed to negative messages about the innovation from other individuals it is still possible to discontinue its use. According to Rogers (2003) individuals are less likely to seek out negative feedback from others once an innovation is set into place. Later adoption or discontinuance of an innovation occurs during this stage as the adopter finalizes their attitudes towards it.

An innovation runs the risk of discontinuance during this stage. There are two types of discontinuance: replacement discontinuance and disenchantment discontinuance. Replacement discontinuance occurs when an innovation is rejected and better innovation is put in its place. Disenchantment discontinuance happens when the innovation is rejected because the individual deems its performance as unsatisfactory, or it doesn't meet the desired needs.

Related Studies Based on Rogers' Theory

An administrative study by an instructional technology staff was trying to understand why and how faculty use and integration of new technologies provided by their university (Berryhill & Durrington, 2009). The faculty were expected to use available new resources but they had no data concerning whether they were actually adopting these technologies into their classroom presentations (McNeely, 2005). The researchers used the diffusion of innovation theory developed by

31

Rogers (2003) to gain an understanding of the applications and use of instructional technology by faculty.

Berryhill and Durrington (2009) designed a three-part survey. The first part was designed to measure faculty knowledge and their adoption rate of the resources provided. The second part asked the faculty if they considered themselves adopters of the new instructional technology made available to them. They were also asked about with whom they discussed instructional technology and how and from whom they received training on the new technology. The final section of the survey collected demographics of the target population of the survey group.

There were 12 possible selections for training. Over half (55%) of the faculty received their training from the staff of Information Technology followed by self-tutorials (35%), the Internet (24%) and the Center for Teaching and Learning (20%). They found that there was a positive correlation between those faculty trained by information technology staff, self-tutorials, and tutorials on the internet and those faculty that adopted the new technology in their classrooms. Berryhill & Durrington(2009) concluded that as the university continued to adopt new technology and develop new techniques of instruction to reach the current student population who increasingly use innovative technologies to communicate and learn. Universities should invest in the training and support of faculty using technologies for teaching. The return on investment will come from increased student success in learning (Berryhill & Durrington, 2009).

A multidisciplinary faculty-led initiative to establish a Faculty Learning Community at the University of Texas at Tyler included a study to determine faculty attitudes towards incorporating technology in higher education curriculum. A Faculty Learning Community, in this instance, is simply a group of faculty who share innovative methods and common goals. The overall goals included learning about how technology was currently being used and encouraged on their campus and how the innovative successes could be shared by other faculty to increase learning by their students (Marzilli et al., 2014).

To accomplish the study, a mixed method survey was developed to acquire not only quantitative information but also included open-ended qualitative questions to allow the participants to express their ideas about including technology in the curriculum. The research questions included their self-reported level of technology expertise and usage of technology in their individual classrooms. Further, faculty were asked about their attitudes concerning the uses and usefulness of technology and the opportunities that were presented by utilizing more technology in higher education classrooms. They were also queried about the barriers to the use of technology that they perceived or had encountered. Finally, they were asked their opinions about the future use of technology in higher education classrooms. The survey was sent electronically to faculty in 32 departments across five colleges. The response rate was 25% (N=72) (Marzilli et al., 2014).

The quantitative results of this survey revealed that faculty agreed that using technology increases student engagement, facilitates course delivery and improves instruction. However, some of the responding faculty showed some reluctance to more technology because the primary use of technology by most the faculty was "moderate".   The survey reported that the average faculty member used six different technologies for their classes. The top six were course management and presentation software, word processing, spreadsheets and the Internet.   They described their skill level with technology as relatively high but their frequency of use was only moderate.   There was a positive correlation between reported skill and frequency of use of technology in the classroom. Those with high skills used more different types of technology and more frequently than those claiming lesser skills (Marzilli, et al., 2014).

The qualitative responses confirmed the findings of the quantitative questions and of existing literature. However, these participants felt that many of their students were not able to use technology effectively, which is counter to results in other studies. Three of the positive opportunities reported were aiding the faculty in organizing the course, student cooperation and engagement, and discouraged plagiarism. The largest barrier was seen to be lack of technological skills and knowledge on the part of the faculty as well as on the part of the students. According to the study participants, faculty are accepting of the new technological advances in higher education but were concerned that these advances may come at the expense of the humanistic perspective gained in face-to-face encounters

between teachers and learners. Many felt like the future will be involved with mobile learning given the increasing use of smartphones, tablets and other devices. The challenge is to enhance the engagement of the students without losing the human touch. The technological evolution will continue only if universities and their administrations provide faculty with the tools, resources, and rewards to keep current with technology (Marzilli, et al., 2014).

A 2008 qualitative study investigated factors in the adoption process of information and communication technologies and the implications for faculty training and technology leadership (Keengwe, Kidd, & Kyei-Blankson, 2009). The researchers interviewed a cross section of 25 faculty and technology professionals at a large mid-southern university that had been involved in some level of the adoption of technology process to ascertain their attitudes and experiences in the adoption process. The goal was to provide data for university administrators to gain insight into the many problems and influences that faculty encounter when applying information and communications technologies to improve their teaching methods.

The narratives from the respondents were analyzed for consistent themes. The analysis identified four themes: organizational support, leadership, training and development, and resources. The underlying theory used for the study was Rogers' Diffusion of Innovations (Rogers, 2003).

Organizational support was one of the key themes. Respondents reported that they were more likely to adopt if their department and their peers were supportive in the technology adoption process, especially if the department provided proper reward motivation, time to incorporate the new technology, and adequate resources to implement the new technology. Many respondents said that they embraced new methods of reaching their students, though some thought the adoption process was stressful and difficult without proper support from their departments and colleagues. Persuasive arguments reported included perception of ease of use and usefulness of the innovations (Keengwe, Kidd, & Kyei-Blankson, 2009).

The researchers recommended that at the very beginning of the adoption process that a complete organizational pre-assessment be done to determine the needs and culture of their organization to discover if the appropriate organizational support is in place to support a technology vision that increases the likelihood of success of the organizational mission (Keengwe, Kidd, & Kyei-Blankson, 2009).

Leadership was the second major theme identified by the respondents. Strong leadership was needed to not only to implement the targeted technology, but to clarify visions, missions, and goals of the adoption process. It was suggested by the researchers that the organizational leaders need to do more than provide hardware and software updates but they need to understand and have strategic plans in place for the full implementation of the innovations to insure the

accomplishment of organizational goals to improve the learning experience by the students by this process (Keengwe, Kidd, & Kyei-Blankson, 2009).

The third theme identified was training and professional development. If there is an earnest desire to implement new learning technologies for the betterment of the learning experience on the part of the organization quality professional development opportunities must be available to insure the faculty can effectively integrate not only the new technology but also to use the technology effectively to improve the instructional process. This process should not be solely an online process but should include opportunities for faculty to meet face-to-face with instructors and trainers in this new technology and insure that follow up training is available if needed (Keengwe, Kidd, & Kyei-Blankson, 2009).

The final theme identified was resources. The faculty must be provided with the proper current hardware, software, and peripherals to accomplish the mission. Just as important is effective technical support, instructional design support, as well as the time and funding to appropriately integrate the innovations process. In order to be successful, the focus must be on the learning process and how this technology can improve the process, not just on buying new technology (Keengwe, Kidd, & Kyei-Blankson, 2009).

Support and Incentives

Several studies suggest that an innovation has a higher rate of adoption among faculty members when support mechanisms by the administration are put

into place. Providing professional development training that focuses on both the technological aspect of an innovation as well as the curricular changes were the types of support mechanisms recommended (Somekh, 2008). According to Celik and Keskin (2009), the time needed to reach a curricular learning objective decreases if instructors are effectively able to utilize instructional technologies.. These findings are reinforced by a study where the researcher used mixed-methods approach to investigate faculty technology uses at a midwestern university. Becking (2011) found that here is a need for instructors to engage in technological professional development that is pedagogically oriented.

Incentivizing mechanisms such as promotion, academic recognition, and stipends can directly affect the adoption rate of an innovation by faculty members (Tuttle, 2012). Nicolle and Lou (2008) also found that factors such as institutional support, peer support, and the perception of impact on student learning played significant roles in encouraging instructional technology integration. They also found that peer interaction among faculty members had the biggest impact on the adoption of an instructional technology. Peer interaction also falls under the interpersonal communication category of *homophile*, which is described by Rogers (2003)as "the degree to which two or more individuals who interact are similar in certain attributes, such as beliefs, education, socioeconomic status, and the like" (p.19).

Summary

This literature review covered in detail the theoretical framework of the diffusion of innovations theory by Everett Rogers (2003). A review of research studies conducted on the adoption of innovations in instructional technologies by university faculty members was also presented. The findings of the studies appear to support Rogers' theory that the several communication channels (interpersonal, localite, and cosmopolite) as well as social system beliefs play a significant role in an individual's decision to adopt an instructional innovation. The studies examined in this literature review are largely in part conducted using a quantitative methodology. The methodology of my study focused on using a phenomenological approach to examine how tenured and tenure track faculty members adopt and use instructional videos in their class curriculum. The following chapter three will describe in detail the methodology used in this phenomenological study.

CHAPTER III

METHODOLOGY

Introduction

This chapter will present detailed information pertaining to the research questions, participant selection criteria, data collection procedures, and theoretical framework. The focus of the research was to investigate how faculty members at a 4-year public university adopt innovations such as instructional videos for instructional purposes using Rogers (2003) Diffusion of Innovations theory. It is important to note that although diffusion theory has been used in numerous other studies pertaining to instructional technology, researchers have conducted very few studies on the use of instructional videos for instructional purposes and administrative policies that encourage their use. Therefore this study used a phenomenological study approach to investigate how faculty members adopt innovations such as instructional videos.

My personal goals for pursuing this topic stems from my position as a video production specialist at the Center for Technology that focuses on developing instructional media for instructional purposes. Also as a graduate student, I have attended classes that go on for hours on end with little or no mediation. I have wondered why some professors use more media than others. Is it because of lack of interest and/or expertise in media? Is it because of a lack of support and incentives from academic leadership?

In order to understand why faculty use instructional video as they do, it made sense to use a qualitative methodology to study not only who is doing what but to make sense of what was happening and to understand what influences their behaviors. This "interpretive " approach to social science focuses on meaning not just physical events and behaviors (Maxwell, 2005).

This study explored the use faculty innovations focusing on instructional videos for instructional purposes by faculty members and instructors at a 4-year public university. It examined through the faculty's lived experiences and perceptions of the variables that shaped their utilization of instructional videos for instructional purposes. This study focused on the following qualitative research questions:

1. How do faculties perceive and experience technological innovations in their teaching practice?

2. What are faculties experiences using the innovation of instructional video?

Research Design

Qualitative research methodology focuses on the worldview meaning of those who are actively participating in a research study (Creswell, 2013). Qualitative research uses the participants own written or spoken words and observable data to discover findings that are not quantifiable using statistics or other methods of quantitative research methodology (Hatch, 2002). Since this study

was investigating the attitudes, usage, and lived experiences that faculty members have about the use instructional videos for instructional purposes, phenomenological inquiry was an appropriate approach for this study.

A phenomenological study according to Patton (1990) "is one that focused on descriptions of what people experience and how it is that they experience" (p. 71). He goes on to state that a researcher can employ a general phenomenological perspective to clarify the importance of using methods that capture people's experience of the world. Phenomenological research focuses in-depth on the meaning of a particular aspect of the participant's experience. The assumption is that through the interview process and reflection between interviews, that the special meaning of their experience can be shared (Rossman & Rallis, 1998).

The phenomenological interview process allows the participants to focus and bring meaning to their involvement (or lack thereof) with innovations such as instructional video as a part of their teaching methodology.

The basic philosophical assumption of phenomenological inquiry is credited to the Husserl's "we can only know what we experience" (Husserl, 1970). Patton (1990) proposed that the purpose of interviewing is to find out what is in and on someone else's mind. Therefore the focus of phenomenological inquiry is to study the perception of the lived experiences of the participants. This study used transcendental or psychological phenomenology that centered on the descriptions

of the experiences of the participants not the interpretations of the researcher

(Moustakas, 1994).

Transcendental or psychological phenomenology means that the researcher

selects a phenomenon to study, brackets out his own experiences, and seeks out

several people that have experienced the phenomenon to collect data from them

(Creswell, 2013). The researcher then reduces the collected data into significant

statements or quotes and further combines these into themes. The researcher then

advances a textural description of what the participants experience, a structured

description of what kind of conditions, situations, or context the participants

experienced, and then combine the textural and structured experiences of the

participants to present an overall essence of their experience (Creswell, 2013).

Role of the Researcher

The purpose of this phenomenological study was to glean from narratives of

faculty their experiences with the innovative use of instructional video in learning

environments and their thoughts about how instructional video impacts student

success. This means that I needed to examine my prior experiences, attitudes, and

opinions that I have acquired through my years as an instructional media designer

and video production specialist to make sure my background does not influence the

methodology and findings of the study. This technique of bracketing or epoché is

designed to help limit the influence of those experiences on the data collection and

analysis process (Maxwell, 2005). Ahern (1999) suggests that documenting ones

feelings, biases, and conflicts of interests will aid in the bracketing process and help preserve the validity of the study.

According to Creswell (2013) it is important to make known to the audience about your past experiences, beliefs, and attitudes, as well as why you are researching this particular topic and what you may have to gain from it personally and professionally. This helps the audience have a better understanding as to who the researcher is and what the motivation behind the research may be and is compliant with Hursserl's concept of epoché (Mustakas, 1994). Simply put, bracketing or epoche lets the researcher be free from bias when reporting the participants' experiences with the phenomenon from an objective perspective setting aside the researcher's prejudgments and predispositions towards the phenomenon (Yuksel & Yildirim, 2015).

My earliest experiences involving instructional videos came during the mid 1980s in elementary school. It wasn't uncommon for teachers to use instructional or educational videos in the form of videocassettes and educational television programming as instructional aids to reinforce themes from lesson plans. It was not until my undergraduate studies that I became interested in video production while working at two different television stations in the state of Tennessee. That interest in video production would later evolve into a passion for understanding and creating instructional media for instructional purposes. It is my belief that instructional videos offer instructors a superior mode to transfer ideas, concepts,

and solutions by employing multisensory use of the learner to paint a broader educational message.

I am currently employed as a multimedia production specialist with the University of North Dakota and a part-time instructional media designer with the University of Louisville. My career allows me to create instructional and educational materials such as instructional videos; computer based learning assets, as well as games and simulations. These materials are becoming more in demand as the widespread access to broadband Internet is making the appeal of online distance education more popular. Understanding how instructors adopt educational innovations like instructional video use and how administrators create policies incentivizing and supporting its use is of particular interest to me in terms of the academic topic and employment security.

It is my personal belief that instructional media such as instructional video offers instructors a superior vehicle in which to drive home learning outcomes and to create engagement. The challenge of finding and creating curriculum relevant instructional videos is an unwelcomed challenge for most instructors due to time constraints and varying comfort levels in producing these types of materials. I also believe that learners are beginning to have an expectation for these types of educational resources as we move further into the 21st century. Furthermore, I anticipate that the demand for more instructional aids such as instructional videos will increase as learning management systems like Blackboard and Moodle that

offer a place for instructors to warehouse content, become more widespread throughout universities.

Due to my previous experience and my current role with creating instructional media for educational purposes it is crucial for me to be cognizant of how my prior experiences, attitudes, and beliefs can potentially affect the methodology of this study.

Delimitations and Limitations of the study

This study focused on individuals who had previously expressed an interest in exploring instructional innovations in their classrooms; therefore the delimitations are as follows:

1. The faculty participants were limited to those individuals that have attended a university sponsored instructional technologies professional workshop.
2. The questions the participants answered to the interviewer are limited to the use of instructional videos for instructional purposes and the variables that shape that use.
3. This study involves participants interviewed by the interviewer and is limited to those serving in the role a tenured faculty member or a tenure-track faculty member at a 4-year public university.
4. The faculty participants were limited to those who are employed as tenured or are on a tenure track.

The following is a list of limitations pertaining to this study:

1. Availability of qualified individuals willing to participate.

2. Availability of the participants due to scheduling and time constraints.

3. Participants were all employed at the same institution.

4. Participants were employed at the same institution type (four-year public).

Sources of Data

Before the study was conducted, approval from the dissertation committee as well as the Institutional Review Board (IRB) was obtained (See Appendix A). The study relied on phenomenological qualitative research methods pertaining to interview protocols. Phenomenological research is defined by Creswell (2013) as a method that "identifies the essence of the human experiences about phenomenon as described by participants" (p.13).

Faculty participants for this study consisted of seven tenured and tenure-track teaching faculty members at a 4-year public university that has a well-established instructional technology development program. Faculty participants were selected based on there shared lived experience of attending a professional development workshop that focused on demonstrating and encouraging the use of instructional technologies for instructional purposes.

Creswell (2013) proposes one general guideline for sample size. It is to not only study few individuals but also to collect extensive detail about each individual

studied. Qualitative research is not intended to generalize the information, but to make clear the specific (Pinnegar & Daynes, 2007). Creswell (2013) recommends a heterogeneous group anywhere from three to fourteen. Dukes (1984) recommends studying 3 to 10 subjects and one phenomenon. Riemen (1986) recommends 10 individuals. Creswell (2013) further states that it is absolutely necessary that all participants have experience of the phenomenon being studied. The participants must be individuals who have all experienced the phenomenon and can articulate their lived experiences. The participants in this study were asked to discuss the meaning of their experiences during intensive interviews. Topics ranged from their early experiences with technology to interaction with their peers to their use of innovations like instructional video.

The more in depth the interviews are the more likely the researcher will find common experiences, themes, and the overall essence of the experience for all participants. The common themes allow for corroborating evidence to shed light on a theme or perspective. This process is called triangulation. (An example of triangulation used in this study can be found in Appendix D.)   Then I expressed what the participants experienced in the form of a textual description explaining the participants' perceptions of the phenomenon using verbatim excerpts from their interviews. I followed this with a structural description of how the participants experienced the phenomenon in terms of conditions, situations or context (Yuksel & Yildirim, 2015). The depth of these two one hour qualitative interviews is more meaningful than the number of participants interviewed.

