


USING VIDEOS AS RELATIONSHIP BUILDERS IN A DIGITAL LEARNING ENVIRONMENT

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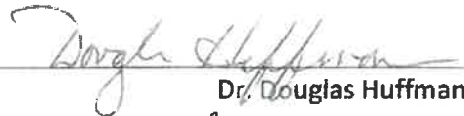
Jeffrey Manning

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and the Graduate Faculty of the University of Kansas in partial fulfillment of the  
requirements for the degree of Doctor of Education

  
Co-Chairperson Dr. Barbara Phipps



Chairperson Dr. Steven White

  
Dr. Douglas Huffman



Dr. Carrie La Voy



Dr. Young-Jin Lee

Date Defended: May 11<sup>th</sup>, 2018

The Dissertation Committee for Jeffrey Manning  
Certifies that this is the approved version of the following dissertation:

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Chairperson Dr. Steven White

Date Approved: *May 22, 2018*

## ABSTRACT

The growth of online learning has increased dramatically over the past decade. The National Center for Educational Statistics (2014) estimate that over 5.5 million college students in the United States are enrolled in online courses. Online learning offers many advantages to students, including the ability to interact with course content anywhere at any time. However, there are some disadvantages as well. Students in online courses have reported feelings of isolation from other students and the instructor.

This study, using a mixed methods approach, explored the use of instructor-made videos as relationship builders within a digital learning environment. The study had two purposes: 1) to investigate students' perceptions of non-content-oriented instructor-made videos that were designed to build relationships between students and the instructor, and 2) measure the level of student achievement in a digital learning environment when instructor-made videos are provided.

The study collected data from three sources. First, students in an online course responded to 13 items from the Communities of Inquiry survey. Four of the items from the survey measured teaching presence, the other 9 items measured social presence. Second, a purposeful sampling of students participated in an interview to explore their perceptions of the instructor-student relationship and instructor effectiveness. Third, student achievement data was compared to historical student achievement data to determine the difference when videos as relationship builders are provided.

The survey results from the study found that students' perceptions of the teaching presence through the design and organization of the course by the instructor was not

significantly different before the exposure to the relationship videos compared to after. The study also found that students had no significant difference in perception of the social presence within the classroom through group cohesion. However, the students' perceptions of social presence through affective expression and open communication did have a statistically significant difference.

The interview data revealed four themes about the students' perceptions of the instructor-student relationship and instructor effectiveness. The four themes were, 1) students perceived the instructor as being more of a "real person" and more approachable, 2) participants enjoyed communicating with others in the class, 3) students appreciated having content created by the instructor that was not related to the course, and 4) participants liked having something to interact with before working on class activities and content.

Analysis of student achievement data was less conclusive. Students did not perform as well on the formative assessments when the relationship videos were provided compared to when they were not. However, a larger percentage of students were able to master the content on the end of unit exam when the videos were available.

This study contributes to the overall understanding of using instructor created multimedia within a digital classroom to build teaching and social presence. The study provides insights into students' perceptions of the use of multimedia and suggestions for future research.

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## CHAPTER ONE

### INTRODUCTION

The growth of online learning has increased dramatically over the past decade. According to the National Center for Educational Statistics (2014), in 2014 there were over 5.5 million college students enrolled in online courses in the United States. To add to this trend, even if a course is not considered online by the institution that is offering it, most traditional post-secondary courses now offer at least some online component. This can be in the form of materials posted to a website, discussion groups between students and instructors, and electronic textbooks and activities. It is becoming evident that this style of learning is emerging as the preferred method for many students in modern education.

Online learning is the method typically chosen by working adults between the ages of 25 and 50 (Sun, Tsai, Finger, Chen, & Yeh, 2008). Online courses allow more flexibility for students as constraints on time and space become less impactful. Students who previously would be unable to seek higher education or advanced degrees, now have opportunities to do so.

According to Hung and Chou (2015), one disadvantage of online learning is that some students in a digital environment have reported the feeling of isolation from the other students and the instructor. Student interactivity and the perceived feeling of community is important to any classroom, especially in an online course where students and teachers are not in the same physical space at the same time. According to Mandernach (2009), research has found that students respond better to course materials when the instructor has a “presence” within the digital classroom. Simply stated, it is important to student achievement for students to feel connected to the instructor and have opportunities to interact with him or her in a similar

fashion as they would in a more traditional classroom setting (Song, Singleton, Hill, & Koh, 2004).

Research on effective practices indicate that students should expect to be able to interact with course materials using several different methods (Hung & Chou, 2015). Instructors are encouraged to provide materials very early in the class to enable students more time to engage and shoulder more of the responsibility for learning. Materials can be provided by offering videos, audio files, links to websites, PowerPoint presentations, and such. Although students do not interact within the same physical environment, research has found that materials made available in different formats can provide a sense of more interactivity in the course (Hung & Chou, 2015).

### **Statement of the Problem**

Students participating in online courses have reported a lack of engagement and a feeling of isolation from other students and the instructor (Lee, Srinivasan, Trail, Lewis, & Lopez, 2011). This is a concern for me, the researcher, because I currently teach an online personal finance course in a midwestern, suburban high school. The school district is considering expanding the number of online courses offered to students in an attempt to create a more flexible learning environment. Although there are many advantages of digital learning, according to research conducted by Song et al. (2004), 71% of students reported a perception of lack of community within the online environment and perceived it as a challenge to their success within the course.

## **Purpose and Research Questions**

Nearly 20 years of research regarding digital learning has generated a sound understanding about the types of online courses provided in secondary settings (synchronous, asynchronous, hybrid, etc.), the role of the instructor, and student's perceptions of course satisfaction and success. Less is known about the effectiveness of strategies to minimize students' sense of isolation and associated impact on students' learning.

This study explored using instructor-made videos as relationship builders within a digital learning environment. The study had two purposes: 1) to investigate students' perceptions of non-content-oriented instructor-made videos that were designed to build relationships between students and the instructor, and 2) measure the level of student achievement in a digital learning environment when instructor-made videos are provided.

The research questions that guided this study are the following:

1. In a digital learning environment, what are students' perceptions of the instructor-student relationship and instructor effectiveness when videos as relationship builders are provided?
2. In a digital learning environment, what are students' perceptions of the social presence of other course participants when videos as relationship builders are provided?
3. In a digital learning environment, what is the difference in student achievement when the instructor provides videos as relationship builders as opposed to not providing them?

## Definition of Terms

The following terms, defined below, will be used in this study:

*Asynchronous* - Indicates that faculty and students in the online learning environment can interact with course elements at various times and from various locations. Examples of asynchronous technologies include email, discussion boards, and blogs.

*Cognitive Presence* - Cognitive presence is one of the three components of the Community of Inquiry Theory. It describes the extent to which participants in an online community are able to construct meaning through discourse and reflection. Cognitive presence involves an exchange of information and the development of new ideas (Boston, Diaz, Gibson, Ice, Richardson, & Swan, 2009).

*Communities of Inquiry* - The Community of Inquiry Theory is a conceptual framework consisting of the overlapping elements of cognitive presence, social presence, and teaching presence. The theory suggests that the interaction of these three elements creates a quality educational experience for a community of learners (Akyol & Garrison 2008).

*Hybrid Course* – Course in which some traditional face-to-face time has been replaced by online learning activities. The purpose of the hybrid course design is to take advantage of the best features of both traditional and online learning.

*Learner-Instructor Interaction* - Learner-instructor interaction is the two-way communication that occurs between the learner and the instructor in the online environment.

*Learning Management System* – Software application for the administration, tracking, reporting, and delivery of educational courses or training programs within an online environment.

*Online Learning (Digital learning, e-learning, distance learning, web-based learning)* - the collaborative knowledge sharing process that occurs between instructors and students when they are not in the same physical space.

*Relationship Video* – a short (3-5 minutes) video created by an instructor of an online course that has a conversational tone containing content unrelated to course objectives. The purpose of the video is to foster the growth of the student-instructor relationship and increase teaching presence within the online classroom.

*Social Presence* - The ability of participants in an online community to project personal characteristics into interactions thereby encouraging other members of the community to see them as real people. (Boston et al., 2009)

*Teaching Presence* - Teaching presence is a core component of the Community of Inquiry Theory. Teaching presence consists of three distinct components: instructional design and organization, facilitated discourse, and direct instruction. These three components allow an instructor to interject their personal presence into the online environment and help students create a meaningful and satisfying learning experience (Boston et al., 2009).

*Transactional Distance* - Transactional distance refers to a pedagogical phenomenon indicative of the non-geographic separation between instructors and students in online learning.

Dialogue and interaction between teacher and student must be high; this reduces transactional distance and allows for better communication between teacher and student. Three key components shorten transactional distance and facilitate meaningful learning: dialog, structure, and autonomy (Moore, 1993).

## **Organization of the Dissertation**

This study provides an analysis of the use of videos as relationship builders in a digital learning environment within a midwestern suburban high school. Chapter Two of this study provides the literature base concerning online instructional strategies and increasing student engagement. Chapter Three details the methodological process of collecting and analyzing data for this study. Chapter Four presents findings and analysis. Chapter Five offers conclusions and implications of this study. Overall, this study contributes to the knowledge base of digital learning and student engagement. It also offers a description of findings of using videos as relationship builders in a digital learning environment.



## CHAPTER TWO

### REVIEW OF RELATED LITERATURE

According to Hung and Chou (2015), one advantage of online learning includes a shift from instructor-centered curriculum in traditional courses to more student-centered curriculum in online environments. Students who were once passive learners because of social anxieties can become more active learners online. Removing those students from a traditional setting allows for them to acquire the material more actively without the fear of judgement from peers.

Online courses are not without disadvantages. Students who were surveyed after the completion of an online course reported that they felt isolated due to lack of social interaction among students (Lee et al., 2011). In the same survey, some students expressed concerns about technical problems interfering with their learning. This issue would most likely not be a problem in a more traditional course. Many institutions of learning have started offering a more hybrid model, where students are expected to do the majority of their coursework online, however, the students do meet in a traditional classroom space periodically. This can alleviate some of the issues with lack of social interaction and allows instructors to offer support for students' needs.

If a hybrid course model is not feasible or the instructor prefers to teach in a fully online environment, strategies that can be implemented to improve student engagement and subsequent success are beginning to emerge (Mandernach, 2009). One strategy that is being studied is incorporating personalized multimedia in the form of videos, audio files, or digital storytelling (Dringus, Snyder, & Terrell, 2010; Lowenthal & Dunlap, 2010). Online instructors

may also attempt to enhance course interactivity by providing personal examples, demonstrating a sense of humor to the students, and inviting students to seek feedback from one another (Arbaugh, 2001). Using asynchronous discussion boards and the preparations an instructor goes through before the course begins, such as providing course materials early and guiding students to various forms of support, can all be beneficial if implemented correctly (Wei, Peng, & Chou, 2015; Hung & Chou, 2015). The following sections will discuss the current literature available pertaining to these topics.

### **Online Learning Theories - Transactional Distance Theory**

The transactional distance (TD) theory was developed in the 1980s and 1990s by Michael G. Moore. While researching learner autonomy in correspondence courses, Moore discovered that almost no previous research had been conducted about the interactions that occurred between students and teachers in distance education. Moore collected and analyzed data about distance education learning models at that time, including televised and correspondence instruction (Moore, 1973). Moore developed the idea of transactional distance, which is the pedagogical phenomenon indicative of the non-geographic separation between instructors and students in distance learning environments (Moore, 1993). He theorized that if learning is to be maximized, transactional distance must be minimized (Moore, 1993).

The Theory of Transactional Distance provides a valuable basis for making online learning more effective and efficient. Online education requires special teaching and learning strategies to bridge the psychological and physical gap between teachers and students (Moore & Kearsley, 2005). According to Huang, Chandra, DePaolo and Simmons (2016), Moore's

transactional distance model provides enormous potential to address the issue of communication gaps in online learning environments. Frequent and high-quality interaction and dialogue between instructors and students reduce transactional distance (Moore & Kearsley, 2005).

