ABSTRACT

BOLES, SUSIE BAKER. Examining the Relationship between Student Perceptions of Online Instructor Teaching and Social Presence through Introductory Video Characteristics. (Under the direction of Dr. Deniz Eseryel).

This study sought to examine students' perceptions of online instructors' teaching and social presence based solely on short, asynchronous introductory videos. The second aim of this study was to examine student expectations of online instructor qualities and introductions to online courses. Through a quantitative research design, this study explored the relationship between student perceptions of teaching and social presence and types of instructor introductory videos, which include varying degrees of instructor physical and verbal presence and common video production styles. The research process consisted of surveying students' expectations and their responses to sets of videos which vary in these characteristics. Participants include 195 undergraduate and graduate students during fall semester 2018. The data analysis includes descriptive statistics, chi-squared analyses, and multiple linear regression. This study found that certain student characteristics such as university status, age, gender, English as a primary language, and field of study are significantly related to student expectations for online instructors and preferred introduction media formats, and certain video characteristics (active body language, a student-oriented script, professional editing, interview production style) may predict a higher student perception of social presence, as measured by the Widmeyer and Loy warm/cold scale, as compared to a video in which an instructor delivers a course-oriented script and uses passive body language.

Keywords: introductory videos, online education, teaching presence, social presence

Examining the Relationship between Student Perceptions of Online Instructor Teaching and Social Presence through Introductory Video Characteristics

by
Susie Baker Boles

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APPROVED BY:

Dr. Deniz Eseryel Chair of Advisory Committee	Dr. Timothy Drake
Dr. Julia McKeown	Dr. Kevin Oliver

DEDICATION

I dedicate this labor of love to all students who choose online education in order to overcome barriers. May you learn, develop community, and enjoy your experience to the fullest!

BIOGRAPHY

Susie Boles is an academic professional with an insatiable thirst for learning and a deeply-rooted joy in aiding others' learning.

Susie began her career in sales education at Colonial Life Insurance, Inc., where she developed an abiding love of online education and purposeful learning. Currently an instructional designer at UNC-Greensboro, Susie Boles thrives on supporting professors develop engaging, effective online learning environments and explore the possibilities of teaching online. She has developed numerous online courses for undergraduate and graduate students in the areas of dance, nanoscience, social justice, peace and conflict studies, kinesiology, music, teacher education, and other disciplines.

Susie enjoys running, singing for the Lord, travel, reading and reviewing fiction books, and going out on Lake Murray with her family in South Carolina, her home state. She also enjoys eating copious amounts of buttered popcorn while watching the latest movies with her husband David. David and Susie own a petite chihuahua-mix rescue named Puddin, who weighs all of 3.5 pounds. Recently she and David have welcomed a daughter, Susan Jubilee, to their family, and they delight in watching her grow and explore the world around her.

Susie earned her bachelor's degree in Journalism and Mass Communication from UNC-Chapel Hill and her master's degree in Marketing and Management from the University of Virginia, both with the outstanding support of the Robertson Scholarship. She is eager to apply the expertise gained from her doctorate in Curriculum and Instruction from N.C. State University to honor God and share the blessing of education she has been gifted.

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"Commit your work to the Lord, and your plans will be established." – Proverbs 16:3

"If you want to go fast, go alone. If you want to go far, go together." – African proverb

I would like to thank the community around me who has helped to make this journey possible! Learning to be a mother while completing a PhD and working full-time is sometimes like running a marathon without training in a foreign country (something I have also done, and so I can vouch for the accuracy of the comparison).

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However big, however small / Let me be part of it all / Share your dreams with me / You may be right, you may be wrong / But say that you'll bring me along.

To the Lord: You have saved me, and all I do is for you.

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CHAPTER ONE: INTRODUCTION

As an instructional designer at a university, professors often ask, “I’d like to create an introductory video; how should I make one? Do students expect a video?” The question of how to initiate the instructor’s presence in an online course is a perennial one, and thus began my interest in investigating relevant research to introductory videos and examining student expectations and perceptions of introductory videos to online courses.

Background

Growth in Online Learning

Online courses are continually evolving, as new tools emerge for instructors and students to communicate. Scholars and practitioners in this field of online education are exploring which course designs and virtual tools are most effective for learning and teaching. Students’ needs and expectations are changing, as online education becomes more accessible and attracts a wider variety of students. The question of whether online education is as effective as face-to-face, traditional classroom educational models has largely been put to rest, with a swell of studies stating there are “no significant differences” (Baker, 2010, p. 2). Now the question is which pedagogical and technological strategies are most effective for students and instructors involved in online learning.