The university used for this study conducts annual professional development initiatives in the summer semesters and offers several incentives to recruit faculty members to attend. Faculty participants were identified as those who were in attendance at the instructional technologies professional development program in the years 2011 to 2016. During this time period 212 members of the university community participated in this program. The justification of going back five years is to insure that the technology covered in the teaching with technology workshops has not significantly changed during that period. Out of the two hundred and twelve participants, one hundred and twenty-six were identified as being either tenured or tenure track faculty members and eligible to participate in the study. They were sent an email explaining the nature of the study and inviting them to participate. The email invitations elicited twenty-two responses, of which five individuals expressed interest in participating in the study. Two additional qualified participants were later recruited with the assistance of personal invitations from a third party, bringing the total number of participants in this study up to seven. After the seven participants who met the qualifications were obtained, an additional email was sent to those faculty members who expressed an interest in participating. (See email in Appendix C) This email requested a curriculum vita and scheduled a time and place where two in-depth one hour phenomenological qualitative interviews were conducted. After the time, date, and location were established the researcher sent a list of the research questions to each one of the participants. (Interview Questions listed in Appendix B.)

The participant pool in this study consisted of seven individuals who identified as either being tenured or on a tenure track employment progression that had attended a summer instructional technologies professional development program from 2011 to 2016 and expressed an interest in participating in the study. Seven participants falls within the size guidelines for phenomenological studies set forth in Creswell (2013). All seven held the rank of Associate Professor as well the degree of Doctor of Philosophy (Ph.D.). The years that participants reported that they taught in higher education ranged from a minimum of 14 years to the maximum reported of 20.5 years. The years reported spent at their current university was between 6 and 12 years. The seven participants sampled in this study came from three colleges throughout the university. Four of the participants teach in the College of Liberal Art and Sciences, two resided in the College of Education and Human Development, and one from the College of Business and Public Administration.

Table 1. Participant Information

_____

Professor	Rank	Years in higher education	Years at current institution	Highest Degree	College
1	Associate Professor	20.5	9.5	Ph.D.	Liberal Arts & Sciences
2	Associate Professor	18	6	Ph.D.	Education & Human Development
3	Associate Professor	16	12	Ph.D.	Business & Public Administration
4	Associate Professor	14	12	Ph.D.	Liberal Arts & Sciences
5	Associate Professor	18	9	Ph.D.	Liberal Arts & Sciences
6	Associate Professor	16	9	Ph.D.	Education & Human Development
7	Associate Professor	15	8	Ph.D.	Liberal Arts & Sciences

_____

Data Collection

The researcher used an audio recording device to record the responses of the

participants. These recordings were later used to accurately transcribe the

participant's responses to the research questions for qualitative coding purposes.

After the interviews were transcribed they were analyzed and coded for themes by

the researcher. According to Seidman (2006) three interviews are needed for a qualitative study. The first interview focuses on getting to know the personal history of each participant. The second interview examines the details of the participant's experiences as related to the study. The third interview asks participants to reflect on their experiences and what it means to them (Seidman, 2006).

For the purposes of this study, the three-interview protocol was modified from three to two. The two-interview protocol for the tenured or tenure-track teaching faculty encompassed the criteria of the three-interview process being: Interview one--getting to know the participant's personal history, examining their personal experiences with instructional videos, and in interview two reflecting on the meanings and impressions those experiences have on the participants. This study relied on the transcribed, verbatim interviews as the primary source of data.

Data Analysis

Data analysis of the verbatim-transcribed interviews underwent the process laid out by Creswell (2013). Included in this process is the transcription of each participants interview verbatim, coding of the transcribed interviews, narrowing down the codes into themes, and presentation of the data (Creswell, 2013). After each interview was conducted, I transcribed the participant's responses. These responses were then analyzed for critical incidents and/or interesting passages and coded accordingly (Seidman, 2006). In this process of phenomenological reduction,

the coded passages were then further analyzed with the intention of reducing the codes to a smaller number of categories. All of the participants were asked the same questions and their responses were coded according to content. Initially, I indentified 364 codes, which was an average of 52 per participant. Often the responses were similar in nature. So the codes that were similar were grouped together. When there was triangulation on a particular topic a new category was created. I identified thirteen categories based on the similar codes. The categories were then reduced further and placed into themes. This continued until the categories became a smaller number of themes that represent the data accurately. I finally identified four themes that were supported by categories that had at least three corroborating quotes on the same point. I developed textural descriptions of what the participants had experienced and structural descriptions of how the conditions, situations, and context of their experiences.

The purpose of this phenomenological study was to understand and describe the phenomenon (in this case the innovation in the use of instructional video to improve the learning environment and student success) in-depth and arrive at the essence of the lived experiences of our participants. The essence is what is common and universal in the experiences of the study group as it pertains to the use of the innovation that in this case is use of instructional video. It is what makes an experience what it is and without which an experience would not be what it is (Husserl, 1970; Moustakas, 1994). Before the second interview, I reviewed the prior interview for accuracy and content. The rationale for this was to determine if

the questions for the next interview needed to be modified based on information gathered during the first interview (Creswell, 2013).

Validity

Accurate data is necessary to draw valid conclusions. Smith and Noble (2014) refer to validity as " the integrity and application of the methods undertaken and the precision in which the findings accurately reflect the data, while reliability describes consistency within the employed analytical procedures" (p.34). Some of the criticisms surrounding qualitative research include: lacking justification of the methods adopted, for having little transparency in analytical protocol, and the studies findings being a collection of personal opinions that mirror the researcher's bias (Rolfe, 2006). Validity is a major concern for both qualitative and quantitative methodologies, but each take a different approach in meeting this goal. For this study I used the approach to validity and reliability in qualitative research as discussed by Creswell (2013). I used triangulation to provide corroborating evidence for the categories and themes. All categories contained responses from at least three participants and in most cases more than three. This technique enhances the validation of the experiences of the participants in relation to the phenomenon being studied (Creswell, 2013).

Internal Validity

The goal for internal validity is to insure the trustworthiness or correctness of the findings (Maxwell, 2005). Creswell (2013) says that the internal validity of a qualitative study can be addressed through several procedures. The procedures include prolonged engagement and persistent observation, triangulation, peer review or debriefing, negative case analysis, clarifying researcher bias, member checking, rich, thick description, and external audits (p. 250-253). For this study I addressed the issue of internal validity by using member checking, verbatim transcripts, epoche (bracketing), peer review, and an audit trail. (Detailed description in Appendix D.)

In the member checking procedure, participants' views of the findings were requested. Lincoln and Guba (1985) assert that this particular technique is "the most critical technique for establishing credibility" (p. 314). Stake (1995) believes that participants should play a major role by providing critical observations of the data. (p. 115). Participants in the study were given the opportunity to review verbatim transcripts of their participation to check for accuracy and thoroughness. They were given the opportunity to make any changes or elaborate on their responses to make sure the transcript truly reflects their experience.

Audio recordings were made of all interviews. These audio files were uploaded into a transcription service to create text versions of the audio files. I then compared the text versions to the audio files to verify that the transcripts were

verbatim. The transcripts of the first interviews were reviewed prior to the second interviews. The second interviews were held within a week of the first interviews.

Epoche or bracketing is designed to arrive at an unprejudiced or unbiased analysis of the data by putting common sense and previous knowledge about the phenomenon being studied in brackets. Bracketing does not eliminate bias, but it does bring an awareness of potential influences in the data analysis (Husserl, 1970). Peer review was used during the horizontalization stage to insure that all participants' statements have equal value and that all relevant statements are selected to ensure that the researcher's subjectivity does not influence the selection of relevant statements. The peer reviewer came from my dissertation committee. An audit trail was created by keeping a research field journal with notes, dates and times of key decisions, interview information, copies of verbatim transcripts, data analysis procedures and decisions.

External Validity

External validity represents how well the particulars of the findings can be applied or transferred to other publics (Johnson, 1997; LeCompte & Goetz, 1982; Lincoln & Guba, 1985). In this study, demographic and contextual data about the participants and their job duties, to the extent to which I can maintain anonymity, was made available so that the readers may evaluate whether findings of this study may apply to other populations. The results of the study will be made available to those who are interested in examining the lived experiences of the participants in

the attempt to better understand how faculty members adopt the use of instructional videos for instructional purposes.

Reliability

There remains much debate surrounding qualitative research methodology, the main criticism is that it is difficult to replicate a study (Johnson, 1997). To help ensure the reliability of this study I took the following precautions: I used the verbatim transcripts of the participants responses, kept an audit trail to track methods that are used in the study, and kept documentation about my opinions about the study's concepts. Reliability will be established through detailed protocol and analysis, detailed analysis of the data and results. This information provides a framework for comparison for other researchers who may be interested in conducting a similar study (Creswell, 2013).

Human Subjects

Before the study was conducted, the Institutional Review Board (IRB) from the University of North Dakota gave approval. The IRB was informed of the criteria used in the study such the proposed methodology, how participants were selected or excluded, and the potential risks to participants. The potential of risks to participants are expected to be minimal in nature with a low occurrence. (IRB form found in Appendix A.)

A fictitious name will be assigned to each of the participants in this study; this is done to disguise their identity. Any personally identifying information that might reveal the identity of the participants is kept in a locked storage cabinet or under a password protected computer file when not being used. The information obtained by participants is kept in the aforementioned secure locations for a period of at least three years after the study has been conducted. After the three-year period has been reached, the documents and computer files will be destroyed in a secure manner. Participants in the study were also offered the opportunity to review their transcripts and have access to the results of the study when it is completed. The names of departments and organizations will be disguised to obscure their identity and the identity of the university.

Summary

Data collection methods I used to investigate faculty members adoption of innovations such as instructional videos for instructional purposes were outlined in this chapter. A phenomenological approach was employed to gather information on how faculty members discover and adopt the use of instructional videos into their course curriculum. I addressed in-depth the procedure protocol for obtaining IRB approval, participant selection criteria, protection protocols for safeguarding the participants, as well as concerns surrounding the validity of the study.

CHAPTER IV

FINDINGS

This study examined how and why faculty members at a 4-year university used the innovation of instructional video in their curriculum. Rogers' Theory of Diffusion of Innovation was used as the framework for this investigation. This theory is based on the idea that innovations in technology and practices change over time and the adoption or rejection of innovations is based on several factors that are discoverable. A phenomenological interview process was used to get the lived experiences of tenured/tenure-track faculty members in relation to their adoption and use of instructional video in their teaching. In Chapter 4 this qualitative interview method will put the lived experiences of the participants into the context of Rogers' theory that was discussed in Chapter 2. Themes will be identified and data will be presented to support the themes. The data were analyzed and interpreted in relation to Rogers' theory on the Diffusion of Innovations as pertaining to the use of instructional video by faculty for the betterment of their students' learning experiences.

After the interviews were transcribed, the phenomenological reduction process of coding, grouping codes into categories, and finally reducing the categories into themes, four primary themes emerged related to the perceptions of participants:

1. Today's learners differ from past generations especially as influenced by their exposure to and use of technology.

2. Innovations such as instructional videos as an integrated part of a curriculum of study enhance the learning experiences by allowing the students to share common experiences.

3. Faculty use social networks to share knowledge about innovations in technology and instructional videos to benefit their student learners.

4. Faculty must rely on prepared videos rather than self-produced instructional videos because of lack of time and skill sets.

Today's learners differ from past generations especially as influenced by their exposure to and use of technology.

This particular group of professors believe that today's learners differ from past generations especially as influenced by their exposure to and use of technology. These learners have spent most of their lives being exposed to various forms of electronic media as opposed to earlier generations who were more often exposed to text material. This current group of learners is much more visually literate than earlier groups and is much more comfortable in an image rich environment than a text only environment. In discussing the application of classroom technology to their classroom presentations, three of the professors felt that the current body of student learners has different learning expectations than past groups. In particular, current students spend much of their time acquiring information and knowledge from mobile digital devices that make video available at will wherever they are.

Making curricular information available for the students to access when they desire may be one way to get through to this generation of learners who are used to accessing information on demand rather than just being presented information in a classroom setting.

Impact of Technology

One important element participants described was the impact of technology on the lives and learning styles of the current student:

So I think that students have a diminished attention span. At this juncture in my teaching tenure if you will, so I've been teaching as I mentioned for some 15 years or so and I have noticed that technology has pretty dramatically changed the need for students to be constantly stimulated with a constant flow of ever-shifting media or you know regular activities, active learning. So I think in some ways again it's advantageous and helpful in other ways. I think that students have related to the double edge sword of technology. I think in some ways the possibility exists for students to gather and leverage information much more rapidly than before.

For many young people trying to use technologies for as much gratification as possible and for the actual study or the purpose of the higher education. In most cases getting it done as quickly as possible without having that deep dive into the knowledge if you will.

And so I think that has truly transformed the environment. I think it's dramatically affected attention spans because as I mentioned before, for many young people there's really a sense that if the information is not immediately applicable, it's not urgent enough to focus on for that length of time (Professor 7).

Prior generations of students experienced college education primarily from listening to lectures and reading assignments. The current generation of students has been exposed to all types of stimulations from many technological devices and this access has impacted the way they learn. They find the most successful learning environments involve technological stimulation in addition to lectures and reading assignments.

Some professors take advantage of the trend towards visualization by incorporating contemporary on-line streaming technology.

Well I think that most of them like my classes using the Google Earth right now. They really like using maps because they're very visually oriented. There is kind of a downside in that. I get the impression that many of them really don't like to read. And so if they can go to Google Earth or some other thing to learn it they will. There seems to be kind of a disconnect there not among all students but some (Professor 4).

The students increasing access to and use of technology in most phases of their lives seems to have changed their learning behaviors. Listening to lectures and

reading assignments no longer stimulate learning as with past generations. They

learn better when more of their senses are involved. In order to stimulate learning

and compensate for shortened attention span, the information must be presented in

a multi-sensory environment. A challenge for the professor is to provide an active

learning environment because students today can gather and leverage information

more rapidly than in the past. "To accomplish more you have to have access to more

things. I just like the Internet for instance; you know we have history's greatest and

largest library in our back pocket" (Professor 1). The information presented must be

presented in a manner that the students can see the immediate applicability or the

students will lose focus. Many students have the ability to learn at a faster pace

through the use of multiple senses. This lack of retention from the written word is

related to the shortened attention span. Some professors compensate for this lack

of attention span by using more visual stimulation in the learning environment.

Visual Orientation

Some disciplines have access to outstanding real time visual stimulation that

can address the problem of shortened attention spans. Some professors use

technological stimulation in courses with the use of live streaming and video for

many reasons including the belief that some students dislike reading. As an

example, one professor explained:

Well definitely, I mean we know that students don't all learn the same, the

standard lecture isn't necessarily going to be very effective. And so mixing up

63

the learning environments and then also adding in the student component where they can provide a lot more feedback is helpful. So I think technology helps to accomplish that (Professor 4).

In mixing up the learning environments, Professor 4 has evolved the curriculum by having the students view instructional video components of his class at their leisure prior to the formal class setting. This technique is referred to as "flipping the classroom" as explained below.

Well for me it was you know, part of kind of flipping the class. So I don't flip my classes completely, but I like the idea of them being able to go view a video on their own during their own time. Most students like that versus taking class time and then we come back and we discuss it and so for me is a lot more efficient. We don't all have to be jammed in classroom to watch a video at the same time. Students can do that at their leisure. And it just gives us more time for discussion and really looking at the parts I want to get out of video (Professor 4).

Taking advantage of the visual orientation of the student by using Google maps and live streaming helps compensate for the shortened attention span of the students by injecting movement and color to the learning environment.

Even the more traditional visual sources such as film can provide insights into complex sociological issues and change perceptions.

But then you would watch something like *Eyes on the Prize* and I thought I

had this perspective the Black Panther Party and now I'm getting this more

complex understanding of the Black Panther Party and what it was all about

and Malcomb X and what. So I do remember that was like one of the times

when I watched a film in class and it gave me a whole different context

(Professor 2).

Videos can give conscious as well as subliminal messages context. "You can

message not just verbally but even at the subconscious level if you use fast paced

editing with color and using voiceovers with symbolism"(Professor 3). The visual

presentation can be of great value to content analysis.

I do think video has an impact, like the difference between reading about

commercials and actually seeing them. Some of the best ones, like Award

winning ones, were kind of fun because it puts a lot of your readings into

context (Professor 3).

The use of media enriched environments permits the student to have a

choice for learning the information from sources other than written media. This

increases the odds that the student will comprehend material in the way they learn

best. Technological innovations in the form of instructional video help them

accomplish the learning process at there desired pace and in their preferred

manner. Professor 4 has used streaming videos in class and recorded video

assignments before class to stimulate his classes because he sees these forms as

superior in getting his students to learn by taking advantage of their heavy reliance on visual and auditory stimulation. Professor 4 has found that the use of video assignments outside of class allows students with shortened attention spans to view the material at their own pace and on their preferred media before coming to class. Professor 4 feels that it is a more efficient use of class time to discuss the information that is to be learned from the video thus increasing the odds that they will indeed learn the desired information.

Effective Integration of Multi-Sensory Tools

While audio and visual stimulation is perceived as being important, there is likewise an awareness that these elements need be well planned to integrate properly into the curriculum that the messages will not necessarily promote learning:

> I find that students love technology but not for educational purposes.
> Students will be sitting there alone texting and watching videos, but as soon
> as you want them to implement those technologies or those devices in class
> for an educational purpose their enthusiasm is gone (Professor 1).

The participants perceive that simply using technology and/or videos inserted into the curriculum does not guarantee that the learning will be enhanced.

> I think if you approach instructional videos in a pedagogical way so you
> really think about how are you using them to support learning, then I think

66

that you really probably can't go wrong because you're thinking about how

you're going to use this tool to support learning. The majority people who

want to use it, I think, are trying to be as thoughtful as they can about what

they choose, why they choose, how it's going to supplement learning

(Professor 2)

If innovations like instructional videos are used thoughtfully, they increase learning

better than simply lecturing and assigning written assignments. This correlates

with Rogers' theory that in determining the success of an innovation that the

innovation is a relative advantage that is the degree that a particular innovation is

seen as superior way in relation to what superseded it.

Many students don't learn best only from the written word or from listening

to lectures being spoken. Many students do learn you know at a more rapid

pace with better knowledge retention and through the use of other senses.

And even in combination of multiple senses at the same time be those tactile,

auditory or visual (Professor7).

According to our participants, today's students are much more involved with

technology and media rich environments. Some students even tend to have

relatively short attentions and dislike reading assignments. To address these

concerns, our professors have found ways to augment lectures by doing live

streaming from the Internet sources like Google to take students to other parts of

the world that add interest and understanding to the subject being taught. One of

the professors has started "flipping" the classroom by having students consume

instructional videos on their own time and devices before class, thus saving class

time for more discussion of the material contained in the videos. These media rich

enhancements increase the success of the learning process.