In Moore's original model, the extent of transactional distance is a function of dialogue, course structure, and learner autonomy (Moore, 1993). These three components appear to reduce the transactional distance between the learners and instructor (Moore & Kearsley, 2005). Dialogue refers to the focused and purposeful interaction between instructor and learners (Moore, 1993). "Dialogue refers to more than simply two-way communication, but takes into account all forms of interaction," states Falloon (2011, p. 189). The frequency of the communication is not as important as the quality and the extent to which communication between the instructor and student is effective in finding a resolution to learning problems (Falloon, 2011). Structure is the course's design elements, such as course and unit objectives, instructional strategies, and assessment methods. It conveys the level of flexibility or the extent to which course design accommodates individual learner's needs (Moore, 1993). A course with a rigid structure can lead to decreased quality of dialogue between instructor and student (Falloon, 2011). Learner autonomy refers to the level of learner control during the learning process. It can be thought of as the extent to which the learner determines the goals and the experiences they will be exposed to during the duration of the course. Learner autonomy is directly tied to dialogue and structure, a course with little interaction between instructor and student and has an inflexible structure will lead students to believe they have little autonomy (Falloon, 2011).

## Technology

The technology available to instructors has increased exponentially since Moore developed his theory. In a study of 227 college students, Huang et al. (2016) used a survey instrument to determine specific factors that influenced TD. The researchers found that newer, richer communication technologies do have an impact on TD, leading to the conclusion that interactive, two-way instructional media should be used when appropriate for course objectives (Huang et al., 2016). Asynchronous, text-based email and discussion forums were least effective in reducing TD. Synchronous, multimedia communication, including Web 2.0 tools such as blogs, wikis, and social media, were found to be more effective (Huang et al., 2016).

Murphy and Rodriguez-Manzanares (2008) also found that technology can help reduce TD at the high school level. The researchers conducted interviews with 20 online instructors at a distance learning center in Canada that served over 1,500 high school students. Murphy and Rodriguez-Manzanares found that the instructors utilized technologies that the students were already familiar with, such as instant messaging and social media, to compensate for lack of physical proximity (Murphy & Rodriguez-Manzanares, 2008). Asynchronous text-based communication in the form of emails provided an effective means to contact students. The instructors interviewed suggested that asynchronous communication should be used for providing students with prompt feedback and immediate attention (Murphy & Rodriguez-Manzanares, 2008).

The selection and use of the correct technology, such as the learning management system, also plays a role in student satisfaction (Paul and Cochran, 2013). The online instructor

must adequately understand the online learning platform and be able to adequately help learners use the system's functionality and performance (Porter, 2004, as cited by Baghdadi, 2011). According to Baghdadi (2011), "the effective use of the LMS's tools enables the online teacher to oversee the students' progress via reporting functions such as summaries of student online activity, participation in discussion groups, and completion of course assignments."

Paul and Cochran (2013), argue that online programs should help students improve their relationship with the technology required for the online course. Beyrer (2010, as cited by Paul and Cochran, 2013) contends "a good tool for helping students gain the necessary technology skills is an institution mandatory online student success course." The course should use videos to demonstrate the skills necessary for online learning (Paul and Cochran, 2013).

### **Interaction**

Moore's Transactional Distance Theory focuses on three types of interactions that occur within the online classroom. These interactions are learner and instructor, learner and learner, and learner and content (Moore & Kearsley, 2005). For learner and instructor interactions, Huang et al. (2016) found that opportunities should be provided for the learner to communicate with the instructor on a frequent basis and through multiple means. Instructors may also need to consider incorporating more interactive two-way communication tools to help bridge the transactional distance within online courses (Huang et al., 2016).

Russo and Campbell (2004), conducted surveys and interviews of 31 students from a large midwestern university to measure perceptions of instructor presence in online courses. The researchers found that the frequency of interactions between learner and instructor was a key factor in establishing instructor presence (Russo & Campbell, 2004). Promptness to

responding to students' questions and providing timely feedback also gave students a higher sense of teaching presence (Russo & Campbell, 2004).

Dialogue between teacher and students must create rapport, a feeling of belonging, and empathy (Ni & Aust, 2008). Learner and student interaction is primarily dyadic and private (Russo & Campbell, 2004). Instructors and students exchange individual e-mails and messages through the learning management system pertaining to feedback and evaluation. Russo and Campbell (2004), found that due to the messages being dyadic and private, they supported greater self-disclosure and information beyond task requirements, possibly creating a greater sense of teaching presence.

Moore acknowledged the importance of learner and learner interactions. He stated that it enhanced the learning process and provided benefits to the students' understanding of course materials (Moore, 1993). After surveying 208 students in 30 class sections, Sher (2009) found that student-student interactions are a significant contributor to the level of student learning and satisfaction in an online learning environment. Sher (2009) also found that students wanted more opportunities to have meaningful interactions with other students and they recognized that being able to work with other students in an online course was helpful.

Students need to be able to interact with course content and materials in order to develop their own perspectives and understanding (Moore & Kearsley, 2005). For this type of interaction to be successful, it requires high levels of learner autonomy. Huang et al. (2016), suggest from their findings that measuring learner autonomy before the course begins may provide insights useful for instructors when developing learning activities. Learner and content interactions were once limited to reading and posting on discussion forums. However,

technological improvements such as video chat, screen capture software, and synchronous text communication have provided new opportunities for these interactions to be more robust.

### **Immediacy**

Ni and Aust (2008, p. 481), defined verbal immediacy as “text-based computer mediated communication behaviors contributing to psychological closeness between teacher and student”. Immediacy behaviors are often divided into two categories: verbal and nonverbal (Ni & Aust, 2008). Verbal immediacy can include using humor, personal examples, providing and inviting feedback, and addressing and being addressed by students by name (Ni & Aust, 2008). Nonverbal immediacy may include eye contact, smiling, and positive head nods.

As cited by Ni and Aust (2008, p. 481), many studies have shown that verbal and nonverbal immediacy has a positive influence on students’ affective and cognitive learning. Ni and Aust (2008), surveyed 214 college students enrolled in online courses. They found that higher teacher verbal immediacy was correlated with higher course satisfaction. Verbal immediacy may be more relevant in the online learning environment as most of the communication between instructor and student is via text, such as email and threaded discussions (Ni & Aust, 2008).

Murphy and Rodriguez-Manzanares (2008), also discovered online instructors using immediacy behaviors to compensate for the lack of physical presence within their digital classrooms. While interviewing 20 online teachers, strategies such as keeping photographs of students and information about students on the wall of the teacher’s office were mentioned. Instructors also stressed the importance of “opening up” to students by sharing personal information or communicating with them outside of instructional time (Murphy & Rodriguez-

Manzanares, 2008). One manager described the first and foremost task of an online instructor as being able to create and build community within the digital classroom (Murphy & Rodriguez-Manzanares, 2008).

### **Online Learning Theories - Communities of Inquiry Theory**

Developed by Garrison, Anderson, and Archer (2001), the Community of Inquiry (CoI) model is a theoretical framework that explains the experience students have while participating in online courses. Garrison et al. (2001) built on the earlier work of Garrison to describe how collaborative learning communities can best function in an online environment. Of particular interest and challenge to the researchers was how to create and maintain a community of learners within an online learning environment (Akyol & Garrison, 2008). The CoI promotes collaborative learning and looks to limit online instruction from being one-way communication between the instructor and students.

Since the CoI framework's inception, it has been frequently cited in the digital learning community and extensive research has been conducted on each of the individual presences (Arbaugh, 2007). The framework was developed into a survey instrument in 2007, which was validated through multi-institutional data collection and analysis (Arbaugh, Cleveland-Innes, Diaz, Garrison, Ice, Richardson, & Swan, 2008).

The Communities of Inquiry model has also been used to attempt to better understand why students drop out of online courses and programs of study. Boston et al. (2009), used a 34-item survey instrument based off the CoI model to collect data from 28,877 undergraduate students. The researchers administered the survey at the end of each semester, for a total of six semesters. They found that students who positively perceived online learning environments,



which is potentially from their perception of being part of an online community, are less likely to drop a course or leave college (Boston et al., 2009).

Akyol & Garrison (2008, p. 3) state that “the Col framework is formed by the intersection of three main elements, social presence, cognitive presence, and teaching presence.” In a mixed methods study that involved surveying 16 graduate students at the University of Calgary and analyzing transcripts of weekly discussion topics, Akyol and Garrison (2008) found significant relationships among perceived learning, perceived satisfaction, and levels of teaching, social, and cognitive presence.

### **Social Presence**

The first of the three presences, social presence, is described as “the ability of learners to project themselves socially and emotionally as well as their ability to perceive other learners as real people” (Boston et al., 2009, p. 4). Social presence is considered to be the basis for collaborative learning within an online environment and is the foundation for meaningful, constructivist learning (Boston et al., 2009). There are three main factors that allow for the establishment of social presence in the online classroom: affective expression, open communication, and group cohesion (Richardson & Swan, 2003).

Affective expression describes the ability of students to project themselves verbally by using text-based communication methods. Students may use self-disclosure, humor, or other expressions of emotion in order to be seen and see others as real people (Boston et al., 2009). Open communication is related to the level of trust online learners have with other learners within the class. A digital classroom that provides open communication will be perceived by students as being a risk-free learning climate, one in which they feel comfortable enough to

reveal themselves to others. Boston et al. (2009), describes group cohesion as the students' ability to develop a group identity and collaborate with one another meaningfully.

Fostering social presence has been the focus of several studies. According to Lambert & Fisher (2013), research has shown that social presence tends to correlate with successful learning outcomes and perceived student satisfaction. The survey of 28,877 undergraduate students by Boston et al. (2009), found that students who have opportunities at affective expression within the digital classroom were more likely to persist with online education. The same survey also found that social presence has an impact on the perceived satisfaction a student has with an online course. Students with a higher degree of social presence participate more actively within the course and interact with others more frequently (Oztok & Brett, 2011). The students with higher levels of social presence feel more a part of the community, feel more satisfied with the course and thus tend to remain in the course until completion (Oztok & Brett, 2011).

### **Cognitive Presence**

The second of the three presences, cognitive presence, is the extent to which learners are able to construct and confirm meaning through reflection and discussion within the digital classroom (Boston et al., 2009). Garrison and Arbaugh (2007), described four phases online instructors should go through in order to develop cognitive presence. First is a triggering event, which is the identification of a problem or issue that warrants further inquiry. Next is exploration of the problem or issue through critical reflection and discourse. The third phase is the learner's construction of meaning from ideas developed through their exploration. Finally, the process culminates with a resolution, in which learners apply their new knowledge in other

settings or contexts. Lambert and Fisher (2013, p. 4), stress that for students to be able to move through the phases, “the instructor must include activities or questions that require critical thinking, provide independent learning opportunities, and offer a forum where students can demonstrate or exhibit applications of their new knowledge.”

### **Teaching Presence**

The third of the three presences, teaching presence, is usually the responsibility of the instructor. Teaching presence is the creation of an educational experience that facilitates communication among the participants of the online course. Garrison and Arbaugh (2007), found evidence to suggest that the role of the instructor was a major factor in helping online students reach the highest levels of inquiry. It is the teacher’s responsibility to establish a course framework that makes it possible for students to realize the intended learning outcomes. Teaching presence has also been found to be a significant determinant of student satisfaction, perceived learning, and creating a sense of community (Garrison & Arbaugh, 2007).

Teaching presence is described by Garrison and colleagues as having three dimensions. The first dimension is the design and organization of the course structure, or the curriculum and methods the students will be following. The second dimension is the facilitation of discourse amongst the course participants, through asynchronous discussion boards or other means. The third dimension is referred to as direct instruction, or the actions taken by the instructor to provide intellectual and scholarly leadership by sharing knowledge.

The design and organization of the course structure is the online instructor’s planning and design of course activities, processes, interactions, and evaluation methods. According to Boston et al. (2009), some of the instructor’s activities for this dimension may include building

curriculum materials, creating presentations and lecture notes, providing multimedia components for students to interact with, offering a mix of individual and group activities, giving students a clear schedule of activities and deadlines, and modeling the effective use of the learning management system.

The facilitation of discourse amongst students is described by Garrison et al. (2007), as the means by which students engage in interacting about and building upon the information provided in the instructional materials. Some of the instructor's activities for this dimension may include reviewing and commenting on students' asynchronous discussion board posts, raising questions and making observations to direct discussions, keep discussions progressing efficiently, motivate inactive students and limit the activities of dominant students if deemed detrimental to the group.

Boston et al. (2009, p. 5), describes direct instruction as "providing intellectual and scholarly leadership from a subject matter expert in order to diagnose comments for accurate understanding, inject sources of information, direct useful discussion, and scaffold learner knowledge to a higher level." Some of the instructor's activities for this dimension may include providing various means of assessment and giving feedback in a timely manner.

### **Course Interactivity**

As discussed previously, one drawback of online courses is that students can often feel isolated because of the lack of community within the class. This isolation has been shown to diminish when students are offered more opportunities to interact. By surveying 381 students and analyzing student achievement data, Wei et al. (2015) found that interactivity is an important part of students' successful learning experiences in an online class. In a course

satisfaction survey, the most frequent suggestions from students on how to improve course satisfaction was to provide more opportunities to interact (Lee et al., 2011). According to Sun et al., (2008) there are three kinds of interactions in learning activities, students with teachers, students with materials, and students with students. Course evaluation results suggest that these kinds of interactions should be offered and encouraged in an online learning environment.

In online learning environments, it is particularly important for students to feel a sense of learning community (Lee et al., 2011). However, because “online learning requires a higher level of student interdependence and students must navigate time and space displacements, maintaining online interactions is a challenging task” (Song & McNary, 2011, p. 1). Online students may feel a sense of isolation easily due to the lack of interaction among classmates and the instructor (Lee et al., 2011).

Students who have a higher sense of classroom community also perceive a higher level of learning (Song et al., 2004). In a 2002 study, Rovai used a 20-item instrument to survey 314 graduate students enrolled in online courses at a private university in Virginia. He found a significant relationship between students’ perceived sense of community and perceived cognitive learning. Rovai (2002), also discovered that the stronger the students’ perceived sense of community the less isolated they felt.

Interaction within the online classroom and students’ perceived sense of learning appear to be related. After conducting a 2008 survey of 214 college students enrolled in online courses, Ni and Aust (2008) concluded that a sense of classroom community was the most significant predictor of both students’ satisfaction with a course and their perceived learning

within the course. Most students perceive the lack of social interaction within an online learning environment as being the most severe barrier to learning (Muilenburg & Berge, 2005).

After examining several studies, Song and McNary (2011, p. 2) stated, “research has shown that the number of online exchanges students initiate is positively related to course outcomes.” Wei et al. (2015) arrived at comparable findings with their study that surveyed 381 undergraduate students in Taiwan. Students in a more interactive system outperformed and required less time when taking problem-solving tests than those in non-interactive environments (Wei et al., 2015).

A sense of community can also contribute to student’s sense of satisfaction with a course. Lack of community was cited by 71% of respondents as being the reason they were less satisfied with their online learning experience compared to a traditional classroom setting (Song et al., 2004). Muilenburg and Berge (2005) found that participants in their study reported improving interaction among students would make a course more effective and enjoyable. Interactive online learning communities may be beneficial to students even if they are not directly interacting with others. Sutton (2001) found that students can learn through vicarious interaction by observing and cognitively processing interactions that take place between others (as cited by Song & McNary, 2011).

Instructors of online courses have an opportunity to create and promote more interactivity and community within the digital classroom. Mullen and Tallent-Runnels (2006) found that instructors’ scaffolding for interaction is critical to promote students’ interaction with others. Instructors may begin with simple activities for students, such as introducing themselves to the larger group through an asynchronous discussion board post. Activities may

become more involved later, including creating multimedia components such as video to convey their opinions about course materials. Eventually, students may be paired virtually with other students to work collaboratively on a course assignment. Arbaugh (2001) surveyed 390 graduate students. The findings suggested that instructors could influence student interaction by providing personal examples, demonstrating a sense of humor to the students, and inviting students to seek feedback from one another. Arbaugh (2001) also concluded that the instructor could model a collective classroom environment by asking students how things are going in the course and encouraging individuals to discuss issues not related to course materials.

Snyder (2009) encourages online instructors to use the “3Rs” to create a sense of community amongst learners. She identified the acts of reinforcing, recognizing, and rewarding students as being vital to supporting a community of learners and enhancing the presence of the instructor and peers. According to Snyder (2009, p. 52), “it is important to reinforce their participation by privately and publicly acknowledging their contributions, recognizing them for their accomplishments, and rewarding them for their successes.”

Reinforcement statements are meant to emphasize or strengthen an objective within the content (Snyder, 2009). Examples of reinforcement statements include the instructor summarizing key learning statements, providing supplemental information to help students understand specific knowledge, or redirecting students when an online discussion becomes unfocused.

Statements and actions used by the instructor to acknowledge they are aware of the students’ presence in the online discussion are called recognition statements (Snyder, 2009). Examples would include the instructor welcoming students into the class, recognizing a

students' first discussion board post, or bringing attention to particularly well-conceived opinions or thoughts.

A reward statement would be used to thank or praise students' work (Snyder, 2009). An instructor can reward a student by providing praise for an exemplary discussion board post or thanking a group of students for supporting one another academically.

Instructors are encouraged to organize the course materials in advance of the class beginning. This will allow the instructor to focus on efficient engagement with their students (Hung & Chou, 2015). Instructors are also encouraged to model strategies for effective participation, collaboration, and learning for the students early in the semester (Hung & Chou, 2015). Instructors may model effective participation collaboration by providing students with examples from previous students' or supplying a detailed rubric that students may use. By doing this, the instructor is seen as beginning to build a sense of community with the students and an atmosphere of trust. When trust and community are in place, a more satisfying interactive environment can be provided to students.

Promoting interactive digital learning environments and community is not the sole responsibility of the instructor, students must also be involved in the process. According to Cho and Kim (2013, p. 69), "active interaction with others in online settings requires students to have a certain degree of self-regulation." Pintrich (2000, as cited by Cho & Kim, 2013) defined self-regulation as a student's proactive management in two areas of learning, motivation and cognition. A cognitively self-regulated learner uses effective writing strategies such as intentionally writing messages, monitoring the interaction between others, and reflecting on their own interaction with other students and the instructor (Cho & Kim, 2013). Motivation



constructs related to self-regulation would include students who enjoy human interaction, possess self-efficacy for interaction with instructors, are concerned with interaction with other students, and contribute to the online community (Cho & Kim, 2013).

To measure students' self-regulation, Cho and Kim (2013) surveyed 407 college age students enrolled in online courses. They found that students in higher grade levels were more likely to self-regulate for interaction in online learning environments than less advanced students. Cho and Kim (2013) also reported that instructor scaffolding for interaction was significantly associated with students' self-regulation for interaction. The researchers argue that an instructor's efforts to create an interactive online community can enhance a students' self-regulation.

Song and McNary (2011) also discovered that students' intrinsic motivation was related to successful online learning outcomes. The researchers analyzed discussion-board postings, learning journals, and the achievement data of students enrolled in a graduate level online course. Song and McNary (2011) found that effective facilitation and guidance from instructors, along with the intrinsic motivation of students, was necessary to get students to begin interaction and maintain on-topic discussions.

Lambert and Fisher (2013) found that students are not always willing to make the efforts necessary to build a successful, interactive community within the digital classroom. The researchers used a 34-item survey at a large midwestern university to measure the perceptions and opinions of graduate level students. Lambert and Fisher (2013) found that most students preferred a sense of community within their online learning environments, however, most were

not fond of collaborative assignments that were essential to build the community that they desired.

There are significant differences between social and educational communities (Lambert & Fisher, 2013). In social communities, members tend to create their own network with other people that possess common interests as themselves. However, in educational communities, many of the members have been grouped together by outside sources. There may not be common interests beyond the need or desire to learn the course materials (Lambert & Fisher, 2013).

The presence of social interaction is not sufficient to create an educational community. Garrison (2007) describes educational communities as comprising of individuals who collaboratively engage in critical discourse and reflection, by which they construct meaning and understanding. Garrison et al. (2000) explain that it is not simply a social community that enhances learning, a community that is built around inquiry that challenges and intellectually engages students is what creates an educational community (as cited by Lambert & Fisher, 2013). "Course structure, leadership, and learner connectedness must be designed into a course for a sense of community to develop in learning communities," (Lambert & Fisher, 2013, p. 1)

### **Using Personalized Multimedia**

Researchers and online instructors continue to search for new strategies to reduce transactional distance and increase teaching presence within the digital classroom. The use of multimedia components as a form of communication has become an area of interest for some researchers. Dringus et al. (2010) looked at including mini-audio presentations within the

asynchronous discussion forums. Lowenthal and Dunlap (2010) attempted to establish teaching presence through the use of digital storytelling. Regardless of the format, using a variety of communication methods appears to have an effect on students' perceptions of the online instructor (Lee et al., 2011). After surveying 110 undergraduate students who had recently completed an online course at a large southeastern university, Lee et al. (2011) found that instructors who use more than one form of communication within the online classroom were perceived to be more supportive to the students.

Using multimedia components may be a viable strategy to reduce transactional distance in the digital classroom. Huang et al. (2016), surveyed 227 college students at a Midwestern university in the United States. The researchers found that participants preferred instructors to use newer, richer communication technologies. This led to the conclusion that interactive, two-way instructional media should be used when appropriate to reduce transactional distance (Huang et al., 2016). Multimedia also allows students to hear the instructor's voice and see the instructor's face. Russo and Campbell (2004), found after surveying 31 college students, that because of the audio and visual capabilities of multimedia, it allowed students to relate to the instructor more and see them as a real person.

One possible form of multimedia that may be used is mini audio presentations (MAPs). Dringus et al. (2010) incorporated 3-11 minute audio files into the asynchronous discussion forums of a graduate level online course. The researchers referred to these short audio files as mini audio presentations, or MAPs. A total of six MAPs were used during a 12-week course. At the conclusion of the study, the researchers surveyed 34 of the students to measure their perceptions of teaching presence, course satisfaction, and participation (Dringus et al., 2010).

The participants of the study reported that using the MAPs helped clarify course content and added a personal touch to the learning environment (Dringus et al., 2010). The participants also stated that keeping the messages short was important and even suggested using a video component (Dringus et al., 2010).

Research indicates that appropriately integrating multimedia components into an online course can be a valuable teaching tool for facilitating student learning (Mandernach, 2009). It is also theorized that instructors can increase student engagement with the course content by providing personalized multimedia components. Personalizing multimedia components are audio and/or video files created and customized by the instructor to meet specific learner needs. These files may help instructors give students a sense of interaction, allow them to feel more comfortable with the professor, and ultimately builds a presence in the digital classroom (Dringus et al., 2010).

According to Mandernach (2009), online courses that utilize multimedia generated by the instructor can create a more personalized, intimate learning experience that may lead to increased student engagement. Students with elevated levels of engagement enjoy the process of learning, tend to persist in their scholarly work, and gain satisfaction from academic accomplishments.