Innovations such as instructional videos as an integrated part of a curriculum of study enhance the learning experiences by allowing the students to share common experiences.

Instructional Video Resources

A second theme that emerged from participant interviews focuses on

instructional videos as an integrated part of a curriculum of study to enhance the

learning experiences by allowing the students to share common experiences.

Finding the instructional videos that provide the appropriate common learning

experiences is a difficult time consuming task that is absolutely necessary to provide

high quality learning environments. Before impactful video can be used, they must

be found. Fortunately the availability of high quality videos can be found on the

internet, in the mass media, in libraries, and on video streaming web sites. The

professors agreed that the current learners are more closely tied to technology than

past learners and that incorporating innovations such as video technology into the

classroom is compatible with the needs and values of the learners.

Internet.

The participants were asked what resources were available to them and

where they prefer to get their instructional videos. Instructional videos are readily

available from many sources from libraries to streaming from the Internet.   A

primary source of instructional videos is the Internet:

> At this point I get everything via the Internet pretty much but every so often
>
> I'll order some physical media. But more and more moving towards
>
> streaming Web content that can be from as you know open access as *You*
>
> *Tube* although I'm really reluctant to just show *You Tube* videos to students
>
> without vetting them first.

> Atomic learning is fine. The videos are really short and the quality is quite
>
> low. It can be helpful for a short period of time. But overall, I vastly prefer
>
> Lynda.com.

> I use a variety of video materials. So some of us tape from simply *You Tube*. I
>
> will gather video from any source possible on the Internet. Also you know
>
> gathering film from libraries, the Media Education Foundation, Pew Internet
>
> or any kind of scholarly type of video recording as well as mass media types
>
> of video recordings (Professor 7).

The Internet provides opportunities to find streaming videos that will

improve the learning experience but the quality level of the available videos vary

from outstanding to low quality. There are Internet resources that focus on

scholarly applications.

> There's a site called Teachers College that has some really nice short videos.
>
> And I would say they're up to 15 minutes long, maybe more, that I'll be using

now. Those sources are open source material that comes from the various universities that might be good to have (Professor 6).

However, professors need to check out the videos for the quality that would help their classes. Poor quality videos do little to enhance the learning experience, but high quality sources like Lynda.com can contribute significantly to the learning process

There are commercial Internet sources like Google that can also serve a scholarly purpose.

I kind of lump video in with other tools now like Google Earth because the students use Google Earth a lot. Now in class the students can literally go to almost any point in the world. They can look at imagery for that location. Most of it still imagery, but they can also look at the landscape because there are a built in elevation models so they can actually get 3-D sense of what that environment looks like (Professor 4).

The high quality Internet sources continues to grow each year providing more access for professors to elevate the classroom learning environments by using attention getting video and even high quality still images to help the students learn.

.

Mass Media.

Instructional videos from mass media can be very timely in providing "real world" experiences as well as being very professionally produced. The Public Broadcasting Service (PBS) is a particularly impressive source of instructional videos for classroom use:

> You know PBS is a great outlet. A lot of the Nova programs are available for educational use. Coupled with that, the Annenberg Foundation has a lot of videos that they've taken and they were originally put together for instructional purposes and they are offered for free versus the Internet. So I use a lot of them. You know in the past we would order stuff through the library or I'll use things coming from the library. But a lot of it now is going to be to some of those online sites (Professor 4).

Some online sources like the Annenberg Foundation provide easy access to professionally produced online instructional videos, therefore, taking over much of the role once available only though libraries.

> Well, like the Annenberg is essentially free license that's specifically for educational purposes. And then the video, some of the NOVA programs are great; PBS actually has a special site that's for educational purposes (Professor 4).

Instructional videos from professional sources such as Public Broadcast Service and Annenberg Foundation provide professors with professionally

produced instructional videos that allow choices of which "real world" experiences that most appropriately add to the classroom learning environment for a particular discipline. These types of sources are readily available to the professor at low or no cost, which is highly desirable in the current budgetary climate.

Libraries.

Libraries used to be the primary source for video resources but that is changing. Many of the major non-commercial sources are now making high quality videos that can be used in instructional settings. Older videos often retain their value in the classroom if they are of high quality.   One professor explained that he/she finds videos from a variety of sources.

> So there are all kinds of different places to search for videos and
> documentaries on different library databases, on the Internet, sometimes
> they get them through inter-library loan. I can get them very quickly usually
> sometimes something as simple as you know on PBS Frontline (Professor 3).

These videos are often offered for free. Once one professor records them, they are frequently shared with other professors teaching the same subject matter.

> Other than those of us in my department who are teaching the sciences,
> typically we will share videos that we're using you know either that we
> purchased for the department or whatnot but then we'll also talk about OK
> well how are you doing this (Professor 4).

The traditional process of using libraries for video resources is still used by faculty but only as one of the many choices of sources for instructional video.

Video Streaming Via Internet.

Newer forms of video sourcing available on the Internet provide instructional aids not dreamed of in earlier times. Google has provided a vast array of learning experiences for those subjects dealing with the earth. For example, one of the participants talked about the availability and simplicity of use:

> I use Google maps a lot and Google Earth. In fact I have one class right now I'm teaching the natural regions of the U.S. and Canada and my students have to do assignments where they're actually using Google Earth to go to different locations in the world and then to identify the particular types of land forms there. So they have one lab where they will look at glacial features so I have I sent them to the Alps and then they were in Alaska looking at different glaciers and glacial features. This week they're looking at coastal features along the U.S. /Canadian coast.

> Yes I will use Google Earth, not only in assignments but just when I'm talking about particular part of the planet or a particular feature I'll just pull up Google Earth and let's go there. Let's look at it and that's fantastic (Professor 4).

The ability to instantly take the students to different parts of the world to make instructional points about physical features enhances the learning experience

far beyond what the traditional static maps could ever do. The students get to

experience three-dimensional, full color, full motion high definitions images from

anywhere on the planet to illustrate the teaching points of the professors. Being

able to utilize visual and auditory explanations of natural phenomenon either

animated or "real" as part of the common learning experience for the student

learners is so much more effective than having the professor lecture about these

hard to visualize concepts.

> Having the video there does help because everyone gets the same experience
>
> and you can do it and it can be kind of a helpful way if you do have some need
>
> to. And then you can come back because you know everyone's had that same
>
> experience and you can debrief at the next time (Professor 2) .

The professorial explanation has much more impact if all of the students

have a common reference to the phenomenon through the use of instructional video

either live or recorded.

The ability to find potential videos that can assist in the instructional process

can be found easily especially for professors that use cultural messages in their

discipline. Cultural messages abound through mass media channels. To the point

that one of the professors said that it was becoming a part of her life.

> I mean that's so it's ok. What this is saying to me is it's just become such a
>
> part of my life I think of it. Yeah, whenever I'm watching television I'm

always thinking about something I might want to bring into the classroom (Professor 1).

Professors that engage current popular culture, such as pop, media, and intercultural, as part of their curriculum such as those studying foreign languages, films, and societies have the availability of current culture through the mass media that can bring in contemporary messages to their student learners simply by observing television.

The portion of Rogers's theory that addresses qualities that determine success of an innovation states that for an innovation to be successful it must be simple and easy to use. The participants attested to the wide availability of potential instructional videos from libraries, to Internet sources, to the mass media. Science teachers use professionally prepared videos from sources such as the Public Broadcasting Service and Annenberg Foundation. Some videos that are in library collections are older but still effective if the concepts are still valid. If there is a need for more up to date information they can use Internet sources such as Google to get live streaming into their classrooms. The resources are typically free and of high quality and can be incorporated into learning experiences through prerecorded video or even live streaming.

Enhanced Learning Environments

The participants were asked to describe their views on how effective or ineffective they believed innovations like instructional videos are as an instructional

aid to professors and to describe their experiences about incorporating

instructional videos into their course curriculum. Universally, the professors had

positive experiences of observing the benefits of the innovative use of instructional

video without regard to their discipline. The participants talked about the ability of

innovative instructional videos to clarify complicated scientific ideas, to

accommodate comparisons of creative interpretations and styles for critical

analysis, and present material in native languages and cultures. In talking about

cultural understanding, one professor feels that the innovation of instructional

video can give the student a deeper understanding of the culture under study and

further can give all of the students a common experience.

> OK. It's one thing to read about Indian boarding schools and read it on a piece
>
> of paper. But when they watch it on a film it's just that it gets closer to that
>
> kind of holistic experience than they have anyway right now would be great
>
> to go to. So it's kind of providing a little bit more of that aesthetic experience
>
> that's not just engaging with text. I mean, I think that is the baseline
>
> (Professor 2).

The use of innovations such as instructional video to allow the student to be

immersed in a cultural setting can give great depth to the understanding of that

culture in the learning experience far greater than can be accomplished by a reading

assignment. By having the entire class immersed at once gives them a common

experience that can give great depth to classroom discussion that follows the video

presentation. If professors use innovations like instructional videos to support

learning, not to replace lectures, the results are that the students gain a deeper understanding of the subject through sharing a learning experience with the class. This experience can be used as the basis of future learning experiences.

There is consensus among the participants that the key to the success is when the professor thoughtfully selects the video and includes it where it will most highly impact the learning experience whether the experience is in a cultural setting or in a complex technical area. Videos can immerse students in new cultural settings but can also immerse the students in complex and at times confusing natural phenomenon. One professor believes that instructional video can clarify complicated scientific ideas: "But you know just showing videos on the Earth's process like volcanism, Plate Tectonics, things like that that I can lecture on. But it's much easier for the students to either see a graphic animation or a real life image of these processes taking place (Professor 4)." The videos help clarify potentially confusing processes. These videos are not designed to replace the presentations of the professor but to reinforce understanding of complicated events that occur in nature that are not readily understandable.

Some professors use video resources for more than visual aids. The proper video can be elevated to the level of the traditional text. Films are often used in a manner where they are given the same educational value as texts in a course:

You know I think about using films but I try to talk about films as text and I have them on the syllabus and that's just like a movie they were watching a

77

film. But in the same way that were getting them into analyzing a novel or play and have them analyze the film in the same way and try and get some more of them to be a little more critically savvy in how they look at the entertainment. You know European films are not Hollywood films in a very distinct way. And so getting students to shed their Hollywood Americanized expectations for what a feature film looks like is often a bit of a cold shower for them. They walk to their first sit-through of the screening and films that happen much because they feel like oh and then it's always you know texted. So they have to read the text and watch the image at the same time, which distracts them because a lot of people aren't used to doing that. So I'm getting more practiced at that each time (Professor 5).

In some instances, the use of video in the classroom is necessary especially as expressed in the above example because the video is the medium that is being critically analyzed for stylistic as well as cultural differences as in the stylistic differences between Hollywood films and films of other nations. Written material cannot contextualize critical analysis in the same manner because the student is learning to do the critical analysis, which is not the same as reading about how someone else has come to critical conclusions. The learning comes from the students experiencing the process of analysis based on their own observations.

Mass Media Use for Cultural Understanding

When students are studying language and culture of a foreign country sometimes observing informal resources can be of great value. There are times that simply watching television programming and even commercials in another language can give meaning to messages when the students do not fully understand the language. This technique can give cultural context to a learning experience as explained by one participant:

> We have access to materials now that I never dreamed possible 20 years ago and we used to be limited to what we could bring back in our suitcase and now we can access everything online. So an example of what you were just talking about. We use these cute little videos. They are commercials from a supermarket and they're hilarious and difficult to understand the language. But through the body language, it gives you the context you need so that students get the humor. They start to understand the cultural relevance and they also realize that they don't need to understand every single word when they're placed in a foreign language situation, which is really important for us because so many students are just overwhelmed by it. I'm never going to learn how to understand the language or how to speak the language. So it's giving them access to reality as we call these videos and showing them that they can still get meaning out of them without understanding every single word is really important for us.

And now we aren't reliant upon those for your hearing or having access to

native speakers. I don't even use the video program that goes along with our

textbook because it is so horrible. It's better to go on *You Tube* or what have

you one finds and find other things (Professor 1).

One perception here is that the videos that often accompany textbooks are

less than high quality and often they do not help in the learning. In the past,

professors had little choice but to use them. Today, Internet sources allow

professors to tap sources worldwide through sites like *You Tube* that promote

learning but are also of high quality. The use of professionally produced television

commercials is an example of humorous attention-getting messages that place

language and foreign cultures in an understanding and meaningful learning

experience. Professor 3 found that political commercials available on *You Tube*

illustrate that "even at the subconscious level the commercials are so fast paced

with their use of color with voiceovers that are filled with symbolism" that they can

be invaluable in understanding cultural messaging imbedded in the commercials.

Sometimes professors can use contemporary commercial television in native

languages to engage their students. Below, one professor explains how a popular

commercial television series gives students the experience of what they would find

if they were actually in another country's culture:

I just had a good example of the fall I taught in my upper level short stories

class. There is a TV show called *Skop* that has been super popular and so it's

essentially a high school drama series but it's just off the charts and making

waves in Europe. And so we had that as an assignment of that to read and

they were hyped. And one of the reasons why the show was so successful is

that the characters tweet and snap chat and Instagram things all week and as

a build up to the episode. So the characters leave this social media trail

bringing in the audience until the show airs that next day. And then you

know drama happens on the screen and then when it falls they're both like

running commentary in social media. Then there's the characters having

their little drama going on and so my students were totally sucked into this

world, so authentic language production. You know they learned swear

words that I don't teach them which I think is awesome and all sorts of other

kind of way oh my God they are still wearing that? Do they get to do that?

And so I mean I can't get them to Europe as a part of my class unless I twist

their arms to study abroad. And so I had no better way of getting to be

transported into authentic 21st century everyday life if I don't use those

things (Professor 5).

Innovations such as instructional videos as an integrated part of a curriculum

to study other languages and cultures are integral to the students' learning and

experiencing the country that they are studying. Prior to the use of innovations

such as contemporary instructional video uses, students would have to travel

abroad to the country to get the flavor of the culture which is powerful learning

experience but impractical in many instances because of high costs and scheduling problems.

When studying live performance venues such as theatrical productions innovations such as instructional videos can play a vital role. The only practical way to accomplish a comparison and contrast of various productions of the same play is through video that can be watched by the entire class. Visual learners find that these videos aid in the learning process.

I think that can be a really powerful for visual learners in particular but it needs a variety of learning inputs to process. So I think they're very important. I probably should use them more often and don't because it is too labor intensive sometimes. I think they have it easier too. I was just grading some of my students' responses to three different iterations of this play that we're studying right now and it is fascinating to see how they react to different things. One loved the first production in Egypt and it's over the top, it's glossy, it's sexy. There's X you know lavish and the kinds of production choices and costuming and enormous orchestra. And it's done in front of the pyramids and the Sphinx and in Giza and so it's you know extraordinarily huge in budget and scope and it cuts down to an hour and a half but does the entire thing. And then there's this other production that uses homeless people as a cast and only does like the last act and it is interesting to see the students' reactions. Music majors loved the theatricality of the full orchestra and the full choir and all of the soundtrack that came with the big production.

While most of the others when they saw the destitution in the cast and the last one made it less fantastic and more realistic and brought home how broken the character was at the end and all these elements that they didn't feel like that glossy exterior in the first one gave them access to and so they liked that gritty realism in the end. So both of those set a spectrum of interpretations and allows students to see that how impactful the choices of the directors are and how what they do with text the extreme variability of what they can do with text when they're portraying it in live theater (Professor 5).

Being able to immerse students in a culture is critical to the understanding from a holistic experience as was discussed earlier in the Indian boarding schools videos giving students cultural context. In creative interpretations the same is true. Innovations like instructional video can present multiple creative views of the same work for the students to consider and discuss. Being able to study two different versions of the same creative piece can be accomplished through the use of the innovation of instructional uses of video. This is especially important when the versions vary dramatically. In this case, the study of a lavish, exotic location production as contrasted to an earthy, depressingly realistic production featuring broken characters. The only way to experience both versions in a classroom setting is by the use of innovative videos for instructional purposes. A different professor uses videos for similar reasons:

So for instance if we're dealing with Snow White, they've read numerous versions of Snow White. I'll show them clips from *Snow White and the Huntsman* and asked them how this adaptation what we're noticing how they changed the story and what that does to the messaging and what that says about pop culture. So it gives us another text (Professor 1).

When dealing with the study of creative processes, being able to analyze the creative decision making of directors can most effectively be experienced through the use of video.   Seeing the same words and thoughts interpreted differently can help the student learn how decisions are made to bring about the directors vision of the play.

Effective Professor Produced Videos

Not all effective instructional videos are professionally produced. Instructional videos may not be commercially viable but they can be produced to present specific situations to classes to stimulate focused learning exercises. Graduate students preparing for leadership positions in education need to understand the dynamics of the classroom and support groups such as professional learning communities. Self-produced videos can focus attention on specific problem situations that are not readily available through professional sources like mass media.

It's an idea I use on lots of video. Like for instance this last weekend we did two observations. So I went out to school districts and I had volunteer

teachers teach a class and I video recorded them and we use that as an

evaluation of teacher experience (Professor 6).

By using self-produced targeted videos, the professor can control the

messages being presented that will reinforce specific teaching points. This is

especially important in teacher evaluation scenarios that have many variables.

Learning about the function of professional organizations such as professional

learning communities cannot readily be found on the commercial market and must

be locally produced if they are to be used.

I'm going to be talking about professional learning communities and I'm

going to show them a clip of a professional learning community in action like

one model of that. That's to get them to think about what does a professional

learning community look like. What are the different forms? I mean I've done

so well before on online communities of practice (Professor 6).

It is important that advanced students in education learn about evaluation

and professional support systems. These topics need instructional videos to aid in

the learning experience but are rarely available through professional channels. The

problem is that there are not professionally produced simulations readily available

on these types of topics, so if the professor is to use these important simulations to

stimulate discussion, they must produce the videos themselves.

Professor 4 uses short self produced videos made on field trips to exotic

places to take his students on virtual field trips that reinforce lecture points made in

class. " We're in these glaciers, so we take a lot of videos and then put them together in some short segments that we share online or we use them during our presentations where it will be imbedded into our Power Points." These types of reinforcing short videos not only serve to amplify the teaching point but also are also valuable attention-getting devices that recaptures student attention. These devices are especially important in long class periods.