Murphy and Rodriguez-Manzanares (2008) investigated the importance of creating teaching presence by interviewing 20 online instructors and program directors at a high school distance education facility. The interviewees reported, “opening up to students by sharing personal information or communicating with them outside of instructional time as being essential” (Murphy & Rodriguez-Manzanares, 2008, p. 7). Participants also reported that they

perceived the role of the teacher was to make a connection with students and meet them socially in order to reduce the distance (Murphy & Rodriguez-Manzanares, 2008). Lowenthal and Dunlap (2010), used digital storytelling in an attempt to increase personal connections and establish social presence. Lowenthal and Dunlap (2010) posted videos of themselves telling stories to the students, using self-disclosure, emotional expression, and subtle humor. In previous courses, the researchers had found that using text-based communications failed to establish a strong learning community and social presence (Lowenthal & Dunlap, 2010).

Personalized multimedia can also increase instructor presence, which is the amount students in an online course feel the instructor is present or available even though the materials are pre-created, being delivered digitally and frequently asynchronously. Researchers have found a significant positive correlation between the instructor's presence and student achievement (Mandernach, 2009). Instructors are encouraged to create multimedia components that use a conversational tone, similar to something that one would use when having a discussion with a friend or colleague. The conversational tone can help students relate better to their professor and even creates a sense of obligation to listen and respond to the speaker (Mandernach, 2009). The more the students begin to think they "know" the instructor, the more likely they are to view and interact with the multimedia materials.

### **Using Asynchronous Discussion Boards to Enhance Critical Thinking**

Lee et al., (2011), found while surveying students who had recently completed an online course, that providing students with opportunities to communicate with one another provided a sense of interactivity. Group discussions, group projects, peer teaching and tutoring are all strategies to improve student-student interactivity (Lee et al., 2011). A peer moderated

discussion has been found to facilitate development of self-directed learning and to promote a sense of community amongst the students (Kauffman, 2015).

Due to the flexibility of time and space that online courses offer, asynchronous discussion boards are another tool to allow students to interact with one another and the instructor. Characteristics of effective online discussions are facilitated by instructors who do the following: know their role in the discussion, interweave substantial course content, set clear expectations of the students for their involvement in the discussions, and promptly respond to students' questions and ask follow-up questions (Wei et al., 2015).

The role of teacher as facilitator is critical in an online discussion (Hung & Chou, 2015). Hung and Chou, (2015) developed an instrument to measure students' perceptions of online instructors' roles in blended and online learning environments. Results from the 750 university students who completed the survey instrument indicated that students felt the instructor should be responsible for generating the opening questions to help start the discussion. Once the discussion has begun and students are participating, the instructor's role is to then provide feedback to students' responses, share opinions on the subject matter, and ask follow-up questions to encourage students to look deeper into the content (Hung & Chou, 2015). The instructor is also responsible for keeping the discussion fresh and alive, using techniques such as praise for insightful answers, redirection to keep students focused on the current topic, and encouragement for more reserved students reluctant to add their own opinions.

To maximize the potential of students' online discussions, researchers found that instructors interwove substantial course content and activities into the online environment (Wei et al., 2015). By doing this, instructors designed topics to align with topics of importance

to the course and to the students' final course grade. The researchers found that online discussions should not be an extra "add-on" activity, but a place where students can discuss, learn, and investigate further major course content and ideas (Mandernach, 2006).

Other than providing substantial course content in the online discussions, research also indicates that effective instructors provide clear expectations for class participation. A study by Wei, Peng, and Chou (2015) found that students tended to post only as many times as required by the instructor. Effective instructors were found to encourage students to use the discussion boards to share knowledge and to communicate with the instructor and peers (Wei, Peng, & Chou, 2015). It was also recommended that instructors respond to students' questions within an appropriate amount of time and ask follow-up questions to further encourage participation. Students must feel that the online discussion boards hold some value to their learning other than meeting an expectation for the course (Wei et al., 2015).

Research by Petrides (2002, as cited by Song et al., 2004) found that asynchronous discussion boards can enhance students' critical thinking. Students reported that they were able to think more deeply when responding in writing compared to giving verbal responses. The flexibility of time and space that discussion boards provide give students an outlet for in-depth interactions that may require additional thought, investigation, or research (Mandernach, 2006). Some strategies that have been found to be effective include:

- *Allow "guest speakers", who are experts in the content field, access to the discussion board.*  
An outside authority may be able to provide alternate viewpoints and they can interact with the students and provide meaningful feedback.
- *Incorporate multimedia components for students to discuss.*  
Videos and audio pieces can often spark interesting conversations.

- *Structure the discussions into small groups that are led by a student leader.*  
Online courses frequently have large enrollments and the discussions can become just as intimidating as a traditional classroom. Many students are more comfortable interacting with a small group and it provides more opportunities for their opinions to be voiced.
- *Create “buzz” groups that engage in a topic for a small amount of time.*  
Provides students options on what topics they want to be involved in and the time constraint keeps material from becoming stale.

### **Instructor Preparation**

Instructor preparation is very important in a traditional course setting; however, it appears to be equally if not more important in an online environment. Hung and Chou (2015) encourage instructors to organize course materials well in advance so they may be able to focus on efficient engagement with their students. Researchers have found that when preparing an online course, effective instructors address how to support students (Lee et al., 2011), including technical support and ways for students to interact with their peers.

Instructors who were found to be supportive of students put course elements in place that explicitly informed students of the support available to them and how to access the resources (Lee et al., 2011). Three strategies that have been found to be effective from previous research in this area include providing course materials early to students, choosing teaching strategies and materials that enables quality learning opportunities, and utilizing outside resources to strengthen the online environment.

According to Hung and Chou (2015), effective online instructors strive to make all course materials available to students by the first day of class. This may include, but not be limited to, providing a concise and informative syllabus, a calendar with important dates for course activities and assignment deadlines, access to study materials, and communication methods for



students to receive feedback and support. By making course materials available early, the instructor allows the students to shoulder more responsibility, engage deeper in the content, and promotes student collaboration in the learning process (Hung & Chou, 2015).

It has been known for many years that quality curriculum and course materials are extremely important in a traditional classroom, it appears that nothing is different in an online environment. In a survey of nearly 300 students enrolled in an online course, the quality of the course was considered the most significant influence on overall student satisfaction and success (Sun et al., 2008). Those same students also reported that the instructor using diverse assessment methods was also a significant contributor to their perceived satisfaction. The instructor has the ability to influence these items during the preparation phase of the online course. He or she can choose a curriculum to follow and which methods of assessment will be offered.

Instructors in the 21<sup>st</sup> century are going to most likely teach a course online or one that has components online. Course interactivity is emerging as a key component for online student success, with implications for instructor's use of strategies to make courses more interactive and teacher's capacity to provide effective online support for the students, in order to maintain quality of education whether in a traditional, online, or hybrid course.

## CHAPTER THREE

### METHODOLOGY

#### **Population and Sample**

The participants of the study were students enrolled in an online personal finance course through a Midwestern, suburban high school. The school district is in a community with low socioeconomic status, 50.3% of students qualify for free or reduced lunch. The district is also in a non-diverse racial community, 87.8% of students identify white, 7.2% black, 4.3% Hispanic. A convenience sampling was used for this study because of the prearranged access the researcher had to the participants. A total of 17 students agreed to participate, 11 females and 6 males. The students of the course ranged from 16 to 18 years of age. Students under the age of 18 were given assent forms to complete ([Appendix A](#)) along with consent forms ([Appendix B](#)) for their parents or guardians. Students age 18 or older were given only consent forms ([Appendix C](#)) for themselves, in accordance with the Institutional Review Board for the Protection of Human Subjects. All students were informed that level of participation in the study had no impact on their course expectations or grades.

#### **Research Questions and Design**

For this study, I used a single-sample, nonexperimental study design with a mixed methods data collection approach. Due to the complex nature of online learning, I believed that using multiple methods and multiple data sources allowed for a deeper understanding of the problem. Quantitative data was collected through the learning management system related to student achievement and surveys that were delivered digitally to participants. In conjunction, qualitative data was collected through interviews with participants. Data collected through the

survey and interviews was used to measure students' perceptions of the relationship videos, the instructor-student relationship, and instructor effectiveness. The study was seeking to answer the following questions:

1. In a digital learning environment, what are students' perceptions of the instructor-student relationship and instructor effectiveness when videos as relationship builders are provided?
2. In a digital learning environment, what are students' perceptions of the social presence of other course participants when videos as relationship builders are provided?
3. In a digital learning environment, what is the difference in student achievement when the instructor provides videos as relationship builders as opposed to not providing them?

The instructor posted a total of five relationship building videos during the fourth unit of a five-unit course. Each video was between three to five minutes in length. An example of the content of a relationship video can be found as a transcript in [Appendix D](#). The fourth unit lasted 14 instructional days; therefore, a video was posted twice a week on average. The relationship building videos were not posted during any of the other four units of the course. The videos were posted on the Canvas learning management system, a website that students log-in to in order to access course materials, communicate with the instructor and classmates, and to complete assignments. The content of the videos were conversational in nature, meaning that the instructor did not discuss specific course content during the video clips. A variety of topics were covered within the videos, including current events happening within the

school and community. As stated previously, the purpose of the videos was to foster the growth of a student-instructor relationship.

### **Data Collection and Analytic Practices**

**Research Question 1.** To answer research question number one, a mixed methods approach was used. I selected a sampling of 13 items from the Community of Inquiry Survey (Arbaugh et al., 2008). Col survey is a 34-item instrument designed to measure student perceptions of the three strands of the theory; teaching presence, social presence, and cognitive presence in a digital learning environment. The instrument has been tested to establish reliability and validity. The internal consistency reliability of the Col survey had a Cronbach's alpha of .91 for social presence, .94 for teaching presence, and .95 for cognitive presence (Swan, Richardson, Ice, Garrison, Cleveland-Innes, & Arbaugh, 2008). The Col survey is an open resource under Creative Common license, therefore permission was granted to use provided appropriate credit is given.

Due to this research question focusing on teaching presence, I selected four items from the Col survey that directly pertained to the development of teaching presence through the design and organization of the digital classroom ([Appendix E](#)). Instruction design and organization refers to the planning and design of an online course, including the structure, process, interaction, and evaluation methods (Garrison et al., 2001). Each item was measured on a 5-point Likert type scale ranging from 1-Strongly Disagree to 5-Strongly Agree. Participants were asked to respond to the survey two separate times, once before the use of relationship videos and once again after the use of the relationship videos. The survey was posted on the

Canvas website and participants were provided a 5-day period to respond for each time the survey was administered.

Analysis of survey responses focused on determining participants' perceptions of the effectiveness of the instructor, specifically communication effectiveness and the design and organization of class materials. Statistical Package for the Social Sciences (SPSS) Version 24 was used for computation of descriptive statistics to analyze the results from each instance that the survey was administered.

In conjunction with the survey, five course participants were chosen to be interviewed by a third party. A purposeful sampling technique was used to choose the five interview participants. As suggested by Patton (2002, p. 230), "the logic and power of purposeful sampling lie in selecting information-rich cases for study in depth . . . Studying information-rich cases yields insights and in-depth understanding rather than empirical generalizations." The five participants were identified by the researcher as posting the most frequently to the discussion boards after relationship videos had been posted. After being selected, one participant indicated they no longer wanted to be interviewed, therefore a sixth participant was chosen by using the same method.

An interview protocol ([Appendix F](#)) was developed by the researcher. In order to refine the interview protocol, I conducted two pilot interviews with course participants from a prior semester. Feedback from the participants of the pilot interviews was used to inform the modifications necessary to improve comprehension and reliability of the interview protocol.

A colleague of the researcher agreed to act as a neutral third party and conduct the interviews. The interviewer was instructed to follow the interview protocol previously

developed, which included following a script as they conducted the seven-item interview. The interviewer used an audio recording device to collect responses.

### **Data Analysis of Student Interviews.**

***Phase One – Transcription.*** Interviews were transcribed from audio recordings into Microsoft Word. Each interview was reviewed twice to ensure of accuracy of the transcription. During each review of the audio recording the researcher listened for the overall tone being used by the participant as they responded to questions. Voice inflections of the participant and verbal cues such as laughter were also considered. This allowed the researcher to better understand the intent within the student’s responses, as there were some instances in which it was obvious that the participant was expressing emotion important to their response.