Taking in to consideration long three-hour types of workshop classes, Professor 2 includes "video capture and audio over Power Point slides to use in describing things" and follows that with recording the lesson and making it available for playback by the student if "they just can't remember what I said on step two or maybe their mind was somewhere else." This "allows me to share what is in my brain and have it available so that more people have access to it." Self-produced videos not only increase the interest in the presentations but also make possible the archiving of the learning environment to that it can be recalled on demand to reinforce learning.

Future Technology

Technology is continuing to evolve. Professor 1 looks forward to the things that new technology will allow us to do.

> We use it to chat with people. I don't think of it terms of efficiency, but rather allowing use to accomplish more time saving measures. For me, as far as the classroom goes, allows me to accomplish more.

Many exciting new video resources are on the horizon and some are currently available. The video experiences many professors are enthusiastic about are in the realm of virtual reality. Professor 4 is looking forward to physical experiences:

> You know it's great stuff that Google is doing. I mean they had mounted it. So you're familiar with all the Google maps and on the ground what they call street view. So what they're really pushing the envelope with that, they're putting cameras on hiker's going down the Grand Canyon so that they get the 3-D view. They've been putting those on like Iditarod dog sleds. The one I think is really cool is the ocean one. So why virtually all the things they showed us was someone (a diver) who was down diving with I guess it was sea lions or something. So that's really neat technology.

The virtual reality video format promises to provide professors with tools to allow students to take virtual field trips to parts of the world that are hard to almost impossible to take the class without all the expenses and logistical problems associated with traditional field trips.

Virtual reality also has the potential to make the sciences come to life whether it is in the plant or animal world. One of the participants looks forward to the exploration of the digital possibilities in the near future. "I mean I see visual learning getting to the point where you know if you're studying biology, let's say you enter that molecule and you're looking around and you're seeing all the connections

or if you're studying the mind you can walk into a brain in a virtual environment and see all the synoptic interfaces (Professor7). " Virtual reality video potentially can make learning about the natural phenomenon of even the most complex scientific concepts more achievable and understandable. The pace of development of these new technologies will allow more of the senses to be brought into the learning environment.

> I mean that's the way we're going to be learning moving forward, really forward if we're looking at communication theory. I mean we're going to accelerate, I believe, the pace of knowledge acquisition but not through simply verbal auditory vocal utterances received by the auditory nerve. I think there's a lot more to learning than just that vocal utterance. I mean we have to really use digital technologies to get to the point where we're activating all the senses (Professor 7).

Instructional videos are currently effective in enhancing the learning experience of students, but it appears, based on the perceptions of these professors, that have even more effective experiences via the digital video world. Experiences that were not possible or even dreamed of are soon to become an integral part of curriculums in all disciplines.

Ineffective use of Instructional Videos

Despite all the positive things that instructional videos bring to the higher education community, there are those that abuse this resource. Instructional videos can be critical in helping learners understand other cultures, creative expression and complex phenomenon but if they are not put into the context of a positive learning environment their value can be minimal. There are times when lazy instructors use a video source to serve, as Professor 5 puts it, as a "babysitter" of their class because they don't want to teach and not using instructional video to supplement the learning environment. Professor 3 put it this way "We watch videos all the time and you know to a point where it stops being sort of reinforcing. You know one hour just watching the video because the instructor doesn't want to teach." This sentiment is echoed by other participants, some who think that the problem is serious:

> I think instructional videos have often been a mainstay for instructors. I think that they can be misused in many cases so you know faculty who don't feel like really engaging students. So you've got to be great or you just want to mentally dissociate from the class for a little while and then just put on a video and let the students watch it. I've seen that happen quite a lot. I think it's terrible. What's really changing in higher education these days and maybe just in time, higher education is changing dramatically and technology has a big role in that (Professor 7).

Lazy or disengaged faculty members have used instructional videos as a crutch to fill time in the class when they choose not to engage their students in the learning process. As discussed above, instructional videos are very powerful learning tools in the hands of faculty. Faculties that properly weave instructional videos into a learning experience can help their students understand complicated natural phenomenon or immerse them in new cultural experiences or gain insight into the creative process. Innovations such as instructional videos are very powerful learning tools for the current generation of learners, but only in the hands of professors that prepare to integrate them properly for class.

> I think that it all depends on the instructor and preparation time and time spent you know previewing, viewing and developing a course flow for each day that will enable students to be as active as possible in the courses that they're learning. You know I hate courses where it's simply the sender-receiver model where students are expected to be a captive audience and much prefer addressing a topic having students read about it in advance and be prepared. Coming to class showing some additional instructional video content and then having specific assignments that students have to work on in order to truly take their knowledge to the next level. The course itself should not be used for just delivering knowledge that can be done ahead of time (Professor 7).

Rogers' theory states that an innovation is more likely to be adopted if it is perceived as a relative advantage. The innovation of instructional video takes

advantage of today's learners' involvement with media rich environments. Through innovative use of instructional videos students can experience new cultures both foreign and domestic without physically having to travel. It can allow creative works to be compared for critical evaluation. In scientific areas, students can be instantaneously transported to destinations worldwide through Google applications accessible in the classroom or on student owned smart devices. If an appropriate video is not available, faculty can produce an instructional video that is targeted for the specific classroom. The future holds exciting promises through virtual reality opportunities in many fields.

The portion of Rogers's theory that addresses qualities that determine success of an innovation states that for an innovation to be successful it must be simple and easy to use. The participants attested to the wide availability of potential instructional videos from libraries, to Internet sources, to the mass media. Science teachers use professionally prepared videos from sources such as the Public Broadcasting Service and Annenberg Foundation. Some videos that are in library collections are older but still effective if the concepts are still valid. If there is a need for more up to date information they can use Internet sources such as Google to get live streaming into their classrooms. The resources are typically free and of high quality and can be incorporated into learning experiences through prerecorded video or even live streaming.

For an innovation to be successful Rogers's theory states it must have Trialability and must have observable results. According to the participants of this

91

study, one of the strengths of instructional video is the fact the video can be vetted for potential effectiveness before being inserted into the curriculum and if its effectiveness wanes, it can be removed instantly. The participants universally had positive experiences in upgrading the learning experience without regard to discipline. Innovations like instructional videos are only effective if they are thoughtfully selected and programmed into the curriculum. The innovation can be ineffective only if not properly integrated into the curriculum by faculty.

Faculty use social networks to share knowledge about innovations in technology and instructional videos to benefit their student learners.

Faculty use social networks to share knowledge about technology and instructional videos to benefit their student learners. In many instances the students are ahead of the teachers in knowledge and use of technology tools so the teachers have joined social networks to keep current and try not to fall behind their students. The current learners are much more visually literate than previous groups and are more comfortable in an image rich environment. The faculty participants in this study discussed how they use innovations like instructional video and how their interest and expertise instructional video evolved.

Early Influences

The participants were asked why they started using instructional video as part of their curricula. Some were influenced by early family experiences. Others participants were inspired by their college professors and the use of instructional

video by their professors while they were still students. One of the professors developed a positive attitude about innovations because of the influence of his father:

My dad who was a high school teacher in his later years and was basically the audio/visual person for the school district. And so we always had a lot of tape recorders and the old video recorders which were the old tape reel to reel players and of course calculators. One of my brothers was a math major so he had some of the very earliest calculators.

It's not like the kids nowadays who are really brought up with computers and smartphones and things like that. We were exposed to a lot of different technologies with the audio-visual especially.

You know a lot of it early on was pretty experimental, I mean of course watching my dad tape these early videos and such (Professor 4).

Early influences by parental figures can guide a person to accept innovations. Watching his father experiment with audiovisual projects lead to an appreciation for and an acceptance of instructional video support as a teaching professional. Mentors do not only come from families but also often come from professors from student days. Being a teaching assistant can give a future professor a chance to observe the value of instructional videos:

It wasn't until I got to my Ph.D. program that I witnessed its (instructional video usage) effectiveness. She was my first dissertation advisor and I was

93

her T A for her fairytale course and her witches' course. She used a lot of technology. She used clips of different movies you know scenes from movies or cartoons and operas. And it was a very carefully orchestrated seventy-five minute class and we had two T A's. We had a plan and we had to be ready to get this clip going and get this one cued up and I completely adopted her style.

It was all because of that one professor in my Ph.D. program. I am sure she showed me what happens with movies or instructional videos. You know what I'm thinking about. You know I have a 15-minute video on the *Fall of the Wall.* What happens with these things is when you're an instructor you're constantly cognizant of the amount of time you have in the classroom. You don't want to waste time. So I can't show an entire film usually but I can pick out snippets and use them in the classroom (Professor 1).

Working as a graduate assistant for a master teacher can be strong learning experience even though it is not in a formal course. Watching the technique of properly sequencing video support material and observing the positive results from the proper use of video in the classroom can leave a lasting impression on potential professors. The effective uses of video and time management are powerful lessons to learn. Sometimes these early inspirations as a student can have an impact later in the career without realizing it at the time. One of the participants experienced this phenomenon while viewing a documentary selected by his/her professor early in his/her college career:

94

So I can actually say that I remember as an undergraduate and one of my

social studies classes we watched *Eyes on the Prize*. And up until that time I

hadn't watch a lot of documentaries and things like that and I remember

watching *Eyes on the Prize* and just being just really profoundly affected by

the visualness.

I just remember it having impact on my own learning so I never really

thought oh my gosh if I'm a professor I'm going to use the instructional video

so no I never that wasn't you that's not at that moment in time. I wasn't

thinking about that. Then as I got into my master's programs and Ph.D., it

became one of the many tools with which I knew I was good. I was good at

potential use but I don't remember ever thinking oh this is going to be

something specifically because it had such a profound impact. I mean I never

thought about it. You ask me questions now. OK. So I mean you know until

you ask that question I would have never thought that the instructional

videos had a profound effect until you made me think about it. OK. Well now I

think I can think of a way I can think of a video in my freshman year and from

my sophomore year soc class and I remember being oh yea we get to watch a

movie and I'm like whoa this is not a movie right. This is everything we've

been talking about. And a real face to those people in a real emotional kind of

effective piece to it too (Professor 2).

Sometimes moments of clarity about an inspiration do not reach the

conscience mind until an event makes us take a fresh look at it. Watching a video

can be an enjoyable experience but at the same time it can reinforce learning in

subtle but effective ways that can manifest in many ways in the future. Another

participant had a similar reaction to video experiences as an undergraduate that has

had a positive effect on his/her current profession as a professor:

> I probably watched my first foreign language film in college. I remember
>
> that. That was the co-curricular event outside of class. I don't remember any
>
> instructional videos being used as undergraduates. So those sort of cinema
>
> like experiences have been constant from grad school and on. I've kept that
>
> as kind of a cultural aside to things often because instead of taking all
>
> pastimes to film or something so that's always a one plus with a scene from
>
> something else. I took up for like showing this next clip or you know
>
> literature class you know if they refer to something that's sort of a visual
>
> something that everybody knows. I maybe show that one clip in class to help
>
> parse out like this is what they refer to or here's the song that they keep
>
> playing over the refrain keeps coming back and back and you know this text
>
> and it's meaningfulness like that. Here's the music. Let's listen to it now and
>
> then watch the video and then look at this passage in literature again and see
>
> what's happening here between text and sound. I'd have to say yes I suppose
>
> pedogy meets course. It was the first indigenous European film I'd watched.
>
> So it was a non-mainstream film so I guess I probably was thinking about
>
> that element and curious to know more about that (Professor 5).

Appropriate selection of video support materials can stimulate the intellectual curiosity in students. Understanding how these types of video sources can affect the student can guide the future professor to select video pieces that can stimulate thoughts in their students beyond the classroom.

The Diffusion of Innovation process is impacted by the social system with which the individual is involved. Some systems are hierarchical such as the family unit or even the school environment. Diffusion occurs in all such settings either formal or informal. Early social systems contribute to whether the individual is open to adopting innovations. Sometimes the influence is not readily apparent but impacts the individual in their future behaviors.

Social networks have strong influences during the developmental years. Mentors could be parents that set a good example by exposing learners to experimenting with audio-video systems to be used in educational settings. Mentors in college can plant ideas of using instructional videos in the student by classroom presentations or even more influential would by having the graduate student participate in framing the learning environment that included instructional video.

Peer Resources

Social networking is an important part of the learning process as a student and even more important during a career as a professor. Staying current with teaching trends in technology such as instructional videos is an ongoing process for

those that try to continually update and upgrade their curriculum to continue to challenge their learners. The participants were asked where they discovered new ideas pertaining to instructional videos. They listed many places like friends, colleagues, conferences, university support units, and scholarly readings as sources for discovering new ideas that work and those that do not work well in the classroom. For example one participant explained:

> Talking to some peers and Center for Technology. I rely on newsletters, talking to people in the Center for Technology, and taking workshops.

> Definitely if they're using something and they share it at a meeting or when having a talk in the hallway then I ask them more questions and think about how I could possibly use that in the classroom.

> I go to friends first. I have faculty who I know use technology because of course not everybody does. I'll talk to my spouse of course because he/she's also an academic. And then I'll talk to other people about it and see it's kind of like a brainstorming process (Professor1).

Professors who actively pursue new ways of presenting their course material tend to use face-to-face communication as a primary source. Checking with friends and colleagues is a natural first step. Attending meetings where academic methods are discussed is a good way to participate in discussions about pedagogy. These sources tend to be from inside academia as opposed to the public sources. These academic meetings attract faculty from various parts of the university, which leads

to possibilities for collaboration. Seeking out colleagues within your social network that have technical expertise to help to accomplish the mission is common:

> Well I think that it was colleagues in the college of education. So we had somebody who actually teaches the technology and so we had a little collaboration going on there. So I think you know colleague collaboration is really the way to go. We've got a lot of excited instructors really and we want to do things well. I feel to change things very frequently because if I'm bored with what I'm doing how can I expect the students to be inspired. I need lots of stimulus and I need lots of change and I need lots of new things to keep engaged motivated (Professor 6).

Professors that are eager to innovate often need skills and knowledge's beyond what they have prepared to do. Collaboration to compensate for weaknesses is necessary to keep the classroom experience from becoming boring. Also, when a professor moves into a new area such as on-line courses, collaboration with someone with the requisite skill set is needed to reduce the time of the learning curve for this new enterprise. These types of collaborations can avoid potential problems:

> In 2011 we started an online language-learning program. So I was doing that with all the content in collaboration with a colleague of mine who was a computer programmer so he taught me some of what HTML and different kinds of things for figuring out web pages and doing some tricks and work

around blackboard and other things like that. So most of the time it's, yeah, I like to do things (Professor 5).

Frequently the faculty has the content part of the equation but not the technical side. So they team up with someone with the technical expertise. But just as often, professors with the technical expertise seek out collaborators with instructional strengths. Some professors have the technical skill but seek out help from instructional designers:

> I've always kind of considered myself a little bit of a first adopter. It is just so you know. I always had really good consumer knowledge of computers and so in my first job as a graduate student I worked sort of the front line tech support at the university I was going to. And so I worked a lot with the instructional designers and worked with people to help them adopt technology and their courses. I mean just because you can use technology doesn't mean it's always helpful. I subscribe to a teaching professor and you know just getting out there and seeing what other people do and that can be really helpful (Professor 3).

One of the keys in becoming an effective professor that uses innovations like instructional video in the classroom process is seeking out new knowledge from many sources. These resources are often on-campus so that collaboration can be facilitated. Social networking and learning is not limited to the immediate campus. There are times when the professor finds innovation happening on other campuses.

Another example of social learning and sharing is reaching out to professors on other campuses:

> So my first class's book was psychology and so I did a lot. I did a whole thing on campaign commercials and I said now you've got *You Tube* in there it is so easy. I can't tell you how many hours I spend cultivating campaign commercials recording and encoding them into your video format so that I could show them on the computer. I use some authors that break down different things and campaign commercials ways. I wrote this professor at Ohio State at the time and he was looking at how news programs frame people's opinions about an event. And so there's this huge Ku Klux Klan rally outside of Columbus Ohio and he recorded the news stations take on this. One of the news stations did sort of law and order frame and here's this hate group coming in and then disrupting everything. And the other newscast he recorded was sort of a first amendment free speech frame. So here's a hate group coming in and what they did kind of harkens to the first amendment and talk about the whole association free speech thing. And so he was interested in looking at this and how it would affect people's attitudes. He did an experimental design. He had one group of people watching the law and order frame and one the free speech frame. Then he told them what they were looking for and they watched the entire newscast. He just answered the different things in there. I wrote him and I was able to get that material from him. My students went through this and I don't think they've been really

101

exposed to anything like that before. Here's the thing. Here are the actual

newscasts that were recorded and of course the video. So that was a really,

really successful assignment I thought that you were able to demonstrate

that what people on the news say can really affect how you perceive

something (Professor 3).

Successful learning experiences can be focuses around the use of

instructional video. A professor can take a meaningful learning exercise from one

university and modify it and present it at another university. The learning exercise

is not a competition between universities but opportunities to share successes so

that more students can benefit from the experience is a major part of collaboration.

Academic discipline conferences are used as a medium of exchange between

professors. Although limited resources frequently limit attendance at conferences

in far off venues, those that get the opportunity to participate gain valuable

exposure to new ideas. Awareness of new ideas can be picked up at conferences:

Probably some are more likely to be at a conference or something if I hear a

presentation or get a good tip from somebody. Or I see a team taught with a

mathematician, which we did in some summer school stuff. So you know

that's how I learned excel and a super savvy way from a mathematician. So

you know things like that we're working with peers or learning short tips like

that (Professor 5).

Conferences allow professors from across the country and even internationally to gather and share ideas and tips to aid in the education of their students. These meetings allow faculty to gather ideas from beyond the limits of their campuses and bring them back and implement these newfound gems. It is good to be an active conference participant but you must also be open enough to learn from your own students:

> I think its just being open minded listen to people around you and responding particularly to students about what is their preference and particularly when you're talking about instructional technology with students and getting them to be critical.

> And I think I could probably identify three sources and the first thing is you know often I get ideas from students in class because they're working in the PK-12 setting and they come with some preferences about the technologies they like to use. The other place I mean I'm inclined to keep in the Blackboard's work suite if I can for most things.

> I also learn by going to conferences. I used to present at technology conferences when I was doing some work on blogging and so I guess a lot of the ideas all come from my own action research. Well the process is just so often it's just by trial and error. I learn by being part of their session. There's a lot of interaction and I'm learning from them and I trust that they're learning from me (Professor 6).