***Phase Two – Analysis.*** Each transcription was analyzed and coded to establish themes. I read through the narratives provided by each participant and identified words and phrases that I determined to be relevant to the context of the study. For each of the words or phrases, I created a code that described the main theme of that piece of data. Some of the codes I used included “started class conversations”, “real person”, and “warm-up activity”. Each piece of data that was determined relevant was highlighted in the word processing software a color related to the code it represented. The transcriptions were also used to identify specific anecdotes that were able to inform the findings of the study. There were some cases in which the respondent described an account of how they were feeling while watching the videos or their reason for watching.

**Phase Three – Tabling of Data.** According to McMillan (2008), organized data needs to be summarized into a small number of categories. To summarize the data, I used a table within Microsoft Word. The codes were reduced into themes that shared common characteristics. Themes were placed into columns to identify frequency of each theme. Tabling also ensured that the themes were mutually exclusive from one another and that all pertinent data had been placed. The four themes that emerged from the interview data that had the highest frequency of responses were: (1) Real Person, Approachable, (2) Class Conversations, (3) Unrelated to Course Content, and (4) Ease of Access.

**Phase Four – Analysis of Tabled Interview Data.** The tabled interview data was condensed and revised into categories. The categories helped to summarize all the entries that had been coded the same way and provided a richer description of the meaning of similarly coded information.

**Research Question 2.** To answer research question number two, I used a sampling of nine items from the Col survey. Due to this research question focusing on social presence, I selected the nine items that directly pertained to the development of social presence of course participants within the digital classroom ([Appendix E](#)). The nine items were grouped into three scales containing three items each. The items were grouped in the same manner that the communities of inquiry survey instrument, developed by Garrison et al. (2008), grouped the items. Using the *Principal Components Analysis* (PCA) approach in SPSS, the three-subscale structure of the Col survey was verified. Furthermore, Garrison et al. (2008, p. 135) determined through factor analysis that the instrument “yielded internal consistencies equal to 0.94 for Teaching Presence, 0.91 for Social Presence, and 0.95 for Cognitive Presence.”

The three scales that make-up the social presence section of the Col survey measured the participants' perceptions of affective expression, open communication, and group cohesion within the digital classroom. Affective expression describes the ability of students to project themselves verbally by using text-based communication methods. Open communication is related to the level of trust online learners have with other learners within the class. Group cohesion is the students' ability to develop a group identity and collaborate with one another meaningfully. (Boston et al., 2009).

Each item was measured on a 5-point Likert type scale ranging from 1-Strongly Disagree to 5-Strongly Agree. Participants were asked to respond to the survey two separate times, once before the use of relationship videos and once again after the use of the relationship videos. The survey was posted on the Canvas website and participants were provided a 5-day time period to respond.

Analysis of survey responses focused on determining participants' perceptions of the social presence of other course participants. Statistical Package for the Social Sciences (SPSS) Version 24 was used for computation of descriptive statistics to analyze the results from each instance that the survey was administered.

**Research Question 3.** To answer research question number three, I analyzed the quality of assignment submissions from the fourth unit of the course. I compared historical assignment submission data from sections of the course that were offered during previous semesters, including fall 2016, spring 2017, and summer 2017. All of the previous semesters did not include the relationship building videos. The assignment submission data consisted of formative assessments that were submitted by students and evaluated by the instructor for quality and



accuracy. The data also consisted of an end of unit exam that was used as a summative assessment. The assignment submission data was compared to the current semester of the course which did include the relationship building videos. Quality of work was based on the percentage of points earned from each assignment submission. I also compared levels of mastery on the end of unit exams from each of the four semesters previously mentioned. Mastery was defined as students earning 80% or higher of the possible points. The 80% level is used within the researcher's school district as an indicator of students mastering specific standards. The following items were measured:

- The average percentage of points earned on assignment submissions from the participants
- The percentage of participants achieving 80% of possible points or higher on the end of unit exam

To combat researcher bias when collecting and analyzing student achievement data, an inter-rater reliability practice was put into place. A colleague of the researcher, who also teaches personal finance, agreed to score a random sampling of student work from ten students. I also scored the student work from the ten randomly selected students. Each scorer determined if a student exhibited mastery level work by using the 80% threshold described previously. I compared my colleague's scores to my scores. The scorers agreed on nine of the ten instances, therefore a reliability coefficient of .81 was achieved.

Table 1 is a timeline showing the sequence of study components, including data analysis and reporting of findings, over the six-month period in which the study was conducted.

**Table 1**  
**Sequence of Study Components**

	SEP		OCT		NOV		DEC		JAN		FEB	
Review of relevant literature	X	X	X	X	X	X	X	X	X	X	X	X
Distribute and collect assent and consent forms				X	X							
Collect and analyze student achievement data		X	X	X	X	X	X					
Record and post relationship videos					X	X						
Create survey instrument			X	X	X							
Collect and analyze survey data					X	X	X	X	X	X		
Conduct interviews							X	X				
Transcribe and code interviews								X	X	X	X	
Compose report of findings								X	X	X	X	X

## CHAPTER FOUR

### DATA ANALYSIS AND FINDINGS

The purpose of this study was to explore using instructor-made videos as relationship builders within a digital learning environment. Specifically, what perceptions do students have about teaching presence, social presence, and the instructor-student relationship when videos are used. The study also sought to measure the level of student achievement in a digital learning environment when instructor-made videos were provided. To examine these questions, a single-sample, nonexperimental study design with a mixed methods data collection approach was used. The first research question focused on what students' perceptions of the instructor-student relationship and instructor effectiveness are when videos as relationship builders are provided. Quantitative data was collected through a survey that was administered two times to participants, once before exposure to the videos and once after. Qualitative data was collected through an interview of five participants. The second research question looked at the students' perceptions of the social presence of other course participants when videos as relationship builders are provided. Quantitative data was collected from the survey instrument. The final research question compared student achievement data when the instructor provided videos as relationship builders as opposed to not providing them. Quantitative data related to student achievement was analyzed from the section of the course in which the study was conducted and three previous sections. This chapter presents the results from the survey instrument, analysis of interview data, and comparison of student achievement data to address each of the three research questions.

## Research Question 1.

*In a digital learning environment, what are students' perceptions of the instructor-student relationship and instructor effectiveness when videos as relationship builders are provided?*

Data was collected using two different methods to answer research question 1. The purpose of using different methods was to attempt to triangulate data and improve validity. The first method involved conducting a survey of course participants. A 13-item survey was created using Google Forms. A link to the survey was posted on the Canvas LMS on November 6<sup>th</sup>, 2017 along with a message requesting students who had agreed to participate in the study to respond as soon as possible. The link remained active for five days. At the end of the 5-day period, 19 students had responded to the survey, representing a response rate of 79.2%. At the conclusion of the fourth unit, after all five relationship videos had been posted, a link to the survey instrument was posted again. Along with the link, another message encouraging students who agreed to participate was posted on December 4<sup>th</sup>, 2017. The link remained active for five days. At the end of the 5-day period, 17 students had responded to the survey. The data from the two students who failed to respond to the second survey was removed from the study to allow a paired samples t-test to be used for survey analysis. The researcher tested the following hypothesis:  $H_0: \bar{X}_{pre} = \bar{X}_{post}$  and  $H_A: \bar{X}_{pre} \leq \bar{X}_{post}$ . Results for the four items related to teaching presence from the descriptive statistics and paired samples t-test are found in Tables 2 and 3.

Table 2

*Descriptive Statistics – Teaching Presence (Design & Organization)*

**Paired Samples Statistics – Design & Organization**

	Mean	N	Std. Deviation	Std. Error Mean
Before Exposure to Videos	3.4706	17	.84263	.20437
After Exposure to Videos	3.5294	17	.61162	.14834

As shown in Table 2, the mean after exposure to the videos (3.53) is slightly higher than the mean before exposure to the videos (3.47). The standard deviation before exposure to videos (.843) is higher than the standard deviation after exposure to videos (.612).

Table 3

*Paired Samples t-test Results – Teaching Presence (Design & Organization)*

**Paired Samples Test – Design & Organization**

	Mean	Std. Deviation	Std. Error Mean	Paired Differences		t	df	Sig. (2-tailed)
				95% Confidence Interval of the Difference				
				Lower	Upper			
Before Exposure to Videos – After Exposure to Videos	-.05882	.68196	.16540	-.40946	.29181	-.356	16	.364

As shown in Table 3, the paired samples t-test shows a significance value of .364. Therefore, students’ perceptions of the teaching presence through the design and organization of the course by the instructor before exposure to the videos (M=3.47, SD=.843) is not significantly different than the students’ perceptions of the teaching presence through the design and organization of the course by the instructor after exposure to the videos (M=3.53, SD=.612),  $t(16) = -.356, p > .05$ .

The second method of data collection for research question 1 was to conduct a 7-item interview with five participants. The participants were purposefully selected for the interview

because they were identified as being particularly active contributors to the discussions after relationship videos had been posted. I was interested in how these five participants perceived the instructor-student relationship and why they contributed frequently to the discussions. The interviews were conducted by a third-party interviewer who followed an interview protocol created by the researcher. The interviewer used an audio recording device during the interviews and the researcher transcribed each interview from the recording. After transcription, I analyzed and coded the data. The data used was Emic data, which McMillan (2008, p. 283) describes as, “information provided by the participants, in their own words. By capturing language, actions, expressions, terms, and explanations as communicated by the participants, the richness and depth of the findings can be summarized.”

I read through the narratives provided by each participant and identified words and phrases that I determined to be relevant to the context of the study. For each of the words or phrases, I created a code that described the main theme of that piece of data. Some of the codes I used included “started class conversations”, “real person”, and “warm-up activity”. Each piece of data that was determined relevant was highlighted in the word processing software a color related to the code it represented. The data was then tabled into common themes, with each code being assigned a column within the table. Finally, the codes were reduced into themes that shared common characteristics. The four themes that emerged from the interview data that had the highest frequency of responses were: (1) Real Person, Approachable, (2) Class Conversations, (3) Unrelated to Course Content, and (4) Ease of Access.

**Real Person, Approachable.** Teaching presence within the Community of Inquiry Framework relates to students being able to identify the instructor as being a real person.

Throughout the interviews students mentioned that the relationship videos allowed them to perceive the teacher as being more real and approachable. One student stated, “I just think the videos made it much easier to feel alright about asking questions and getting help and stuff.” Another participant said, “I think after the Minute with Manning videos it seemed a little easier to go see him...I definitely think the videos made it easier for me to approach him.”

Students also said that the videos allowed them to know more personal information about the instructor. One student said, “until he [the instructor] started posting the videos the only things I really know about him was his voice and that he taught computers.” The data from the interviews suggests that students enjoyed learning personal information. “I liked getting to hear more about him [the instructor], like outside of school and stuff,” said one student. Another participant stated, “...it was kinda like he [the instructor] was talking to us and letting us know more about him. So that was pretty cool.” Finally, according to one participant, “some teachers don’t like to talk much about their personal lives, but I think most kids like it when they do.”

Some participants expressed their desire for the videos to have been offered earlier in the semester. One student reflected, “...I think he should have made those videos at the beginning of the semester. I think that would help all of us know him better. Which, I think, would be better for the kids and make it easier for us to ask questions and stuff.”

**Class Conversations.** Throughout the research reviewed in chapter 2, class interactivity was found to have a positive impact on the digital learning environment. Another theme that emerged during the analysis of the interview data is that participants enjoyed communicating with one another and reading each other’s comments and responding. One participant stated,

“I think it was good for all of us to be talking to each other.” Another said, “it was also cool when I would see a video and I knew that other people had watched it because they were like already commenting and stuff.”

Some participants explained that the discussion boards used concurrently with the videos limited some of the feelings of isolation that is often reported with digital learning. One participant expressed, “online classes aren’t really fun, you know. Like usually you aren’t with anyone else when you are working on class stuff...at least when people would respond and comment, you know, on the videos it didn’t feel as isolated. So, I think the videos are a good thing.”

**Unrelated to Course Content.** Throughout the student interviews, several participants expressed how they enjoyed having something to interact with on the class website that was not related to course content. One student explained, “...kids don’t want to just hear about class stuff all the time. I know, like for me, I want to hear about other things too.” Another student agreed, “...sometimes it gets boring when all you see is stuff related to the class. I think that I thought it was good to see other stuff too.” Related to other comments, another student declared, “it was just nice to have something to do on the class website that wasn’t really related to personal finance.”

Participants also expressed that they appreciated that the instructor was willing to discuss things that were not related to course content. One student said, “It was kinda cool to hear him [the instructor] talk about things that weren’t related to personal finance.” “I did like getting to hear about the things that he was doing. Like he told us about going to see the play, which I was in, and I didn’t even know that he was there,” said another student.



**Ease of Access.** The final theme that emerged during the student interviews was that participants appreciated having something to interact with before working on class activities and content. Students expressed wanting something that was not rigorous. One participant stated, “I just through that, you know, that when I first logged in I didn’t want to start right away. You know how it is, I just kinda wanted to watch the video before I did anything else. I guess I kinda liked being able to start out with something easy.” Another student said, “it was kinda cool when I logged in and there was a new one. I would usually watch them [videos] before I would do anything else.”

Students also expressed that they appreciated the videos not being difficult to locate and being notified when a new video was available. One person said, “I guess I decided to watch them because they were right on the first page when you logged in. They weren’t hidden or anything, I didn’t have to go look for them.” “I would get excited when I got a notification that a new one was posted...I don’t know, I just thought they were cool,” said another participant.

## **Research Question 2.**

*In a digital learning environment, what are students’ perceptions of the social presence of other course participants when videos as relationship builders are provided?*

Data was collected from the survey instrument to answer research question 2. The procedures related to the survey instrument described in research question 1 were also used for research question 2. A total of nine items related to social presence were included in the survey. The nine items consisted of three scales of three items each. A paired samples t-test was used for survey analysis. The researcher tested the following hypothesis:  $H_0: \bar{X}_{pre} = \bar{X}_{post}$  and

$H_A: \bar{X}_{pre} \leq \bar{X}_{post}$  on each of the three scales. The first scale measured the students' perception of social presence through affective expression, which is the students' ability to project themselves verbally by using text-based communication methods. Results from the descriptive statistics and paired samples t-test are found in Tables 4 and 5.

Table 4  
*Descriptive Statistics – Social Presence (Affective Expression)*

<b>Paired Samples Statistics – Affective Expression</b>				
	Mean	N	Std. Deviation	Std. Error Mean
Before Exposure to Videos	2.8824	17	.99262	.24075
After Exposure to Videos	3.4314	17	.53703	.13025

As shown in Table 4, the mean after exposure to the videos (3.43) is higher than the mean before exposure to the videos (2.88). The standard deviation before exposure to videos (.993) is higher than the standard deviation after exposure to videos (.537).

Table 5  
*Paired Samples t-test Results – Social Presence (Affective Expression)*

	Mean	Std. Deviation	Paired Differences			t	df	Sig. (2-tailed)
			Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Before Exposure to Videos – After Exposure to Videos	-.54902	1.25245	.30376	-1.19297	.09493	-1.807	16	.045

As shown in Table 5, the paired samples t-test shows a significance value of .045. Therefore, students' perceptions of the social presence through affective expression after exposure to the videos (M=3.43, SD=.537) is significantly different than the students'

perceptions of the social presence through affective expression before exposure to the videos (M=2.88, SD=.993),  $t(16) = -1.807$ ,  $p \leq .05$ .

The second scale measured the students' perception of social presence through open communication, which is related to the level of trust online learners have with other learners within the class. Results from the descriptive statistics and the paired samples t-test are found in Tables 6 and 7.

Table 6  
*Descriptive Statistics – Social Presence (Open Communication)*

<b>Paired Samples Statistics – Open Communication</b>				
	Mean	N	Std. Deviation	Std. Error Mean
Before Exposure to Videos	3.1176	17	.88930	.21569
After Exposure to Videos	3.5686	17	.78850	.19124

As shown in Table 6, the mean after exposure to the videos (3.57) is higher than the mean before exposure to the videos (3.12). The standard deviation before exposure to videos (.889) is higher than the standard deviation after exposure to videos (.789).

Table 7  
*Paired Samples t-test Results – Social Presence (Open Communication)*

	<b>Paired Samples Test – Open Communication</b>								
	Paired Differences						t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
			Lower	Upper					
Before Exposure to Videos – After Exposure to Videos	-.45098	1.06027	.25715	-.99612	.09416	-1.754	16	.049	

As shown in Table 7, the paired samples t-test shows a significance value of .049.

Therefore, students' perceptions of the social presence through open communication after exposure to the videos (M=3.57, SD=.789) is significantly different than the students' perceptions of the social presence through open communication before exposure to the videos (M=3.12, SD=.889),  $t(16) = -1.754$ ,  $p \leq .05$ .

The third scale measured the students' perception of social presence through group cohesion, which is the students' ability to develop a group identity and collaborate with one another meaningfully. Results from the descriptive statistics and paired samples t-test are found in Tables 8 and 9.

Table 8  
*Descriptive Statistics – Social Presence (Group Cohesion)*

<b>Paired Samples Statistics – Group Cohesion</b>				
	Mean	N	Std. Deviation	Std. Error Mean
Before Exposure to Videos	3.0980	17	1.07215	.26004
After Exposure to Videos	3.3137	17	.62883	.15251

As shown in Table 8, the mean after exposure to the videos (3.31) is slightly higher than the mean before exposure to the videos (3.10). The standard deviation before exposure to videos (1.07) is higher than the standard deviation after exposure to videos (.629).

Table 9  
*Paired Samples t-test Results – Social Presence (Group Cohesion)*

	<b>Paired Samples Test – Group Cohesion</b>							
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Before Exposure to Videos – After Exposure to Videos	-.21569	1.13616	.27556	-.79984	.36847	-.783	16	.223

As shown in Table 9, the paired samples t-test shows a significance value of .223. Therefore, students' perceptions of the social presence through group cohesion before exposure to the videos (M=3.10, SD=1.07) is not significantly different than the students' perceptions of the social presence through group cohesion after exposure to the videos (M=3.31, SD=.629),  $t(16) = -.783$ ,  $p > .05$ .

### **Research Question 3.**

*In a digital learning environment, what is the difference in student achievement when the instructor provides videos as relationship builders as opposed to not providing them?*

Student achievement data was collected to answer research question 3. The quality of assignment submissions from the fourth unit was compared to historical assignment submission data from the fourth unit from sections of the course that were offered during previous semesters. The assignments have not changed; therefore, the data source is the same. Quality of work was based on the percentage of points earned from each assignment submission.

I also compared levels of mastery on the end of unit exams. Mastery was defined as students earning 80% or higher of the possible points. The 80% level is used within the researcher's school district as an indicator of students mastering specific standards. In order to combat researcher bias when collecting and analyzing student achievement data, an inter-rater reliability practice was put into place. The following items were measured:

- The average percentage of points earned on assignment submissions from the participants

- The percentage of participants achieving 80% of possible points or higher on the end of unit exam

Table 10, Figure 1, and Figure 2 show the student achievement data comparison.

Table 10 shows the two types of student achievement data collected. The first type of student achievement data is percentage of points earned from assignment submissions, which are formative assignments given to students during unit 4 of the personal finance course. Students return the assignments to the instructor to receive feedback on accuracy and quality. Table 10 shows the percentage of points that were earned on all assignment submissions from the four sections of the course that were compared for this study. The second type of student achievement data is the percentage of students enrolled in the course that achieved the mastery level on the end of unit exam. Mastery level is achieved by a student when they earn greater than or equal to 80% of the possible points on the exam. Table 10 shows the percentage of students earning mastery level from the four sections of the course that were compared for this study.

Table 10  
*Student Achievement Data*

	<b>Fall 2016</b>	<b>Spring 2017</b>	<b>Summer 2017</b>	<b>Fall 2017</b>
% of points earned from assignment submissions	89.4%	90.1%	82.7%	88.6%
% of students achieving mastery level (>80%) on end of unit exam	87.5%	85.7%	85.3%	91.7%

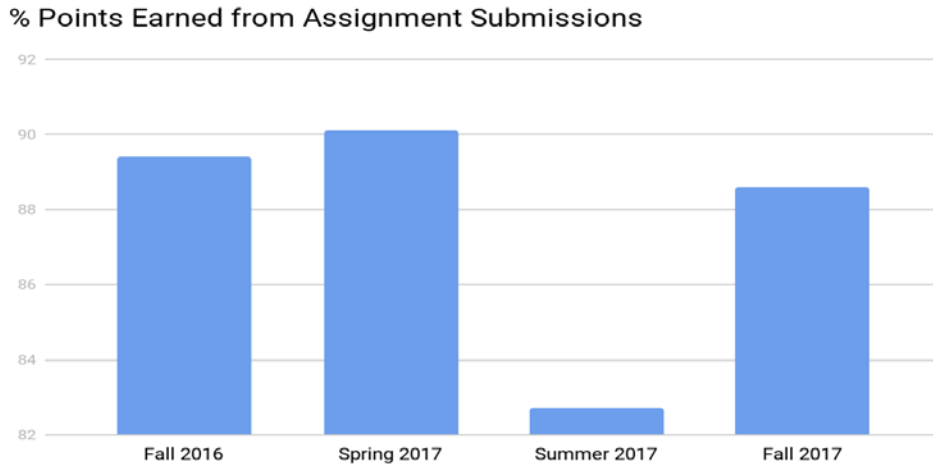


Figure 1. Percentage of Points Earned from Assignment Submissions

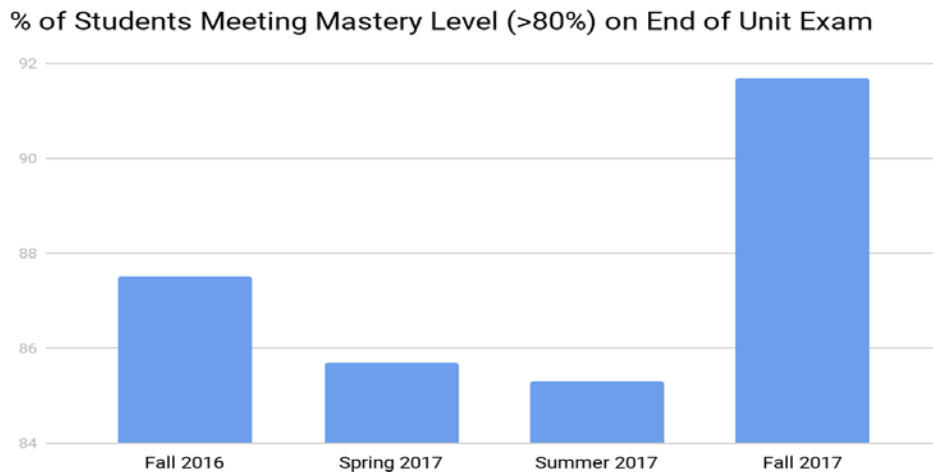


Figure 2. Percentage of Students Meeting Mastery Level on End of Unit Exam

Student achievement data suggests that there was no significant difference in student achievement when relationship videos were used in the course. The semester when the videos were used (fall 2017) shows that students earned 88.6% of possible points on assignment submissions. This percentage is ranked third when compared to historical data from previous semesters of the same course. Students in the spring 2017 semester earned 90.1% of possible points and students from the fall 2016 semester earned 89.4% of possible points, both higher than the semester during the study. Students did not perform as well on the assignments

during the semester with relationship videos as students from two of the three previous semesters.