Graduate students can be a strong source of contemporary ideas because they are practitioners in their discipline and attending grad school to further their careers. If they are allowed to share their experiences with their classmates, the learning experience becomes interactive and all benefit. Attending conferences can be of great value because of the ideas learned from others, but if the professor actively participates in the conferences, the benefits and growth is even more impactful. Attending local conferences and/or seminars can be just as powerful as traveling to distant conferences. One professor takes advantage of both local and distance conferences and seminars to seek out innovations:

> Well one way it would be taking the summer program finding out about
> technology is they're going to some of the workshops by serving on the
> continuing education committee for the university for several years. I am
> also more aware of some of the workshops and stuff being offered. So that
> would be one area that I would learn about the technology. Second area
> would be through some of my professional meetings I go to in my discipline.
> So since I use computerized information systems in particular try to keep up
> on the literature and then taking workshops and such when I'm attending
> professional meetings or going to talks that are oriented towards using some
> of this technology.

> Well the best way is to look and see what others are doing. And one of the
> ways of doing that more would be going to the workshops, going to talk to
> professional meetings, where they're actually talking about how they're

incorporating.   Some of it's from my colleagues either in the department or across the university and some is just trial and error. I realized that hey that would be neat. I think we could use that and try it and see if it works (Professor 4).

Being active in the professional community whether it is campus wide or discipline wide is a key to finding new ways to incorporate innovations such as instructional videos in classroom presentations. A variety of workshops from summer workshops that last for longer periods of time to "brown bag" types of sessions that last only an hour or two are opportunities for professors to share their techniques with each other to the benefit of their students. Professors can gain new ideas and insights in innovations like instructional video and other technical advances from sources not only in academia but also from sources adjacent to academia like technical conferences and connections. Many different sources can be used to continue to upgrade knowledge:

Generally speaking I do a lot of reading in my scholarly discipline so I hear from colleagues and others scholars in my academic field related to peer review journal articles. I also am contacted quite regularly by vendors who inquire regarding whether or not I'm interested in purchasing or subscribing or using a specific service. Generally I just ignore these and move them straight to junk. Often times I hear about technologies. I also attend a number of conferences where I visit with colleagues and that can be of help as well. Finally. I do attend trade environments for academic technologies including

Blackboard World, Edu-cause. I've attended the Qualtric's Insight Summit

where I presented at it, which was also very helpful. I served as an executive

of a nonprofit organization internationally where I met with other executive

officers and was able to consult and collaborate with them. So that was of

great assistance to me in learning about the existence of instructional

technologies as well as learning how to incorporate them (Professor 7).

Acquiring new ways to influence the learning experience of the students can

be found in many quarters. Peers in the campus community are a frequent source of

innovations. But innovations can be found at conferences from those around the

country and around the world. Innovations can be found from public service work

and the connections made there.

Rogers believes that when it comes to the adoption of an innovation like

instructional video, it is the communication between individuals within a group or

community that are the most influential in making the decision especially when

compared to the influence of mass communication. People that they know and trust

within their communities are given higher levels of credibility compared to those

outside their groups. Within these groups, those that are thought to be mentors

have a strong impact on adoption of instructional video.

The innovation-decision process starts with gathering knowledge about the

potential innovation. The knowledge gathering has three parts—awareness

knowledge, "how-to" knowledge and principles knowledge. The more knowledge

the decision-makers have the more likely an innovation is to be adopted. The participants often gained their awareness at discipline-oriented conferences, on campus seminars and workshops, as well as working with faculty from across campus. It is all about social sharing and social interaction from parents to colleagues to even students that leads to technology use by faculty that enhances student learning environments.

Social interaction from early childhood through adulthood is the key component in the decision making process that informs professors of the professional use of instructional video in college curriculums. Mentors from parents to teachers to colleagues establish the mind set that the use of innovations like instructional media is critical to establishing learning environments that address the needs of contemporary learners.

Faculty must rely on prepared videos rather than self-produced instructional videos because of lack of time and skill sets.

Faculty members are using the innovation of instructional video because it is effective and readily available through online resources such as Google and the Annenberg Foundation. Mass media sources also provide resources through PBS and even foreign and domestic commercial television. There are times however, when the professor wants a video that targets a particular teaching point that is not available in professional media. The professors look to university support systems to help them solve their teaching problem.

Support Systems

The participants were asked to give their views on the formal support systems that are put in place by the university to aid in the incorporation and/or adoption of instructional videos. The participants had high praise for the university Center for Technology and the Teaching Center. Center for Technology is designed to help faculty incorporate all forms of technology including instructional video into the curriculum from a "hands-on" perspective. The Teaching Center is more theoretical in focus helping faculty find ways to increase the effectiveness of their classroom performance.

> I go to a lot of the Teaching Center and the Center for Technology programs. In fact, I was in one on Friday afternoon on threshold concepts, which again was very interesting. So yeah you're absolutely right. I go to these and I'm always looking for new ideas. I think that the Teaching Center has or could have a very powerful influence on this university campus (Professor 6).

The Center for Technology provides seminars during the year and in the summers, but generally the faculty must initiate contact for particular technology issues. One-on-one learning opportunities exist beyond the formal seminars and workshops. One professor found that getting to know the support staff at the Center for Technology when first arriving on campus can pay dividends in developing ideas and implementing technology for use in the classroom.

I started working with the Center for Technology when I first came here I

made connections there. And I respect everybody in the Center for

Technology. I love working with everyone there and just I just got the feeling

that it's not to say that it's not like that across campus. But when it comes to

the Center for Technology I just feel that dedication and enthusiasm there.

I've come to the Center for Technology with an idea and right away we could

do this we can do that and it inspires me. So yeah, if it weren't for the people

in the Center for Technology I might not be doing the things I'm doing in the

classroom. It has to do with the people and the attitude and the support.

I rely so much on the support mechanisms better here than any university

I've ever worked at. Support here is phenomenal (Professor 1).

The Center for Technology is a prime source on campus for discovering new

ideas, but relying solely on the Center for Technology for new ideas instead of going

to disciplinary and technology conventions is not a good idea. However, when the

information gathered from the Center for Technology is combined with peer

discussions and recommendations at the regional or national level, it can give

positive results. One professor explained this along these lines:

I haven't been to any conventions. It seems like usually I'm the guy telling

people about stuff. I don't know what's it is within this smaller group of

people that I run around with and people across the way is good. I learned

about some cool stuff from them like that TRINT software. A lot of times it is

from people over in the Center for Technology that I hear about new things. I hear very cool things about different software different applications to try. So I feel like I have to seek out stuff a little bit more than stuff that I know that my peer group is talking about (Professor 3).

The Center for Technology and the Teaching Center have been university support units for many years. Current discussions about restructuring the Center for Technology and possibly combining it with other support units like the Teaching Center could change the formal university support system. Some fear that the merging of these units might be purely for cost cutting and not for improving effectiveness for assisting faculty.

I think traditionally that has come from the Center for Technology. I think that in the past historically it's functioned beautifully. And my sense now I still get good service. However I sense now that the unit is under pressure and sense that people at the Center for Technology, et cetera, you can reel off the names, are all doing too much work. And I think my impression is they cut off the head and it's best to say it that way. Well I mean, I do know what's going on and I know that there are some attempts to join the Center for Technology with the Teaching Center with what have you. If that's going to consolidate support and still be well lead and so on, it has potential to be amazing. But I'm not sure it's not just a cost cutting exercise and, therefore, I like to think optimistically that this, that what's can come out of this is a

really good model of the future. My concern is that they're going to pressure

people so much that they're not going to have the intellectual space.

The university has instructional support units like the Center for Technology

and the Teaching Center. They have provided support for faculty wanting to

improve the learning environments in their classrooms. Structural changes are

being discussed that could change this support system. As long as the changes are

for improvement and not strictly for budgetary reasons, the participants are

supportive.

Self-Produced Videos

Faculty must rely on prepared videos rather than self-produced instructional

videos because of lack of time and skill sets. Motivating faculty to try innovations

like instructional videos varies by the professor. Wanting to improve the learning of

their students motivates all the participants in this study. Some of the participants

believe that monetary incentives, especially in the case of younger faculty members

can be influential in their acquiring new innovative skills like self-producing

instructional videos. The potential adopters often try to mentally conceptualize the

perceived benefits about an innovation.

Yeah, it's very rare that I think about technology in the sense it's going to be

fun. I'm always thinking about how can that help me. Can it make my life

better? Can I improve my students' learning experience, their learning

outcomes, and if not then I won't waste my time.

111

I love to experiment but I'm going to be very critical if I can't figure out how

it's going to improve the experience for my students and me. I'm not going to

use it. I'm not going to just jump on a bandwagon because this is the latest

and greatest thing. So I'll give it a try a couple times and it's if it doesn't help I

cut it (Professor 1).

Experimenting with new technology like self-producing instructional video

is only good if it improves the learning environment and the learning outcomes.

Inserting new technology into the curriculum simply because you can is not

effective use of time. If the experiment does not improve the learning situations,

then they should be discarded. Rogers' theory states that Trialability is an important

component in the acceptance or rejection of an innovation. Innovations like

instructional videos allow the professor to give the video a trial. If it works, the

learning environment is improved, but if it does not work out it can be rejected

without any damage to the curriculum.

Finding ways to improve the learning experience with innovative support

like instructional videos can be a time challenge for many professors during the

academic year. Summer seminars and workshops provide opportunities to learn

without overburdening the workload during the regular semesters. Professor 6

addressed the idea of the summer offerings and also addressed some campus

support reorganization that is currently in play:

I'm not a great advocate for motivating people by offering external support more so than I have and because I don't believe that's how people function. But there is a however, you know if during the summer when we're on a nine month contract. There are many people who are just trying to put food on the table and I look at some of our young families and our younger professors and they need the money. And so during the summer instead of teaching a class maybe offering less and I think he probably does like to offer a stipend so that they don't have to worry about sort of earning a buck to keep a family together. Now for me it's a little different. Generally my motivation is about self-improvement. So and I'm never happy, I'm never satisfied and I'm always looking for how you can do better. And so I fondly believe that's most of my colleagues are similar. But I think if it comes down to the culture of the departments, of the program, of the collegiality with people we are working together to have that little friendly competition about let's be the best. Let's all be the best. We do. Because when you're teaching in a program you can only be as good as your colleagues really.

Friendly competition to improve teaching often is part of the departmental culture and is another form of social interaction among peers that stimulates improvements in the curriculum in a collegial atmosphere. Summer seminars give faculty opportunities to learn new processes without having classes compete for available time during the regular academic year. However, incorporating these new

processes into the curriculum creates a new time commitment on the part of the faculty member:

> Well I think offering summer workshops with a small stipend helps. Now there's a lot of training I think during the year from some of the different organizations on campus and I think that's good. The only real problem is just finding time to do any of those things because they are a new time commitment to learn about them and then also to oftentimes use them or incorporate them into classes so (Professor 4).

Time to learn new innovative techniques like self-produced instructional video is more available outside the academic year and can be taught in the summer seminars and workshops with colleagues from across the university. These learning opportunities not only provide technical guidance, but also opportunities for peer social interactions that are not as easily achieved at other times of the academic year. One of the participants had a considerable amount to say on the topic so I have broken down his/her statements into sections that can better be understood. He/she put it this way; "To me the issue is at the department level or the college level or at the university level or not getting faculty the time in their schedule to take advantage of the things that the Center for Technology provides (Professor 2)." The Center for Technology has held summer workshops on self-producing videos. In order to get faculty participation financial incentives have been used:

So for example financial incentives being a summer grant to do this. Absolutely, I mean you can either entice faculty monetarily or with a course release time off, so it becomes your time to do it. Monetary incentives are great. I still think though the probably not the best use of money because, again, most of us actually I think are kind of amateurs. That's right. I mean you're not going to get the quality that if you were to hand this off as somebody else that it would be of much higher quality (Professor 2).

But a couple of weeks learning these new skills does not make the professor an expert or in many cases even competent in these new areas. In order to get the professional instructional video quality needed for effective learning the professor needs to partner with some professional with the requisite skill sets. By getting someone with the proper skill sets the video can be used over and over again by the professor or other professors teaching the same subjects. This same professor continued his/her thought by stating:

For example you could have someone look this is a class, it's going to be that you're going to be teaching and we have classes that would be great for the class that use consistently over and over again that maybe it could actually be going online or you want to have instructional videos. OK we're one-on-one with the instructor. Get these things they look great, they look good. Its worth the instructors time to have to spend with someone who you say, here are my power points. Here's my script.   Maybe you're going to find better. You know I get clip art and that sometimes it looks terrible. You know I put clip

115

art on things I feel it needs to be some picture right but I just don't have that someone else who could probably take and be like wow I can snap this up, spend a little time. You're saving my time but then you're also creating something that I can be used over and over and over again. And I know it's there and it looks good and I can kind of keep it there or maybe you know next time I've got to just maybe insert something that's a little bit maybe more relevant. I can just say hey I got to insert this piece of art changes here (Professor 2).

By pairing up curriculum experts with video production experts, the skill sets of each complement the other and the end result is a high quality video that focuses on the learning environment content and attention getting video that can be used many times by many faculty. Still from this same professor added that faculty should not be expected to do it all by saying:

I mean that's what we think that's one of the things that if we're having faculty do it on there own. It's not a good use of their skill sets whereas you have someone who's master skill set is to create good videos. Then you have that person create good videos and have the professors feed in (Professor 2).

Professors do not want to spend time developing instructional video that looks amateurish. The "how-to" knowledge of the faculty producing their own instructional videos tailored to their own specific needs is desirable but has major barriers –time and skill sets as well as incentives. Professor 4 in rejecting the idea of

116

producing his/her own videos stated "The only real problem is just finding time to do to do any of those things because they are new time commitment to learn about them and then also to oftentimes use them or incorporate them into classes so." Professor 2 agreed that although support is strong, finding time to implement innovations is a problem:

> I think the challenges I have, we have everything we could possibly need right now material wise, and probably support wise I just don't have the time. OK. If they would give me a course release time to focus my time on it, absolutely.

> Even summer seminars and workshops that are two weeks in length can cause problems of time management for faculty. Professor 1 put it this way:

> It depends on the person, for me that's not an incentive. You know I did the teaching with technology summer grant and, of course, I got money for doing that but that wasn't the reason why I participate in it. I think the idea is that it can't. The problem with teaching with technology is it was two weeks of your time. I think that faculty is so busy that you need to have smaller time commitment options. So there used to be this I don't even know what it was called and you probably remember where we had like a technology forum and it was maybe an hour and a half and you could go and listen to someone speak and then you could visit different tables and see how technology was being implemented in different classes.

Lack of time in the faculty workload even in the summer can cause problems for faculty. Some faculties find shorter forums during the academic year more appealing. One participant also finds the challenges of time and skill set overwhelming but would like to see instructional video supported even more:

> Now I get I'm not as good as another faculty member in our department. He creates these amazing videos that would totally put mine to shame. He's amazing. I can't get his caliber because he's got a lot of graphic arts.

> We think about teamwork right? We think about professors trying to create their own videos. You're not going to get you're going to because you don't have the technical expertise there but you have the content expertise. And so when you build a pair, someone with a motive and expertise with someone with a different expertise and then you bring them together, then you're going to create a better product. And that's what we ultimately want. I don't like having my videos out there because I am embarrassed by them but at the same time you know and I've looked for the things I've looked for their videos on *You Tube* and I don't think they're any better than necessarily mine.

> I think my ideas and my hope is that when I saw this video on *You Tube* and like that's not so great I could create something better and I kind of try and that's OK. But my goal would be to create even if we could take one or two videos a semester, one semester, whatever it happens to be and just highlight

let's work on this one. Let's work on this one and just slowly up our game.

Then I think we'd end up with a much better package (Professor 2).

It is sometimes difficult to find prepared videos on sites like *You Tube* on the learning point that needs strengthening. The faculty member has a need to create a self-produced video but lack of skill sets and the time to self produce instructional videos. If needed time is provided and professional technical support is available, a professional quality instructional video on the needed learning experience is not only desirable but also possible.

That would be wonderful absolutely if someone could do that for me because I don't. That's not my skill set. But I feel like in terms of technology what happens oftentimes I felt this way. When I use technology to get K-12 settings in different settings what happens is, there like here is just great tool. Now go figure it out yourself and do it yourself. And like I'm not a marketer. I'm not a graphic designer. I'm not any of those things people don't. I don't want to hear my voice on my PowerPoint slides. I mean like why and all of a sudden it's like here's the opportunity, but then we don't. Instead of like have someone that can produce that for me or do I take whatever I can do it and create it into a nice pretty package. My videos suck. They are terrible. I mean I don't want to watch them but they're there and I feel like OK you know they feel and I hope they feel the need I think to use them but they're not they're not exciting.

I mean I don't want it to be boring. I really don't want to be boring. But my

skill set is not in the creation of videos. I want it to be high quality. I want it to

look like first rate. I don't want to look like that camera jiggling. You don't

want to look amateurish.   You really want to look well polished because then

you're putting your professional time into it (Professor 2).

The time to professionally produce an instructional video is required.

However, if the faculty member does not have the requisite skill sets to produce the

video, the participants felt the time would be wasted and the instructional video

would not be effective. The professors believe that if the faculty with the proper

skill sets in curriculum development could be teamed up with someone with the

skill sets of producing professional video, then the results could be outstanding for

the faculty. More importantly, the students will have an enhanced learning tool

designed specifically for the learning situation that is needed. Further, this video

could be made available to other professors teaching the same subjects and the

value of the video increases dramatically and can be experienced by the students for

years. Unfortunately, the ability to produce professional appearing instructional

videos cannot be taught in a couple of weeks.

I love this and I'm willing to do it because I think it actually does help the

students but it's time consuming. So I pick it up, you take a video, you go to a

Center for Technology workshop they're fantastic in what they give you.

They really show you how to do it and then you walk away you like I have got

to find the 20 or 30 hours to go do that. And that's where the timing at a time (Professor 2).

The desire to develop focused learning videos is not uncommon among the faculty but even with the proper training and guidance to develop these videos, the faculty just does not have the time. Even with desire and the training, the faculty workload is too demanding to free up the requisite number of hours needed to produce a professional looking instructional video.

Even if time was not the only restriction, faculty members do not have the necessary skill sets. Faculty are trained to develop curriculum and do research not to produce videos.