The percentage of students achieving mastery level on the end of unit exam was 91.7% for the fall 2017 semester. This percentage is the highest recorded from the four sections of the course that were compared during this study. The data suggests that more students were able to master the content on the end of unit exam when relationship videos were used by the instructor. However, the researcher perceives this number to not be of significant stature due to limitations of the study.

### **Summary of Chapter Four Findings**

There were several findings discovered through the data analysis of the survey instrument, student interviews, and review of student achievement data. A summary of key findings for each of the three research questions is below:

**Research question 1.** In a digital learning environment, what are students' perceptions of the instructor-student relationship and instructor effectiveness when videos as relationship builders are provided?

The analysis from the survey instrument found no significant difference between students' perceptions of the four items pertaining to teaching presence before viewing the relationship videos and after viewing the videos. The qualitative data from the student interviews revealed four themes related to teaching presence: (1) Real Person, Approachable, (2) Class Conversations, (3) Unrelated to Course Content, and (4) Ease of Access. Students perceived the instructor as being more approachable and a "real person." Students liked communicating with one another, reading each other's comments and responding. Students



enjoyed interacting with something that was not related to course content. Finally, students appreciated that the videos were something to do on the course website before working on class activities and content.

**Research Question 2.** In a digital learning environment, what are students' perceptions of the social presence of other course participants when videos as relationship builders are provided?

The analysis from the survey instrument found a significant difference between students' perceptions of the three items pertaining affective expression. Affective expression is the ability of students to project themselves verbally by using text-based communication methods. Students perceived their ability to do this to be significantly improved after the videos compared to before the videos.

The results from the survey instrument also found a significant difference between students' perceptions of the three items pertaining to open communication. Open communication is the level of trust online learners have with other learners within the digital classroom. Students perceived their level of trust to be significantly higher after the videos compared to before the videos.

Finally, the survey instrument revealed no significant difference between students' perceptions of the three items related to group cohesion. Group cohesion is the students' ability to develop a group identity and collaborate with one another meaningfully. Students did not perceive their group identity to be significantly changed after the videos compared to before the videos.

**Research Question 3.** In a digital learning environment, what is the difference in student achievement when the instructor provides videos as relationship builders as opposed to not providing them?

Student achievement data from the semester in which the study was conducted was compared to three previous semesters the course was offered. The total percentage of points earned from assignment submissions dropped slightly to 88.6%. There were two previous semesters in which the percentage was higher. The percentage of students achieving mastery level (>80%) on the end of unit exam rose slightly to 91.7%. This was the highest percentage recorded for the course. However, the student achievement results do not appear to be significant, leading the researcher to believe that the videos did not improve or decrease the students' ability to successfully learn course content.

## CHAPTER FIVE

### CONCLUSIONS

This study explored the use of videos as relationship builders in the digital classroom. Previous research on this topic focused on the advantages and disadvantages of online learning as well as the growth trends within the industry. Two online learning theories were identified, Moore's Transactional Distance Theory and the Communities of Inquiry Framework. Both theories focused on creating a sense of community within the digital classroom and allowing students to perceive their teachers and classmates as real people.

The problem identified by previous researchers was that many students reported a lack of engagement and a feeling of isolation from other students and the instructor (Lee et al., 2011). Other researchers discovered that 71% of students who did report a lack of community identified it as being a challenge to their success within the online course (Song et al., 2004). Therefore, the purpose of this study was to use personalized multimedia, termed relationship videos, in an attempt to build teaching and social presence. The researcher was also interested to compare student achievement data when videos were used to when they were not. This study addresses three questions:

1. In a digital learning environment, what are students' perceptions of the instructor-student relationship and instructor effectiveness when videos as relationship builders are provided?
2. In a digital learning environment, what are students' perceptions of the social presence of other course participants when videos as relationship builders are provided?

3. In a digital learning environment, what is the difference in student achievement when the instructor provides videos as relationship builders as opposed to not providing them?

This chapter will provide conclusions, limitations, and recommendations for future research on the topic of using relationship videos within the digital classroom.

## **Conclusions**

After synthesizing data from all sources and analyzing for themes, there are four primary findings from this research study:

1. The use of relationship videos in the digital classroom improved the overall social presence students perceived from their classmates.
2. Students perceived the videos as being an enjoyable, easy activity to interact with before moving to more rigorous activities that were related to course content.
3. Students appreciated the teacher being willing to share personal information through the relationship videos, which students perceived to allow for a feeling that the teacher was more approachable.
4. The use of relationship videos in the digital classroom do not appear to have a significant affect on student achievement.

The use of relationship videos in the digital classroom improved the overall social presence students perceived from their classmates. Quantitative data from the surveys suggests that students did significantly feel more comfortable projecting themselves verbally by using text-based communication methods. The survey data also suggests that students did significantly feel more comfortable with other learners within the class. These results are most

likely a result of students interacting with the discussion board after each relationship video. The discussion board gave students an opportunity to engage in classroom conversations related to topics not pertaining to course content. The student interviews confirm this assumption, as participants expressed that they enjoyed engaging in conversations with other course participants about non-course related items. This finding does raise the question: Are the relationship videos necessary to build social presence or would students perceive the same feelings through simple, non-course related discussion items posted periodically?

Students perceived the videos as being an enjoyable, easy activity to interact with before moving to more rigorous activities that were related to course content. Qualitative data from the interviews suggest that students want an “opening activity” with which to interact with in the digital learning environment much like they do in a more traditional learning environment. Teachers have been using opening activities to begin class for years, often referred to as “bell ringers.” Perhaps students have become accustomed to this structure, therefore they appreciate having similar activities in digital learning environments as well? Qualitative data also suggests that students appreciated the opening activity being one that is not related to course content. This may be more related to the relationship piece between the teacher and the student.

Students appreciated the teacher being willing to share personal information through the relationship videos, which students perceived to allow for a feeling that the teacher was more approachable. Qualitative data from the student interviews suggest that students felt more connected to the instructor after viewing the videos. Students expressed that they

appreciated the instructor being willing to share personal information, which more than one interviewee expressed as being preferable by most students.

Arbaugh (2001) found that online instructors may enhance course interactivity by providing personal examples, demonstrating a sense of humor, and inviting students to seek feedback from one another. The relationship videos used in this study connected with all three of the points suggested by Arbaugh (2001). The videos were casual and often humorous, the instructor spoke about instances within his personal life and the lives of the course participants, and the instructor invited students to provide feedback about the topic at the end of each video. The videos being structured this way may reveal why students perceived them positively and felt more of a personal connection with the instructor, which in turn led to students perceiving the instructor as being more approachable.

The use of relationship videos in the digital classroom do not appear to have a significant affect on student achievement. The quantitative data from student achievement does not suggest any significant difference when relationship videos are offered and when they are not. Data from other areas of this study suggest that students enjoyed the videos and wanted to interact with them, however, it does not appear that the presence of the videos had a strong enough appeal to significantly change students' understanding of course content.

### **Limitations**

This study has several acknowledged limitations. The use of convenience sampling for this study may have caused results that are not generalizable or repeatable. Convenience sampling resulted in some participants of the study having a previous relationship with the instructor of the course because the instructor has taught within the high school in which the

study was being conducted for five years. Convenience sampling may also have resulted in some of the participants having previous relationships with one another, therefore the sense of social presence may be overexaggerated by some respondents.

The sample size of the quantitative data is low. Kass and Tinsley (1979) suggest a sample size for quantitative research to be five participants per survey question. Therefore, their suggestion would be a sample size of 65. The sample size used in this study is 17, well below the suggested amount.

The Communities of Inquiry survey instrument developed by Arbaugh et al., (2008) was originally designed for post-secondary students. The participants of this study were high school students; therefore the survey component was not designed for the participants.

### **Suggestions for Future Research**

The findings of this study create some opportunities for future research. The first is to replicate this study with post-secondary participants. Because the Communities of Inquiry survey was originally designed for post-secondary students, this study may be more appropriate for that population. Post-secondary is also where most students are taking online courses currently, therefore, gathering data from that population may prove to be more generalizable.

A second suggestion would be to replicate this study with a larger sample size in order to gather more reliable quantitative data. Repeating this study with samples that are from more diverse populations, in different content areas, and from other geographic locations is also suggested.

Using a control group and an experimental group design may also be worthwhile. This methodology would allow the researcher to maintain for other variables such as time of study. In future research it would also be preferred if the researcher and the instructor of the course were not the same person. This would allow for the researcher to better understand the teaching and social presence dynamics. This would also allow for the researcher to be the interviewer, which could lead to more in depth questioning through follow-up questions.



## Appendix A

### Minor Student Assent Procedure

#### The Effect of Instructor Created Multimedia on Student Interactivity and Achievement within an Online Course

Dear student,

My name is Jeff Manning. I will be your personal finance instructor this semester for the online course you have registered. I am also a doctoral student at the University of Kansas. As part of my doctoral program, I am doing some research about how students learn in an online environment. In order to investigate this, I am asking for you to be a participant in my study.

I will be collecting information about your use of the class website (Canvas), your academic achievement with the course material, and your perceptions of the course materials and the effectiveness of the instructor.

If you decide you want to be in the study, you will just participate like normal during the course. You will be asked to complete a short 13 question survey two times. One time before you view the videos and once more after. You may also be randomly selected to be interviewed. The interview is only five questions long and should only take 10-15 minutes. If you decide you do not want to be interviewed, you may choose not to.

There are no risks involved in participating in the study. You might feel a little anxiety while taking the survey or during the interview, but every effort will be made to make you feel comfortable. There are many benefits to you as a participant, including the opportunity for self-reflection related to the course materials and your academic efforts and achievement.

Your parents or guardian need to say it's OK for you to be in the study. After they decide, you get to choose if you want to do it too. If you don't want to be in the study, no one will be mad at you. If you want to be in the study now and change your mind later, that's OK. You can stop at any time.

If you don't feel like answering any questions, you don't have to. I will be happy to answer any questions you may have now or when we are talking together. Do you want to take part in this project?

---

#### Authorization

Yes, I want to participate.

No, I do not want to participate.

I, \_\_\_\_\_ (print name), agree to participate in the research described above.

I, \_\_\_\_\_ (print name), agree to participate by responding to a survey that the researcher will send to me.

I, \_\_\_\_\_ (print name), agree to participate in the interview if asked to do so.

## Appendix B

### Parent Consent Procedure

# The Effect of Instructor Created Multimedia on Student Interactivity and Achievement within an Online Course

## Consent for Participation in Research

Dear parent / guardian,

My name is Jeff Manning. I am your student's personal finance instructor this semester for the online course your student is currently enrolled in. I am also a doctoral student at the University of Kansas. As part of my doctoral program, I am doing some research about how students learn in an online environment. To investigate this, I am asking for your student to be a participant in my study.

I am interested in how instructor created multimedia can affect student interactivity and achievement within an online course. What this basically means is that I am going to provide videos created by myself for your student to view as part of the course materials. I am wanting to research if providing these videos changes their feelings about the course or their success in the course. I am interested in collecting information related to their use of the learning management system (Canvas website), their academic achievement with the course material, and their perceptions of the course materials and the effectiveness of the instructor.

If you decide your student may be involved in the study, they will just participate like normal during the course. They will be asked to complete a short 13 question survey two times. One time before they view the videos and once more after. Your student may also be selected to be interviewed by a teacher at Excelsior Springs High School. The interview should only take 10-15 minutes. If you or your student decides not to be interviewed, you may choose not to.

There are no risks involved in participating in the study. While your student may feel slight anxiety while taking the surveys, every effort will be made to make them feel comfortable. There are many benefits to them as a participant, including the opportunity for self-reflection related to the course materials and their academic efforts and achievement.