No absolutely. I mean I think that that our time as instructors is much better spent creating a curriculum or doing the things that we are good at and our skill sets are kind of based around versus having to learn a new skill set like video editing or snazzy you know designer. What music would you pair with this; I'm guessing, right. Sure I'm trying to figure out what works best. I find that most people don't have to waste a lot of time solving this. You know my daughter is a designer-to-be and she does all this fun stuff and I thought maybe I should just give it to her. She can do it because she ends up doing better stuff and I can't. I wish there were someone that you could hand this off to and say this is your expertise area. Here you go (Professor 2).

Given that faculty are not given enough time within their workload to experiment with new ways of upgrading the classroom learning environment, some think that increased support from organizations like the Center for Technology can better increase the effectiveness of instructional videos designed specifically for by utilizing the talents and skills of faculty in conjunction with the talents and skills of video support personnel. Professor 6 agrees with the support but points out significant problems with the existing values of teaching that are part of the institutional system:

> Now here's the problem though. And good teaching doesn't seem to be valued. So for those for those professors who are seeking tenure or who are seeking promotion they're not going to get there by being superb teachers but they are going to get there by publishing. And so I think there's a little bit of a problem with the evaluation process. What exactly is valued? Now the other thing is that when you actually knew a new technology or you change things up in your class that might be reflected in your evaluations, at student evaluations of your performance at the end of the semester. So I could understand people being a little reticent to experiment and try things out. If the students are going to use some poor value, well not even poor. You know people here even if your score was you know even slip a little below 4 and then everyone sort of hold their hands up in horror. How could you get a score below four or so, you know there are some unrealistic expectations of

the evaluations and performance? And so I guess what I'm saying is there's no incentive to experiment.

They might think twice about the time it takes to work on some of that technology piece.

There are procedural considerations such as promotion and tenure that go into the decision making process of adopting or rejecting innovations such as instructional video. According to Rogers the decision making stage is where the potential adopter actually adopts or rejects an innovation. The innovation-decision process starts with gathering knowledge about the potential innovation. The knowledge gathering has three parts—awareness knowledge, "how-to" knowledge and principles knowledge. The more knowledge the decision-makers have the more likely an innovation is to be adopted. Many of the faculty interviews expressed interest in innovating their classroom by producing their own instructional videos. The two primary factors given for the rejection of doing their own videos were the lack of time and lack of skill set. Time during the academic year would be available for producing instructional videos only through course release time but with the heavy course loads this is difficult to get.   Summer workshops, especially those with monetary incentives can help with skill sets, but the faculty members have primary skill sets in areas other than video production so that a two-week workshop can show you how to do it.   However becoming professional instructional video makers in such a short time frame is almost impossible. Increasing university support for those with video production skills set to pair up with curriculum content experts

has great promise. But resources such as these are difficult in demanding budgetary times.

Summary

The theory of Diffusion of Innovation seeks to identify how and why certain populations adopt innovations. This theory is different from other sociological theories its in approach to change. Rather than focusing on the persuasion of change, it views change as a "reinvention" of behaviors and products as they evolve to suit the needs of the population they serve.   This study discovered the lived experiences of the participants as it relates to current student learner population and how they are adapting their learning environments to better accommodate the learning behaviors of today's students. Four themes evolved from the analysis of the participants' experiences.

Today's learners differ from past generations especially as influenced by their exposure to and use of technology.

The first theme is based on the idea that the current student learner population is more involved with technology on a scale not seen in past generations. They tend to have shortened attention spans and many dislike reading. They are therefore more comfortable in a multi sensory environment of smart devices that rely heavily on visual content. All of the participants in the study agreed that because today's learners have a close connection and interaction with technologies that allows for an ease of instructional video implementation into the course curriculum. This aligns with Rogers' theory that expresses that a particular

124

innovation like instructional videos is seen as superior to what superseded it, in this case primarily reading assignments and lectures. Learners that are used to media rich environments find that instructional videos and live video streaming integrated into the curriculum very conducive to their learning styles.

Instructional videos as an integrated part of a curriculum of study enhance the learning experiences by allowing the students to share common experiences.

The second theme found that the participants believed that if the instructional videos were appropriately infused into the curriculum that they are very effective. One of the participants stated, "It's one thing to read about Indian boarding schools and read it on a piece of paper, but when they watch it on a film it's just that it gets closer to that kind of holistic experience (Professor 1)." Other participants used Google to take their students instantly to other parts of the world to explain natural phenomenon that defies understanding by mere lecture. The videos help clarify complex phenomenon.   Some of the participants use instructional video to immerse their students in foreign cultures and languages in ways not possible by traditional curriculum. As an integrated part of a curriculum of study innovations, such as instructional videos, enhance the learning experiences by allowing the students to share common experiences. These are the types of relative advantages Rogers believes that shows a superior way of doing something that will make the innovation more likely to be adopted.   Rogers' theory says that for an innovation to be successful it must be simple and easy to use. Professionally produced instructional videos are easy to access from many sources including mass media, scholarly distributors, and the Internet with live streaming providers such as

125

Google. Rogers theory further states that the innovations must have Trialability and must have observable results. Instructional videos can be vetted in advance for content and applicability. The participants universally had positive experiences in the learning environments when the instructional videos were thoughtfully selected and programmed into the curriculum. Since the current group of learners is more tied to technology than those in the past, the participants agreed that instructional videos are effective tools to reach these learners.

Faculty use social networks to share knowledge about technology and instructional videos to benefit their student learners.

The third theme discovered the reliance by the participants on social interaction. The social systems with which the individual participants were involved growing up and in school were very influential in their development as classroom teachers using instructional videos. Early exposure to instructional videos while the professors were matriculating has seemed to leave a positive impression (or at least a subliminal one). These early experiences with instructional video seem to support the notion that as learners, the professors began to notice the potential of instructional videos inside of a course's curriculum. These early experiences created the feeling in the future faculty that instructional video use in higher education is a norm rather than an exception. Rogers believes that the decision to adopt an innovation is most influenced by the individuals and social groups with which the potential adopter networks. The majority of the participants interviewed reported that it is not uncommon to share innovations about an

effective instructional video between co-workers and peers from professional organizations.

Faculty must rely on prepared videos rather than self-produced instructional videos because of lack of time and skill sets.

The fourth theme focused on the idea that they find most of the instructional videos they add to their curriculum through various distribution mechanisms rather than produce their own instructional videos. According to Rogers the decision stage is where the potential adopter actually adopts or rejects an innovation. The participants thought the idea of creating focused self-produced instructional videos was appealing. The two primary factors given by the participants to reject the use of self-produced videos were the lack of time in their busy schedules and the lack of skill sets that would make their self-produced videos look professional. Although they can attend seminars on the process of video production, getting to the expert level is more problematic. They do not want to produce a video that is amateurish and embarrassing. However, if they were able to team up with support staff that have professional level skill sets they would be inclined to innovate this way although available time would continue to be a major concern. According to Rogers, these factors would lead most potential innovators to reject the innovation of self-produced instructional videos.

CHAPTER V

DISCUSSION

Colleges and universities create learning environments that strive to optimize the strengths and minimize the weaknesses of the learners. Media rich environments have changed the current generation of learners just as it is now changing higher education. A need exists to examine the experiences and perceptions of instructors when adopting innovations such as instructional videos for use in their media enriched curriculum delivery. The knowledge gained by these studies is needed to understand the motivations and challenges of seasoned faculty. If faculty members are to continue to reinvent their classroom presentations, they will need the support of academic leaders to provide them with the appropriate time, tools, partnerships and incentives to keep their curriculum relevant to the current and future generations of learners.

This study used a phenomenological approach to discover why and how faculty members at a 4-year public university are innovating by using instructional video in their classrooms. The phenomenon studied was the adoption process and the motivation of the faculty. The theoretical framework for studying this process was Rogers Diffusion of Innovations Theory. This theory is based on the idea that innovations in technology and practices change over time and the adoption or rejection of innovations is based on several factors that are discoverable.

This study explored the innovation of the use of instructional videos for instructional purposes by faculty members and instructors at a 4-year public university. A phenomenological interview process was used to get the lived experiences of tenured and tenure-track faculty members in relation to their adoption and use of innovations like instructional video in their teaching. The process examined the faculty's lived experiences and perceptions of the variables that shaped their utilization and rational for use of the innovation of instructional videos for instructional purposes. This study focused on the following qualitative research questions:

1. How do faculties perceive and experience technological innovations in their teaching practice?

2. What are faculties experiences using the innovation of instructional video?

The basic philosophical assumption of phenomenological inquiry is "we can only know what we experience" (Husserl, 1970). Therefore the focus of phenomenological inquiry is to study the perception of the lived experiences of the participants. This study used transcendental or psychological phenomenology that centered on the descriptions of the experiences of the participants not the interpretations of the researcher (Moustakas, 1994). The participants in this study were seasoned professors that all have earned the rank of Associate Professor with at least 14 years full time teaching experience in higher education. They represent a

cross section of the university from arts, sciences, education, and business and represent a multifaceted and varied group representative of the campus community.

Transcendental or psychological phenomenology means that the researcher selects a phenomenon to study, brackets out his/her own experiences, and seeks out several people that have experienced the phenomenon to collect data from them. The researcher then reduces the collected data into significant statements or quotes and further combines these into themes. The researcher then advances a textural description of what the participant's experience, a structured description of what kind of conditions, situations, or context the participant's experienced (Moustakas, 1994).

Faculty participants for this study consisted of seven tenured and tenure-track teaching faculty members at a 4-year public university that has a well-established instructional technology development program. Faculty participants were selected based on there shared lived experience of attending a professional development workshop that focused on demonstrating and encouraging the use of instructional technologies for instructional purposes. All of the participants held the degree of Ph.D. and the rank of Associate Professor. Further, they were all experienced faculty with between 14 and 20.5 years teaching at the university level and have been at their current university from 6 to 12 years. Four of the participants teach in the Liberal Art and Sciences, two resided in the College of Education and Human Development, and one from the College of Business and Public Administration.

Each of the participants was interviewed twice. The interviews were then transcribed and reviewed for accuracy.   The participants were given fictitious names (i.e., Professor 1, Professor 2, etc.) The interviews were then coded, and the codes were narrowed down into themes.

I addressed in-depth the procedure protocol for obtaining IRB approval, participant selection criteria, protection protocols for safeguarding the participants, as well as concerns surrounding the validity of the study.

Essence

The purpose of this phenomenological study is to understand and describe the phenomenon of faculty innovation in particular the use of instructional video use in higher education curriculum by the participants in the study. The essence is what is common and universal in the experiences of these participants as it pertains to the innovative use of instructional video.

The essence of this study is that faculty innovations such as instructional videos, properly programmed into a curriculum, play a critical role in designing media rich learning environments that are more compatible with the learning styles of today's learners. Current students live in a multi-sensory environment of smart devices that prominently feature video communications a key component.

In the same way the participants in the study found that appropriate use of the innovation of using instructional videos were very effective in enhancing the learning environments of their classrooms. They primarily learn about innovations

in technologies like instructional videos through social networking as well as through formal training from university support units.

Similarly, the professors in the study explained that they would further innovate by producing their own targeted instructional videos if they had time and assistance from professionally skilled video support personnel. They were concerned that if they did not have the proper amount of time to work on these instructional videos and professional support in the production of the videos that the instructional videos would appear to be amateurish and lose their positive impact.

So in short, the professors felt that innovations like instructional video use were beneficial to the learners but the creation of materials custom tailored to the course curriculum would be too time consuming and overwhelming for instructors to be responsible for creating.

Findings Compared to Literature Review

The studies in the Literature Review primarily focused on the use of instructional technology use in classrooms. This study focused more specifically on the use of instructional video in the classroom. The findings in this study are very compatible with the findings in the earlier studies of instructional technology.

This study went deeper by ascertaining how the participants feel that today's students react to innovations such as use of instructional video. The study reinforced the literature in that the current student learners learn better through

multi-sensory presentation of complex course material because of their reliance on media rich technology.

We discovered how seasoned professors developed their use of the innovation of instructional video. Participants developed their use of the innovation of instructional videos through social networking from early mentoring by family and teachers to current day social networking with local colleagues as well as colleagues in the professorial community.

The participants in this study talked about how effective the innovation of instructional videos were in areas of scientific phenomenon, immersion in culture and language, and tools for critical analysis of creative activities. All believe that innovations like instructional videos aid in the transference of knowledge to their students. The participants would like to develop more innovations like instructional videos that are specifically designed for their classes but they do not have the necessary time or skill sets to produce professional messages especially if they cannot partner with support personnel who have professional video production skills. All of the above added to or reinforced existing literature.

The Berryhill and Durrington (2009) study found that about seventy-five percent of their study participants received training from their Information Technology staff. This study found that all of the participants sought out the Center for Technology. The Berryhill and Durrington study concluded that to reach the current student population that increasingly uses innovative technologies to

communicate and learn that universities should invest in training and support of faculty to use technologies for teaching (Berryhill & Durrington, 2009). This study's participants believe that the current students often prefer visual learning to "book learning".

The Marzilli study in Texas found a positive correlation between reported skill with technology and increased use of technology in the classroom. The largest barrier for implementing more technology in the classroom was lack of technology skills and knowledge by the faculty (Marzilli, et al., 2014). This study found similar results in majority of faculty not having the proper skill sets to produce professional looking instructional videos.

A qualitative study concerning the adoption process of information and communications technologies was reported in 2008 (Keengwe, Kidd, & Kyei-Blankson, 2009). They found that participants in their study were more likely to adopt an innovation if their department and their peers were supportive especially if the department provided the proper motivation. Many of the respondents said that they welcomed new methods of reaching their students even though some thought the adoption process was stressful and difficult without adequate support from their colleagues and department. They also found that training and professional development opportunities must be made available. Effective technical support, instructional design support along with time and funding to implement the innovations were critical (Keengwe, Kidd, & Kyei-Blankson, 2009). The study participants in this study were open and embraced the use of instructional video but

had difficulty finding enough time and support to expand their use of instructional video.

The findings of this study confirmed that like the studies of instructional technology that faculty realizes that focusing on improving the learning environments for the students new innovations are desirable. But the innovations can only effectively take place when the faculty has adequate time and skill support to professionally adopt the innovations such as instructional video.

Implications for Practice

This study has implications for the stakeholders including students, professors, academic leaders, and academic technical support units. The participants in the study had experiences with each of the stakeholders that they shared. Their experiences fit well into Rogers Theory of Diffusion of Innovation.

The consensus of the participants was that student learners benefit from innovations such as instructional videos because they are in line with the way today's students use media rich environments. The professors use innovations like instructional videos in the classroom to provide the students with shared learning experiences in a controlled environment. Many professors are also providing students with innovations such as instructional video assignments outside of class that they will be able to access at their own pace and with their own media that increases the odds that the students will actually consume the videos when they will be in the mood to learn. These learning experiences are especially potent when

135

dealing with scientific phenomenon, cultural immersion, and critical analysis of creative processes.

Professors reported that they benefit from innovations like instructional videos because they create learning environments that can immerse their student learners in learning exercises that are tailored to their multi-sensory learning styles. The study participants agreed that innovations like professionally produced instructional video greatly enhances the student-learning environment. All the participants agreed with this conclusion and they all spend time seeking out the best video resources to further improve the quality of their teaching. The participants also wanted to have innovations like customized instructional video to add to their classes, but due to workload constraints they do not have enough time to spend time creating new content for their courses. Most do not have the necessary skills to professionally produce the videos even if they had the time. Effective video production support is essential for supporting the implementation of professional instructional video either through training of the faculty or actually producing the instructional video for the faculty.

This study found that if academic leaders want to emphasize effective learning environments for their students, they are going to have to strategically plan. Academic leaders must provide incentives to professors that will encourage them to continue to reinvent their curriculum. These innovations can only take place if the faculty members have time and resources to create effective professional messages through instructional video. They must make it a priority to give their

faculty resources and incentives to motivate them to improve classroom learning whether on-line, hybrid or face-to–face. If the faculty perceives that effective classroom teaching is not going to be rewarded through promotion and tenure, they will respond to what they perceive the priorities that are valued by academic leaders.

The participants in the study found great value in academic support units especially in gaining knowledge of and "how to" implementation of technological innovative areas such as instructional video production. Since time is major challenge to the professors, academic support units need to find creative ways to spread knowledge of instructional innovation to the faculty. Also the academic support units need to be able to partner with faculty to accomplish complex technical projects such as instructional videos.

It is my recommendation based on the shared, lived experiences of the participants that institutional academic leadership encourage the use of instructional innovations like instructional videos by creating support mechanisms that utilize either departmental or institutional resources. These support mechanisms could be in the form of a full-time or part-time instructional media production personnel, in-depth media production workshops, re-assign time to work on creating/obtaining new media materials, and by recognizing instructional innovations in the promotion and tenure policy.

Implications for Future Research

Universities are putting more and more of their courses on-line. Research needs to be done that discovers whether simply recording instructors lectures and playing them back is an effective way for students to learn. Although it takes more time, resources, and effort, should on-line courses be professionally designed and produced including professional graphical presentations and announcers? What is the most effective way to make compatible on-line and face-to-face classes? Also, research is needed on the effectiveness of on-line and hybrid courses compared to the traditional face-to-face learning environment.

Along the same lines, more study is needed on flipped classrooms. Do students learn better if they get the lectures in advance via instructional videos? Would the students actually watch the lecture material in advance of the class? If the lectures are all pre-produced and the students required watching before class, do the in class portions of the course need to be handled with professors or would graduate assistants be adequate?

This study focused on the attitudes and views of faculty. Research needs to be done to find out what the students want in their learning environments. Since the current generation of college students is into more visually oriented technology, do the students think the way coursework is currently presented is the way to help them learn the best? Further research needs discover how the current student population learns most effectively?

Opportunities for future studies include examining how instructional innovation adoption rates are impacted by gender, employment status (tenured vs. non-tenured), and institution type (public vs. private), as well as how instructional innovations effect learners with disabilities and the challenges faced by those charged with designing and creating materials for them.   Further examining these topics through the lens of instructional innovations could prove helpful in understanding how and why instructors adopt innovations as well as create strategies that promote and support their use in curriculum.

Conclusion

The use of innovations such as instructional videos in higher education is a phenomenon that has been happening since the middle-half of the 20th century. This innovative instructional format is important for helping educators provide visual context to drive relatable learning outcomes. When it comes to innovations such as instructional videos, instructors have two choices; they can either find relevant material through online sources, peer networks, and private production companies; or they can opt to produce their own material. Given the enormous amount of time it takes to develop a video production skill set and to create professional quality instructional videos, many instructors are opting to either find video material related to the subject that has already been created and try to make it fit into their curriculum. I believe that innovations like instructional video use will see a huge increase over the next century as instructors continue to find innovative ways of engaging with a learner base that becomes seemingly more tech savvy with each

new generation. For this reason many universities are opting to hire full-time and part-time staff to aid in the creation and preservation (through analog to digital transference) of instructional video materials.

The transcendental phenomenological interview process allowed me to discover the lived experiences of seasoned professors and their attitudes and uses of innovations focusing on instructional videos. The participants do indeed use the innovation of instructional videos and that they find them very effective in enhancing the learning environments of current students. The consensus among participants is a desire to develop more innovations through customized instructional videos to further upgrade their classes but lack the time and resources to do it professionally.

Through the process of phenomenological inquiry and working with the lived experiences of these participants, the essence of innovation through instructional video use can be distilled down to the idea that current students live in a multisensory world of smart devices that depend on video for communication. Innovations such instructional video in the classroom is a very powerful and effective tool to reach these learners. Custom designed instructional video is desirable but only if faculty has the appropriate time and professionally skilled video support to produce professional instructional videos that enhance their learning environments.

Faculty must continuously review their teaching methods in relation to the learning needs of their students. Innovations in learning environments must be the norm rather than the exception. Technological advancements have changed and will continue to change the landscape of higher education. Faculty who do not innovate might someday find themselves replaced by technological innovations.

APPENDICES

<h1 align="center">Appendix A</h1>

<h2 align="center">INFORMED CONSENT</h2>

TITLE: *Faculty Adoption of Instructional Videos: A Phenomenological Study*

PROJECT DIRECTOR: *Timothy Oneal, doctoral student at the University of North Dakota*

PHONE # *615-347-5393*

DEPARTMENT: *Department of Educational Leadership*

STATEMENT OF RESEARCH

A person who is to participate in the research must give his or her informed consent to such participation. This consent must be based on an understanding of the nature and risks of the research. This document provides information that is important for this understanding. Research projects include only subjects who choose to take part. Please take your time in making your decision as to whether to participate. If you have questions at any time, please ask.

WHAT IS THE PURPOSE OF THIS STUDY?

You are invited to be in a research study that examines how tenure and tenure track faculty adopt and use instructional videos in their course curriculum The purpose of this research study is to gain a better understanding of how faculty members adopt instructional technologies like instructional.

WHAT WILL HAPPEN DURING THIS STUDY?

You will be asked to participate in two individual interviews with me that will last between 45 and 90 minutes each. You will be free to skip any questions that you would prefer not to answer.

Your participation is voluntary. You may choose not to participate or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise entitled. Your decision whether or not to participate will not affect your current or future relations with the University of North Dakota.

WHAT ARE THE RISKS OF THE STUDY?

The risks associated with participating in this study are expected to be minimal. It is possible that some participants may experience some discomfort during the interview if sensitive topics are discussed. You may stop the interview at any time or decline to answer any questions without any penalty to you. If you feel any distress after the interview, I encourage you to seek the support of a professional counselor. Neither the researcher nor the University of North Dakota will be financially responsible for any professional counseling sought by you.

WHAT ARE THE BENEFITS OF THIS STUDY?

You may not benefit personally from being in this study. However, I hope that you experience some benefit through an opportunity to discuss your experiences. In addition, it's possible that you may benefit in the future from the results of this study.

WILL IT COST ME ANYTHING TO BE IN THIS STUDY?

Every effort will be made to schedule the interview(s) in such a way that no additional travel is required of you. You will not be compensated for participating in this study.

WHO IS FUNDING THE STUDY?

The University of North Dakota and I are receiving no payments from other agencies, organizations, or companies to conduct this research study.

CONFIDENTIALITY

The records of this study will be kept private to the extent permitted by law. In any report about this study that might be published, you will not be identified. Your study record may be reviewed by Government agencies, the University of North Dakota Institutional Review Board, and my faculty adviser for this project.

Any information that is obtained in this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by using a pseudonym in all interview transcripts. Any personally identifying information will be changed to protect your identity. Any interview recordings will be kept solely by me and will be destroyed three years after the completion of the study. You maintain the right to review and edit interview transcripts and audio recordings at any time.

If I write a report or article about this study, I will describe the study results in such a manner so that you cannot be identified.

CONTACTS AND QUESTIONS?

If you have any questions, you may ask them now. If you later have questions, concerns, or complaints about the research please contact Tim Oneal at (615) 347-5393, or you may contact my faculty adviser, Daniel Rice, at (701) 777-2978.

If you have questions regarding your rights as a research subject, or if you have any concerns or complaints about the research, you may contact the University of North Dakota Institutional Review Board at (701) 777-4279. Please call this number if you cannot reach research staff, or you wish to talk with someone else.

Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.

Subjects Name: _____

_____   _____
Signature of Subject   Date

_____   _____
Signature of Person Who Obtained Consent   *Date*

Appendix B

INTERVIEW QUESTIONS

First interview

1. How would you define technology?
2. Describe the types of technology you had in your house growing up?
3. Describe the ways you currently use technology for entertainment purposes?
4. Describe how you learned about the various technologies you utilized from an early age to the present?
5. Describe the instructional technologies used in your:
   a. Elementary School (primary)
   b. High School (secondary)
   c. University (post secondary)
6. How do you go about putting together a new course?
7. Has your process of putting together courses changed any over the years?

Second Interview

1) Describe your earliest exposure to instructional videos (primary through higher education)?
2) Describe your views on how effective or ineffective you believe instructional videos are as an instructional aid for instructors?
3) Describe your experiences about incorporating an instructional video into your course curriculum?
   a) Where do you obtain the videos you use?
   b) Do you create your own videos?
   c) Would you be more likely to produce your own materials if your institution you production support?
   d) What types of incentives and/or support mechanisms do you believe would encourage you to adopt instructional videos into your class curriculum?
4) Describe your views on the types of support mechanisms your institution has put into place to aid you in the incorporation and/or adoption of instructional videos?
5) What types of incentives motivate you best?
6) What types of barriers discourage you from adopting new ideas into your teaching?

Appendix C

EMAIL INVITATION

Dear Dr. **********,

You are invited to be in a research study that examines how tenure and tenure track faculty adopt and use instructional videos in their course curriculum The purpose of this research study is to gain a better understanding of how faculty members adopt instructional technologies like instructional videos.

You will be asked to participate in two individual interviews with me that will last between 45 and 90 minutes each. You will be free to skip any questions that you would prefer not to answer.

Your participation is voluntary. You may choose not to participate or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise entitled. Your decision whether or not to participate will not affect your current or future relations with the University of North Dakota.

Thank you for your consideration,

Tim Oneal

Appendix D

RESEARCH PROCESS

Recruitment

Faculty participants were identified as those who were in attendance at the instructional technologies professional development program in the years 2011 to 2016. During this time period 212 members of the faculty participated in this program.   The justification of going back five years is to insure that the technology covered in the teaching with technology workshops has not significantly changed during that period. The list of program participants from the Center for Technology did not specify if they were full time and/or tenure-track to help judge eligibility. They were sent an email explaining the nature of the study and inviting them to participate. I sent out 126 invitations to participate in the study. I received only 22 responses. Only 5 said that they were interested in participating in the study. I asked for assistance from those staff members in the Center for Technology that had participated in presenting the summer programs in recruiting eligible participants. My goal was to have 10 to 12 participants, but I accepted 7 eligible volunteers that are within the recommended guidelines for qualitative studies.

Selection

Only 7 eligible faculty members that met the requirements of being tenured or tenure-track faculty who had attended a summer instructional technologies professional development program from 2011 to 2016 expressed interest in participating in the study. According to Creswell, a recommended participant group size has no fewer than 3 nor more than 14, therefore 7 participants is an acceptable number for the study.   Each participant was scheduled for 2 interviews lasting no longer than one hour each.

All seven held the rank of Associate Professor as well the degree of Doctor of Philosophy (Ph.D.). The years that participants reported that they taught in higher education ranged from a minimum of 14 years to the maximum reported of 20.5 years. The years reported spent at their current university was between 6 and 12 years. The seven participants sampled in this study came from three colleges throughout the university. Four of the participants teach in the College of Liberal Art and Sciences, two resided in the College of Education and Human Development, and one from the College of Business and Public Administration.

Phenomenological Reduction

1. I recorded each interview on an audio recording device.
2. I uploaded the interviews to a transcription service (TRINT). Trint uses state-of-the-art speech-to-text algorithms to generate accurate transcripts. Trint then synchronizes the generated text to the original audio so that the text can be verified for accuracy by the researcher.
3. After listening to all the interviews and comparing it to the verified generated text, I then began the coding process.
4. I initially identified 364 codes consisting of critical incidents and/or interesting passages from the transcripts. That is an average of 52 per participant.
5. The codes were reduced to 13 categories based on the interview questions and Rogers' Theory of Diffusion of Innovation. The categories were:
   a. Impact of Technology
   b. Visual Orientation
   c. Effective Integration of Multi-Sensory Tools
   d. Instructional Video Resources
   e. Enhanced Learning Environments
   f. Mass Media Use for Cultural Understanding
   g. Effective Professor Produced Videos
   h. Future Technologies
   i. Ineffective use of Instructional Videos
   j. Early Influences
   k. Peer Resources
   l. Support Systems
   m. Self-Produced Videos
6. The categories were reduced to 4 themes.
   a. Today's learners differ from past generations especially as influenced by their exposure to and use of technology.
   b. Innovations such as instructional videos as an integrated part of a curriculum of study enhance the learning experiences by allowing the students to share common experiences.
   c. Faculty use social networks to share knowledge about innovations in technology and instructional videos to benefit their student learners.
   d. Faculty must rely on prepared videos rather than self-produced instructional videos because of lack of time and skill sets.

Reducing Codes to Categories

This is an example of how the transcripts were used to do a triangulation of codes of three professors talking about the peer influence of teachers in introducing them to the use of the innovation of instructional video that led to a category of **Early Influences.** This category and these codes were included on pages 82 to 85.

1.

Professor1: [00:41:09] Yes they came and went while I was out of state that really did not take off. It was all tapes. As we get started, we started getting into CDs at that point where you were playing CDs for the audio component of textbooks. That was it. That was the only technology.   **(It wasn't until I got to my Ph.D. program that I witnessed its (instructional video usage) effectiveness. She was my first dissertation advisor and I was her T A for her fairytale course and her witches' course. She used a lot of technology. She used clips of different movies you know scenes from movies or cartoons and operas. And it was a very carefully orchestrated seventy-five minute class and we had two T A's. We had a plan and we had to be ready to get this clip going and get this one cued up and I completely adopted her style.)**

T: [00:42:23] OK.

Professor 1: [00:42:24] And that's why I have all of these DVDs. There's things that I use for different reasons.

T: [00:42:32] So you do use them for instructional purposes you do use videos?

Professor 1: [00:42:36] I do. I just really don't even really think about it. Yeah. **(It was all because of that one professor in my Ph.D. program. I am sure she showed me what happens with movies or instructional videos. You know what I'm thinking about. You know I have a 15-minute video on the *Fall of the Wall.* What happens with these things is when you're an instructor you're constantly cognizant of the amount of time you have in the classroom. You don't want to waste time. So I can't show an entire film usually but I can pick out snippets and use them in the classroom.)**

2.

T: [00:14:56] OK. So describe your earliest exposure to instructional videos primarily through higher education? I mean this can be as a student matriculating. What kind of impacts do you recall of anything like video in particular that you viewed in class that you thought was particularly helpful in providing context to it?

Professor 2: [00:15:29] Yeah. **(So I can actually say that I remember as an undergraduate and one of my social studies classes we watched *Eyes on the Prize*. And up until that time I hadn't watch a lot of documentaries and things like that and I remember watching *Eyes on the Prize* and just being just really profoundly affected by the visualness.)**I think up until that point time I went through high school and I learned about the civil rights movement. And of course I had a very negative a very negative view about the Black Panther Party that was always portrayed in a very particular way in a look right now my X my experiences in high school were very textbook oriented we didn't watch a lot of films. I mean we had textbooks we wanted we read the textbook. We know it wasn't the textbook. Everything was very text bound get to college and all of a sudden I remember well the textbook change the tech. There weren't really textbooks but are you reading much more complicated complex texts. But then you would watch something like *Eyes on the Prize* and I was like here I thought I had this perspective the Black Panther Party and now I'm getting this like more complex understanding of the Black Panther Party and what it was all about and Malcomb X and what. So I do remember that was like one of the times when I watch a film in class and it gave me a whole different context. That's been quite a while ago. And so I think that's been some sense in terms of even more documentary films things like that that happen you know they are also a way to kind of illustrate like can engage in discussion in a different way.

T: [00:17:08 So when you were in that closet and maybe you weren't looking for X amount of years into the future where you're actually going to be an instructor, so did you watch? Do you think looking back on that experience that it didn't really have an effect in your ways of thinking like how you use them today? You see because of your experiences that this was a factor for me maybe a similar situation might be a third to for students.

Professor 2: [00:17:35] I don't know if I necessarily made that connection. I certainly didn't make it as underground. **(I just remember it having impact on my own learning so I never really thought oh my gosh if I'm a professor I'm going to use the instructional video so no I never that wasn't you that's not at that moment in time. I wasn't thinking about that. Then as I got into my master's programs and Ph.D., it became one of the many tools with which I knew I was good. I was good at potential use but I don't remember ever thinking oh this is going to be something specifically because it had such a profound impact. I mean I never thought about it. You ask me questions now. OK. So I mean you know until you ask that question I would have never thought that the instructional videos had a profound effect until you made me think about it. OK. Well now I think I can think of a way I can think of a video in my freshman year and from my sophomore year soc class and I remember being oh yea we get to watch a movie and I'm like whoa this is not a movie right. This is everything we've been talking about. And a real face to those people in a real emotional kind of effective piece to it too.)&**

3.

T: [00:18:05] Right. So we talked about this a little bit last time about your earlier exposure to different types of technology in your house. Can you describe your earliest exposure to instructional videos in a higher education setting? Maybe you were taking a course back as an undergrad. Is there anything that kind of sticks out in your head about maybe something you want to call a class?

Professor 5: [00:18:42] **(I probably watched my first foreign language film in college. I remember that. That was the co-curricular event outside of class. I don't remember any instructional videos being used as undergraduates. So those sort of cinema like experiences have been constant from grad school and on. I've kept that

152

as kind of a cultural aside to things often because instead of taking all pastimes to film or something so that's always a one plus with a scene from something else. I took up for like showing this next clip or you know literature class you know if they refer to something that's sort of a visual something that everybody knows. I may be show that one clip in class to help parse out like this is what they refer to or here's the song that they keep playing over the refrain keeps coming back and back and you know this text and it's meaningfulness like that. Here's the music. Let's listen to it now and then watch the video and then look at this passage in literature again and see what's happening here between text and sound.)**The last image.

T: [00:20:01] The movie that you watched as an undergrad, did it have any kind of impact on you at all? Did it encourage you to go into a certain field or have a certain thought process or belief system or anything like that? Did it impact you in any way?

Professor 5: [00:20:19] **(I'd have to say yes I suppose pedogy meets course. It was the first indigenous European film I'd watched. So it was a non-mainstream film so I guess I probably was thinking about that element and curious to know more about that.)** Was there an Oscar nominee or an Oscar winner or a member out of my head. And so I was thinking why in the world would this movie as an undergrad. I was curious about it. And then I said sure because it's you know a famous one is should it be going to grad school and then I was like oh that's why. So it was just the exposure to it at that point and the analysis of the time I got to grad school and say other things. In my college days that being a lot of we watched a lot of theater and one of my drama classes we watch theater productions from Europe.

OPEN CODING RESULTS: CODE, CATEGORY, AND THEME

Theme 1: Today's learners differ from past generations especially as influenced by their exposure to and use of technology.

Impact of Technology

Visual literacy

Media exposure

Learning expectations

Use of mobile digital devices

Access messages at will

Information on demand

Diminished attention span

Active learning

Students need constant stimulation

Technology for gratification

No deep dive into knowledge

Technology transformed environment

Information needs to be immediately applicable

Lack of focus for periods of time

Prior generations learn from lectures and reading

Need to add technology stimulation to learning

Changing learning behaviors

Lectures and reading no longer stimulate

Learn better when senses involved

Access to information

Students don' t like to read

Technology definition

Students learn better using multiple senses

Electronic gadgets

Program devices

Tools to help us do our jobs more efficiently

Creation of tools

Graphic Information Systems

Technology needs specific purpose and function

Video captures

Audio over Power Points

Visual Orientation

Standard lecture isn't necessarily very effective

Students don't all learn the same

Flipping classroom

Flipping addresses short attention spans

Students watch videos on own time

Students watch videos at their leisure

More time for classroom discussion

Can focus on parts of videos in class

Flipping is more efficient for class time

Video injects movement and color to learning environment

Film can provide insights into complex issues

Film can change perceptions

Eyes on the Prize

Film can give different context

Videos can give conscious messages

Videos can give subliminal messages

Use of fast paced editing, color and voiceovers give symbolism

Video has impact

Difference between read bout commercials and actually seeing them

Puts readings into context

Media rich environments permit choice for student learning

Effective Integration of Multi-Sensory Tools

Audio and visual elements must be well planned to integrate

Students love technology for entertainment

Students do not love technology for educational purposes

Lose enthusiasm for educational purposes

Instructional videos must support learning

Majority of teachers are thoughtful in selection of videos

Most teachers use videos to supplement learning

Many students learn best from written word or lectures

Many have better retention through use of multiple senses

Live streaming like Google to add interest and understanding

Theme 2: Innovations such as instructional videos as an integrated part of a curriculum of study enhance the learning experiences by allowing the students to share common experiences.

Instructional Video Resources

      Internet

Streaming web content

You Tube –quality varies

Open Access content

Need to vet videos

Atomic Learning—short, low quality

Lynda.com-- preferred

Scholarly video recordings

Media Education Foundation

Pew Internet

      Mass Media

Public Broadcasting Service

PBS special site for educational purposes

PBS *Frontline*

Nova for educational use

Annenberg Foundation – free license

On-line sources

Libraries

Used to be primary site for videos

High quality older videos can retain value

Videos often free

Frequently shared with other professors in discipline

One of many options for video

Video Streaming Via Internet

Google has vast array of learning experiences

Simplicity of use

Google maps

Google Earth go to different locations

Identify landforms

Illustrate teaching points

Three-dimensional, full color, high definition

Everyone gets same experience

Common reference for phenomenon

Common experience good for review

Cultural messages abound in media

MOOC's

Enhanced Learning Environments

Positive experiences in all disciplines

Clarify complicated ideas

Clarify confusing processes

Accommodate comparisons of creative activities

Accommodate critical analysis

Student gets deeper understanding of culture

Common experience

Holistic experience

Aesthetic experience

Not just engaging with text

Films can have same educational value as texts

Critical analysis of film

Video allows for comparisons of creativity

Video allows student to experience the process of analysis

I don't let the video speak for me.