Please note that participation in this study is voluntary. If your student wishes to withdraw, they may do so *at any time* without penalty. They may take part in all or part of this study, meaning that they may participate in the study by allowing the researcher to study their use of the learning management system (Canvas website), or your student may participate by only filling out the surveys. You may refuse to sign this form and not have your student participate in this study. You should be aware that even if you agree to have your student participate, they are free to withdraw at any time. If they do withdraw from this study, it will not affect their grade or the teacher-student relationship.

If you or your student has any questions about your rights as a research participant, please contact (785) 864-7429 or (785) 864-7385, or write to the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7568, or email [irb@ku.edu](mailto:irb@ku.edu)

**Confidentiality**

All the information your student provides will be kept strictly confidential. They will not be identified by their real name. Only a pseudonym will appear on research data and surveys, and any excerpts of dialogue that are published or appear in print will have all identifying details removed. Their identifiable information will not be shared unless (a) it is required by law or university policy, or (b) you give written permission. Permission granted on this date to use and disclose your information remains in effect indefinitely. By signing this form you give permission for the use and disclosure of your information for purposes of this study at any time in the future.

**Authorization**

I have read this consent form and I understand what is being requested of my child as a participant in this study. I freely consent for my child to participate. I have been given satisfactory answers to my questions. The investigator provided me with a copy of this form.

Signed: \_\_\_\_\_

Printed name: \_\_\_\_\_

Date: \_\_\_\_\_

**\*\*If you have any questions about this study, please contact me or my advisor, Dr. Barbara Phipps\*\***

Jeff Manning  
Marketing / Business Instructor  
Excelsior Springs School District  
8011 NE 112<sup>th</sup> Street  
Kansas City, MO 64157  
[jmanning@ga.essd40.com](mailto:jmanning@ga.essd40.com)  
(417) 343-1866

Dr. Barbara Phipps  
Curriculum & Teaching Professor  
University of Kansas  
1122 West Campus Rd  
Lawrence, KS 66045-3101  
[phipps@ku.edu](mailto:phipps@ku.edu)  
(785) 864-9685

## Appendix C

### Adult Student Consent Procedure

## The Effect of Instructor Created Multimedia on Student Interactivity and Achievement within an Online Course

### Consent for Participation in Research

Dear student,

My name is Jeff Manning. I will be your personal finance instructor this semester for the online course you have registered. I am also a doctoral student at the University of Kansas. As part of my doctoral program, I am doing some research about how students learn in an online environment. In order to investigate this, I am asking for you to be a participant in my study.

I will be collecting information about your use of the class website (Canvas), your academic achievement with the course material, and your perceptions of the course materials and the effectiveness of the instructor.

If you decide you want to be in the study, you will just participate like normal during the course. You will be asked to complete a short 13 question survey two times. One time before you view the videos and once more after. You may also be randomly selected to be interviewed. The interview should only take 10-15 minutes. If you decide you do not want to be interviewed, you may choose not to.

There are no risks involved in participating in the study. You might feel a little anxiety while taking the survey or during the interview, but every effort will be made to make you feel comfortable. There are many benefits to you as a participant, including the opportunity for self-reflection related to the course materials and your academic efforts and achievement.

If you don't feel like answering any questions, you don't have to. I will be happy to answer any questions you may have now or when we are talking together. Do you want to take part in this project?

Please note that participation in this study is voluntary. If you wish to withdraw, you may do so *at any time* without penalty. You may take part in all or part of this study, meaning that you may participate in the study by allowing the researcher to study your use of the learning management system (Canvas website), or you may participate by only filling out the surveys. You may refuse to sign this form and not participate in this study. You should be aware that if you agree to participate, you are free to withdraw at any time. If you do withdraw from this study, it will not affect your grade or the teacher-student relationship.

If you have any questions about your rights as a research participant, please contact (785) 864-7429 or (785) 864-7385, or write to the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7568, or email [irb@ku.edu](mailto:irb@ku.edu)

### Confidentiality

All the information your student provides will be kept strictly confidential. They will not be identified by their real name. Only a pseudonym will appear on research data and surveys, and any excerpts of dialogue that are published or appear in print will have all identifying details removed. Their identifiable information will not be shared unless (a) it is required by law or university policy, or (b) you give written permission. Permission granted on this date to use and disclose your information remains in effect indefinitely. By signing this form you give permission for the use and disclosure of your information for purposes of this study at any time in the future.

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### Authorization

I have read this consent form and I understand what is being requested of my child as a participant in this study. I freely consent for my child to participate. I have been given satisfactory answers to my questions. The investigator provided me with a copy of this form.

Yes, I want to participate.

No, I do not want to participate.

I, \_\_\_\_\_ (print name), agree to participate in the research described above.

I, \_\_\_\_\_ (print name), agree to participate by responding to a survey that the researcher will send to me.

I, \_\_\_\_\_ (print name), agree to participate in the interview if asked to do so.

\*\*If you have any questions about this study, please contact me or my advisor, Dr. Barbara Phipps\*\*

Jeff Manning  
Marketing / Business Instructor  
Excelsior Springs School District  
8011 NE 112<sup>th</sup> Street  
Kansas City, MO 64157  
[jmanning@ga.essd40.com](mailto:jmanning@ga.essd40.com)  
(417) 343-1866

Dr. Barbara Phipps  
Curriculum & Teaching Professor  
University of Kansas  
1122 West Campus Rd  
Lawrence, KS 66045-3101  
[phipps@ku.edu](mailto:phipps@ku.edu)  
(785) 864-9685

## Appendix D

### Relationship Video Transcript - Example

Alright, hello everyone, and this is another edition of “Minute with Manning”.

I was really trying to think about what my topic this week was going to be, my topic for this edition, what should it be? There are lots of things that I think would be worth discussing, but one that I really want to talk about is what time or what part of the season we are in right now and this is actually my very favorite time of the year.

We are in the middle of Spring and it is just such an awesome time. As a lot of you guys know, I just got back from San Diego about a week ago and when I was out there the weather was just so incredibly beautiful. It was warm, it was sunny, it was just so nice. And then I came back to Missouri, good ole’ Missouri and it has been rainy, and kinda cold, and it was just totally different. I was thinking to myself, “my gosh, what I have I done, I should have stayed in California”.

But, this last week, these last few days in particular, it’s really, really turned out to be a pretty nice couple of days and that really gets me excited for this season. You know, the redbuds are blooming, I have seen a lot of Tulips and Daffodils, and all sorts of things starting to come to life. It just gets me excited.

I’m excited for baseball season to start up. My wife and I love going to the Royals games. I don’t know if the team is going to be very good this year or not but we will probably try to make it out to a few games, maybe six or seven games or so. I love doing that, it is one of my favorite times.

I also know that you guys are probably getting pretty excited, especially you seniors. You know the countdown is officially on now that we are back from spring break it is pretty much full steam ahead on graduation. So, I’m sure that you can’t wait to get there. And underclassmen, even you are probably starting to get excited. Especially juniors, you’re ready to be seniors, you know one more year closer and it is just a really exciting time of the year.

So here is what I want you guys to do. I want you, right below here, right down in that box that you see below this video, I want you to post either your favorite time or what your favorite part of spring is. Or, maybe, if you’re not much of a spring lover maybe you will post what your least favorite part of spring is.

I can tell you one thing, my eye right here, I don’t know if you can see it very well or not by my eye right here will tell you that allergy season has officially begun. So maybe you have that too and you don’t really like spring as much as I do. So, give me a comment, post away, maybe comment to each other and we will see if we can get a nice little discussion going about spring.

Thanks guys!

Appendix E

Survey Instrument

<i>Community of Inquiry Survey Instrument (abbreviated)</i>		
Section	Item #	Question
Teaching Presence – Design & Organization	1	The instructor clearly communicated important course topics.
	2	The instructor clearly communicated important course goals.
	3	The instructor provided clear instructions on how to participate in course learning activities.
	4	The instructor clearly communicated important due dates/time frames for learning activities.
Social Presence – Affective Expression	5	Getting to know other course participants gave me a sense of belonging in the course.
	6	I was able to form distinct impressions of some course participants.
	7	Online or web-based communication is an excellent medium for social interaction.
Social Presence – Open Communication	8	I felt comfortable conversing through the online medium.
	9	I felt comfortable participating in the course discussions.
	10	I felt comfortable interacting with other course participants.
Social Presence – Group Cohesion	11	I felt comfortable disagreeing with other course participants while still maintaining a sense of trust.
	12	I felt that my point of view was acknowledged by other course participants.
	13	Online discussions help me develop a sense of collaboration.



## Appendix F

### Student Interview Protocol

Interview participants: Students enrolled in high school online personal finance course (n=5)

Goal: Understand students' perceptions of the instructor-student relationship and instructor effectiveness when videos as relationship builders are provided.

#### Introduction:

Hello, my name is [Interviewer's Name]. Thank you for agreeing to take this time to speak with me today. I have been asked to conduct a brief interview with you about your feelings toward the online personal finance course you are currently enrolled in and the instructor of that course. If at any time you wish to conclude the interview you may do so. Your responses will not affect your grade. Before we begin, do you have any questions about the interview process?

- Q1: What are some of your feelings toward the online course and the instructor?
- Q2: What was your first reaction to the videos in which the instructor was speaking directly to the camera? Why?
- Q3: Why did you choose to watch or not watch the videos in which the instructor was speaking directly to the camera?
- Q4: How did the videos in which the instructor was speaking directly to the camera influence your perception or feelings toward the instructor?
- Q5: Did the videos in which the instructor was speaking directly to the camera make the instructor more approachable? Why?
- Q6: Do you think you would like an online class better or worse if it didn't have the videos in which the instructor was speaking to the camera? Why?
- Q7: Is there anything you would like to add about your feelings towards the online course or the instructor?

## Appendix G

### Human Subjects Approval of Protocol



#### APPROVAL OF PROTOCOL

November 9, 2017

Jeffrey Manning  
jeffreymanning@ku.edu

Dear Jeffrey Manning:

On 11/9/2017, the IRB reviewed the following submission:

Type of Review:	Modification/Update
Title of Study:	The Effect of Instructor Created Multimedia on Student Interactivity and Achievement Within an Online Course
Investigator:	Jeffrey Manning
IRB ID:	STUDY00140439
Funding:	None
Grant ID:	None
Documents Reviewed:	• Parent Consent Procedure, • Adult Student Consent Procedure, • Minor Student Assent Procedure, • Methodology, • HSCL-Manning-Form.pdf, • Relationship Video Example Transcript, • Survey Instrument, • Interview Questions

The IRB approved the study from 11/9/2017 to 11/8/2018.

1. Before 11/8/2018 submit a Continuing Review request and required attachments to request continuing approval or closure.
2. Any significant change to the protocol requires a modification approval prior to altering the project.
3. Notify HRPP about any new investigators not named in original application. Note that new investigators must take the online tutorial at [https://rps.drupal.ku.edu/human\\_subjects\\_compliance\\_training](https://rps.drupal.ku.edu/human_subjects_compliance_training).
4. Any injury to a subject because of the research procedure must be reported immediately.
5. When signed consent documents are required, the primary investigator must retain the signed consent documents for at least three years past completion of the research activity.

If continuing review approval is not granted before the expiration date of 11/8/2018 approval of this protocol expires on that date.

Please note university data security and handling requirements for your project:  
<https://documents.ku.edu/policies/IT/DataClassificationandHandlingProceduresGuide.htm>

You must use the final, watermarked version of the consent form, available under the "Documents" tab in eCompliance.

Sincerely,

Jocelyn Isley, MS, CIP  
Interim IRB Administrator, KU Lawrence Campus

Human Research Protection Program  
Youngberg Hall | 2385 Irving Hill Rd | Lawrence, KS 66045 | (785) 864-7429 | [research.ku.edu/hrpp](mailto:research.ku.edu/hrpp)

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