Mass Media Use for Cultural Understanding

Watching television in native language give meaning to messages

Cultural context to learning experience

Body language gives context to verbal language

Videos give access to reality

Videos that accompanies text are horrible

You Tube videos can aid understanding

Professional television commercials aid understanding

Television program transports students to everyday life

Visual learners find video aid learning process

Visual comparison of different versions of same creative work

Technology is not necessarily a time saver.

Using film as text

Effective Professor Produced Videos

Self–produced can focus on specific learning problems

Self-produced can control the messages

Can reinforce specific teaching points

Does not have to be commercially viable

Virtual field trips to reinforce lecture points

Can control the length of video

Can be attention getting devices

Amplify teaching points

Can record lecture points for playback later

Archiving learning environment

Future Technology

Use to accomplish time saving measures

Google using 3-D views

Cameras on helmets

Views of Grand Canyon

Views of dog sled races

Views of divers in the ocean

Virtual reality formats

Views of molecules in biology

Walk through the brain

Digital technologies to active all the senses

Ineffective Use of Instructional Videos

Lazy instructors use video as babysitters

Over use of video stops reinforcement value

Used by faculty that do not want to engage students

Dislike sender-receiver model of teaching

Dislike when students are captive audience

Course should not be used just to deliver knowledge

Theme 3: Faculty use social networks to share knowledge about innovations in technology and instructional videos to benefit their student learners.

Early Influences

Explored a lot of technologies

Audio/visual person

Watching my dad record videos

Exposed to a lot of different technologies

College advisor used lots of technology

College advisor used scenes from movies & cartoons

Presentations were carefully orchestrated with video

Pick out snippets of videos to meet time requirements

Affected by visualness

Observing proper use of video as TA

Impact on my own learning

Cinema-like experience can reinforce learning

Early social networks have strong influences on future behaviors

Color televisions

VCR's

Radio

TRS 80

X-Files

Television Antennas

Dining in front of television

Schoolhouse Rock

Preamble to Constitution in a jingle

Tape recorders

Huge video camera carried on shoulder

Atari

First class to get email address

Women were not allowed to use computers at work

Pong

Commodore 64

Beta video system

Peer Resources

Talking to some peers

Go to friends first

Talk to my spouse

Brainstorming process

Colleagues in department and college meetings

Taking workshops

Going to "brown bag" seminars

Newsletters from support organizations

New things to keep engaged

Collaborating with colleagues with different talents

Work with instructional designers

Subscribe to newsletters

Frame people's opinions

Affect people's attitudes

Recorded for class

Opportunities to share success

Go to conferences for ideas

Professional meeting in discipline

Get a good tip

Being open-minded to ideas from others

Getting ideas from graduate students working in field

Reading academic discipline journal articles

Talking with vendors

Serving on boards of professional and non-profit organizations

Theme 4: Faculty must rely on prepared videos rather than self-produced instructional videos because of lack of time and skill sets.

Support Systems

Go to a lot of workshops

"Hands on" perspective for incorporating technology

Powerful influence on this university

Dedication

Enthusiasm

Inspires me

Support is phenomenal

Learning about new software

Discovering new ideas

Hear about new things

Reorganization of support units concerning

Goal to create 1 or 2 videos per semester with partner

Faculty should focus on creating curricula

Faculty tend to wait until the last minute

Symposiums in the Union

Department staff meetings for training sessions

Film crew available to go with faculty

External funding for faculty

Self-Produced Videos

How can technology help me improve?

Improve my students learning experience

Motivation is about self-improvement

Culture of the department

Small stipend helps

Financial incentives

Teamwork

Create a better product

Create a product that can be used many times

Want it to be high quality

Look first rate

Someone to hand off to with stronger skill sets

Too many time commitments to add new projects

Not enough time to develop video properly

No incentive to experiment

Unrealistic expectation for faculty

Teaching not valued as much as research

REFERENCES

REFERENCES

Ahern, K. J. (1999). Ten tips for reflexive bracketing. *Qualitative Health Research*, 9, 407-411. doi: 10.1177/104973239900900309

Allen, W.A. & Smith, A.R. (2012) Effects of video podcasting on psychomotor and cognitive performance, attitudes and study behavior of student physical therapists. *Innovations in Education and Teaching International*. 49, 401-414.

Al Lily, A. (2013). Social change and educational technologies: By invitation or invasion. *Journal of Organisational Transformation & Social Change*. 10 (1), 42-63. doi:10.1179/1477963312Z.0000000004

Anderson, J., Boyles, J., & Rainie, L. (2012, July 27). Pew Research Center's Internet& American Life Project. The future impact of the Internet on higher education: Experts expect more-efficient collaborative environments and new grading schemes; they worry about massive online courses, the shift away from on-campus life. Retrieved from http://pewinternet.org/~/media//Files/Reports/2012/PIP_Future_of_Higher_Ed.pdf

Becking, S. K. (2011). Instructor technology use: A mixed methods investigation. (Doctoral Dissertation). Retrieved from ETD collection for University of Nebraska–Lincoln. Paper AAI3449885

Berryhill, A. & Durrington, V. (2009) Instructional technology investments in higher

education: Are faculty using the technology? *Media Review* 15, 25-45.

Retrieved on 28 July 2015.

Bishop, J. & Verleger, M. (2013). The flipped classroom: A survey of the Research.

120th ASEE Annual Conference & Exposition, American Society for

Engineering Education Paper ID #6219.0

Berrett, D. (2012). How "Flipping" the classroom can improve the traditional lecture.

Chronicle of Higher Education.Retrieved from

http://chronicle.com/article/How-Flipping-the-Classroom/13085571

Boyer, E. L. (1990). Scholarship reconsidered priorities of the professoriate. *The*

Carnegie Foundation for the Advancement of Teaching.

Brunvand, S. (2010). Best practices for producing video content for teacher

education. *Contemporary Issues in Technology and Teacher Education*, *10*(2),

247-256.

Celik, L., & Keskin, M. (2009). The effects of the primary class teachers' information

technology literacy skills level on students' achievement: The case of

Afyonkarahisar. *Procedia Social and Behavioral Sciences*, 1167-1171.

Cohen, P., Ebeling, B. and Kulik, J.(1981). A meta-analysis of outcome studies of

visual-based instruction. *Educational Technology Research and Development*.

29(1): 26-36.

Coswatte, S. (September 18, 2014) Updated e-learning definitions. *Online Learning Consortium.* Retrieved from onlinelearningconsortium.org/updated-e-learning-definitions

Creswell, J. W. (2013). Research design: Qualitative, quantitative, and mixed methods approaches (3rd ed.). Thousand Oaks, CA: Sage Publications.

DeGennaro, D. (2008, Fall 2008). Learning designs: An analysis of youth-initiated technology use. *Journal of Research on Technology in Education*, 42(1), 1-20.

Dick, W. & Carey, L.(1990). *The systematic design of instruction*. New York: Harper Collins.

Dukes, S. (1984). Phenomenological methodology in the human sciences. *Journal of Religion and Health*, 23(3), 197-203.

Estes, M., Ingram, R. and Liu, J. (2014). A review of flipped classroom research, practice and technologies. *International EETL Review*. 4.

Friedrich, R., Peterson, M. & Koster, A. (2011, Spring). The rise of Generation C: How to prepare for the connected generation's transformation of the consumer and business landscape. *Strategy and Business*,62.New York: Booz & Company.

Giannakos, M., Chorianopoulos, K., Ronchetti, M., Szegedi, P. & Teasley, S.(2013) "Analytics on video-based learning" *In Proceedings of the Third International Conference on Learning Analytics and Knowledge*. ACM, pp. 283-284.

Gikas, J. & Grant, M.M.(October, 2013) Mobile computing devices in higher education: Student perspectives on leaning with cellphones, smartphones & social media.

The Internet and Higher Education19, 18-26. Retrieved from:

https//doi.org/10.1016/j.iheduc.2013.06.002

Guo, P., Kim, J., & Rubin, R.(2014). How video production affects student

engagement: An empirical study of MOOC Videos. *MIT Computer Science and*

Artificial Intelligence Laboratory.

Hatch, J.A. (2002) *Doing qualitative research in education settings.* Albany: State

University of New York Press.

He, Y., Swenson, S., & Lents, N. (2012). Online video tutorials increase learning of

difficult concepts in an undergraduate analytical chemistry course. *Journal of*

Chemical Education, 89, 1128– 1132.

Herreid, C. & Schiller, N. (2013). Case studies and the flipped classroom. *Journal of*

College Science Teaching. 42(5), 62-66.

Hibbert, M. (2014). What makes an online instructional video compelling?

EDUCAUSE Review.

Hughes, H. (2012). Introduction to flipping the college classroom. In Ameil, T. and

Wilson, B. (Eds.) *Proceedings of EdMedia: World Conference on Educational*

Media and Technology 2012. 2434-2438. Association for the Advancement of

Computing in Education.

Husserl, E. (1970). Logical investigation. New York: Humanities Press.

Johnson, R. B. (1997). Examining the validity structure of qualitative research. *Education*, 118, 282-292.

Kaufman, P., Mohan, J.(2009). Video use and higher education: Options for the future. *Intelligent Television*.

Keengwe, J., Kidd, T., & Kyei-Blankson, L. (2009). Faculty and technology: Implications for faculty training and technology leadership. *Journal of Science Education and Technology*, 18(1), 23–28.

Kelly, K. (November 21, 2008). Becoming screen literate, *New York Times Magazine*, 2008 online at: http://www.nytimes.com/2008/11/23/magazine/23wwln-future-t.html?ref=magazine;

Kemp, J.E., Morrison, G.R. & Ross, S.M. (1994). *Designing effective instruction*, Merrill, New York.

Khan Academy(2015).YouTube Channel. http://www.youtube.com/user/khanacademy/about.

Kolikant, Y.B.D. (2010). Digital natives, better learners? Students' beliefs about how the internet influenced their ability to learn. *Computers in Human Behavior*, 26(6), 1384-1391.

Krathwhol, D.R. (1993). *Methods of Educational and Social Science Research*. New York: Longman.

Lage, M., Platt, G. and Treglia, M. (2000). Inverting the classroom: A gateway to
creating an inclusive learning environment. *The Journal of Economic
Education*, 31(1):30-43.

LeCompte, M. D. & Goetz, J. P. (1982). Problems of reliability and validity in
ethnographic research. *Review of Educational Research, 52*, 31-60. doi:
10.3102/00346543052001031

Lessig, L. (2008). *Remix: Making art and commerce thrive in the hybrid economy*. New
York: Penguin Press.

Lincoln, Y. S. & Guba, E. G. (1985). *Naturalistic inquiry.* Beverly Hills, CA: Sage
Publications.

Lloyd, S.A. & Robertson, C.L. (2012) Screencast tutorials enhance student learning of
statistics. *Teaching of Psychology*. 39, 67-71.

Manuel, K. (2002). *Teaching information literacy to Generation Y*. New York:
Haworth Press.

Marzilli, C., Delello, J., Marmion, S., McWhorter, R., Roberts, P., Marzilli, S. (March
2014). Faculty attitudes towards integrating technology and innovation.
International Journal on Integrating Technology in Education 3(1), 1-20.

Maxwell, J. A. (2005). *Qualitative research design: An interactive approach* (2nd ed.).
Thousand Oaks, CA: Sage Publications.

McGarr, O. (2009). A review of podcasting in higher education: Its influence on the

   traditional lecture. *Australasian Journal of Educational Technology, 25,* 309–

   321.

McNeely, B. (2005). Using technology as a learning tool, not just the cool new thing.

   In Oblinger, D.G., & Oblinger, J.L. (Eds.) Educating the net generation (4.1–

   4.10). Retrieved September 7, 2005, from http://www.

   educause.edu/educatingthenetgen/

McNeil, B. (1989). *A meta-analysis of interactive video instruction: A 10 year review of

   achievement effects.* PhD. Thesis, University of Idaho.

 Moustakas, C. (1994). *Phenomenological research methods.* Thousand Oaks, CA:

   Sage.

NASBE (2012). Born in another time ensuring educational technology meets the

   needs of students today and tomorrow. *National Association of State Boards of

   Education.*Retrieved from http://assess4ed.net/resources/ensuring-

   eucational-technology-meets-needs-students-today-%E2%80%93-and-

   tomorrow-nasbe-report-0

New Media Consortium (2013). The Future of Education. *The 2013 NMC Horizon

   Project Summit Communiqué.* 22-24.

Nicolle, P. S., & Lou, Y. (2008). Technology adoption into teaching and learning by

   mainstream university faculty: A mixed methodology study revealing the

"How, When, Why, and Why Not." *Journal of Educational Computing Research*, 39(3), 235-265.

Noer, M. (2012). One man, one computer, 10 million students: How Khan Academy is reinventing education. *Forbes*. Retrieved August 25, 2015 @ http://www.forbes.com/sites/michaelnoer/2012/11/02/one-man-one-computer-10-million-students-how-khan-academy-is-reinventing-education/

Oblinger, D. G. & Oblinger, J. L.(2015). Is it age or IT: First steps toward understanding the net generation. *Educause.* Retrieved August 7, 2015from http://www.educause.edu/research-and-publications/books/educating-net-generation/it-age-or-it-first-steps-toward-understanding-net-generation

Orgeron, D., Orgeron, D. & Streible, D. (2012). *Learning with the lights off: Educational film in the United States*. Oxford University Press: New York.

Passerini, K. & Granger, M.(2000). "A developmental model for distance learning using the Internet". *Computers and Education*, 34(1), pp. 1–15. http://dx.doi.org/10.1016/S0360-1315(99)00024- X

Patton, M. Q. (1990). *Qualitative Evaluation and Research Methods* (2nd ed.).

Newbury Park, CA: Sage.

PC Magazine (2016) Definition of : streaming video. *Encyclopedia*. Retrieved from http://www.pcmag.com/encyclopedia/term/52139/streaming-video

Pinnegar, S., & Daynes,J. (2007). Locating narrative inquiry historically: Thematics

in the turn to narrative. In D.J. Clandinin (Ed.), Handbook of narrative inquiry:

Mapping a methodology (pp.3-34). Thousand Oaks, CA: Sage.

Prensky, M. (2001). Digital Natives, Digital Immigrants Part 1. *On The Horizon*,9(5),1.

doi:10.1108/10748120110424816

Prensky, M. (2001). Digital Natives, Digital Immigrants Part II: Do they really think

differently? *On The Horizon*, 9 (6),1.

Rackaway, C. (2012) Video killed the textbook star? Use of multimedia supplements

to enhance student learning. *Journal of Political Science Education*. 8, 189-

200.

Reimen, D. (1986). The essential structure of a caring interaction: Doing

phenomenology. In P.M. Munhall & C.J. Oilers (eds.) Nursing research: A

qualitative perspective (pp. 85-105). Norwalk, CT: Appleton-Century-Crofts.

Robinson, L. (2009) A summary of diffusion of innovation-enabling change.

www.enablingchange.com.au/summary diffusion theory.pdf. Retrieved June

19, 2015.

Rogers, E. M. (2003). *Diffusion of Innovations* (5th ed.)New York: Free Press.

Rolfe G.(2006) Validity, trustworthiness and rigour: quality and the idea of

qualitative research. *J Adv Nurs* ;53:304–10. doi:10.1111/j.1365-

2648.2006.03727.x

Rossman, R. B., & Rallis, S. F. (1998). *Learning in the field: An introduction to qualitative research.* Thousand Oaks, CA: Sage.

Sahin, I. (2006). Instructional computer use by COE faculty in Turkey: application of diffusion of innovations theory. Ph.D. Dissertation Iowa State University. Retrieved from Digital Repository @Iowa State University.

Seidman, I. (2006). Interviewing as Qualitative Research (3rd ed.). New York, New York: Teachers College Press.

Smith J. & Noble H.(2014). Bias in research. *Evid Based Nurs* ;17:2–3.
doi:10.1136/eb-2014-101946
http://ebn.bmj.com/external-ref?access_num=24257909&link_type=MED

Snowden, K. (2012). *Teacher perceptions of the flipped classroom: Using video lectures online to replace traditional in-class lectures.* Thesis University of North Texas.

Somekh, B. (2008). Factors affecting teachers' pedagogical adoption of ICT. In J. Voogt, & G. Knezek (Eds.) *International Handbook of Information Technology in Primary and Secondary Education*, 449-460. Springer Science + Business Media, LLC.

Stockdill, S. H., & Morehouse, D. L. (1992) Critical factors in successful adoption of technology: A checklist of TDC findings. *Educational Technology, 1*, 57-58.

Stake, R. (1995). *The art of case study research.* Thousand Oaks, CA: Sage.

Surry, D.W. & Farquhar, J.D. (May 1997) Diffusion theory and instructional technology. *Journal of Instructional Science and Technology (2)* 1. Online: http://www.usq.edu.au/electpub/e-jist/vol2no1/article2.htm

The White House (2011). *Remarks by the president in state of union address.* United States Capitol, January 25, 2011. Washington, D.C. Retrieved from http://www.whitehouse.gov/the-press- office/2011/01/25/remarks-president-state-union-address

Tsur, M.(2014)Research confirms video improves learning results. *Huffington Post College.*

Tuttle, H. (2012) The lived experiences of faculty who use instructional technology: A phenomenological study. Ph.D. Dissertation University of Nebraska – Lincoln. Retrieved from *Educational Administration: Theses, Dissertations, and Student Research.* Paper 103. http://digitalcommons.unl.edu/cehsedaddiss/103

Yuksel, P. & Yildirim, S. (January, 2015). Theoretical frameworks, methods, and procedures for conducting phenomenological studies in educational settings. *Turkish Online Journal of Qualitative Inquiry*, 6(1).

Zhang, J. Wang, U. & Zhang, B.(2012). Introducing a new teaching model: Flipped classroom. *Journal of Distance Education*. 4, 46-51.

Zhang, D., Zhou, L., Briggs, R. and Nunamaker (2006) Instructional video in e-learning: Assessing the impact of interactive video on learning effectiveness. *Information & Management*. 43(1):15-27.