Online education represents a substantial portion of higher education and is growing. According to the Digital Learning Compass: Distance Education Enrollment Report 2017, 29.7% of all higher education students are taking at least one online course (Allen, I.E. & Seaman, J., 2017, p. 4). This number has steadily risen from 25.9% in 2012 (Allen, I.E. & Seaman, J., 2017, p. 4). This growth is of particular interest in an era when higher education at large has experienced a 3.2% decrease from 2012-2015 (Allen, I.E. & Seaman, J., 2017, p. 4). Online courses may be offered synchronously, in which students and instructors meet virtually at the same time, or asynchronously, in which students and instructors interact at different times with one another and the course material.

One reason for this growth may be students' attraction to online learning's flexibility and convenience: students can participate from wherever they are, without the constraint of meeting in person. Indeed, such flexibility and convenience are primary factors in many students' motivation to enroll in online courses as opposed to residential courses (Pastore & Carr-Chellman, 2009; Griffiths & Graham, 2009). Yet, the same benefit of convenience and flexibility can become a drawback: without intentionally designing for the instructor's presence and peer-to-peer interaction, online courses can be prone to a lack of personal connection with the instructor and peer students. Students and instructors are separated by geographical distance and time, and thus intentional opportunities for interaction must be built into the course and communicated. This absence of direct contact leads to a sense of isolation, which can lead to withdrawal from the online course or program, failure to reach out when assistance is needed, and low motivation, and studies have shown the rate of dropout in online courses is higher than face-to-face courses (Croft, Dalton, & Grant, 2015; Ali & Smith, 2010; Rovai, 2002).

Online learning refers to a web-based learning environment which may be accessed on an Internet-enabled device, whether it be a computer, tablet, phone, or other equipment. In a typical face-to-face classroom, the instructor is physically present and teaches students through a combination of verbal and visual input and body language. Online courses are primarily text-based, which brings the benefits of readability and searchability, and which allows the student to reread and process information at his or her own pace. However, this format can result in a loss of the verbal tone, meaningful pauses, facial expressions, gestures, and myriad other elements of communication from the instructor and peers.

The Changing Role of the Online Instructor in Creating Teaching and Social Presence

Unfortunately, many instructors teaching online for the first time may assume their presence can be developed online using the same techniques they used in the classroom. Conrad (2004) interviewed instructors who taught graduate courses online for the first time before and after their online teaching experience. A primary theme from these interviews was instructors' concern over teaching in a medium without visual cues to and from their students: the loss of the ability to appear authentic and credible due to the absence of physical presence and the loss of the students' body language and facial expressions in response to teaching (Conrad, 2004, p. 35). In their interviews, these instructors expressed a lack of awareness of how to build community and their presence online, and many other instructors may struggle with the same challenge. Often new online instructors exhibit little awareness of the role of community in online learning environments (Sieber, 2005, p. 329).

To build community and alleviate students' potential sense of isolation, the online instructor has a particular role to play in developing teaching and social presence within the online course. One of the most significant factors of online course quality is instructor presence and interpersonal interaction (Jaggars, Edgecombe, & Stacey, 2013). Garrison, Anderson, and Archer (2000) conceptualize "presence" in the online course as the ability of instructors and students "*to project their personal characteristics into the community, thereby presenting themselves to other participants as 'real people'*" (p. 89). Edwards, Perry, and Janzen (2011) state, "Exemplary teachers likely do this through establishing strong, positive presence in the educational environment whether it is classroom or online" (p. 113). The role of instructor takes on a new meaning in distance education, transforming the instructor into a facilitator of self-directed learning (Berge, 2008; Collins & Berge, 1996; Paulsen, 1995; Beaudoin, 1990). In his article on the role of the online instructor and facilitator, Berge (1995) states that two types of interaction occur in the online classroom: interaction with content and other people (p. 22). He categorizes the roles of an online instructor into pedagogical, social, managerial, and technical tasks, which all interrelate: "Creating a friendly, social environment in which learning is promoted is also essential for successful moderating" (Berge, 1995, p. 23).

This environment carries meaningful benefits for students: a sense of social presence can predict improved course retention and final grades in online courses (Liu, Gomez, & Yen, 2009) and lead to engagement, which many studies have shown to increase student achievement, likelihood of graduation, and satisfaction (Oblinger, 2014, p. 14). In Garrison, Anderson, and Archer's (1999) Community of Inquiry model, the learning experience depends upon the integration of social presence, cognitive presence, and teaching presence.

Either in person or online, teaching presence is a critical element for learning. However, the role of the online instructor requires different knowledge, skills, and attitudes than the face-to-face classroom instructor role, and the online instructor may have different technologies to leverage, such as multimedia.

Multimedia in Online Courses as a Means of Building Teaching and Social Presence

Online courses frequently feature video as a primary media. Hansch, Hillers, McConachie, Newman, Schildhauer, and Schmidt (2015) conducted an exploratory study of videos within Massively Open Online Courses (MOOCs) and state that pre-recorded video is typically the main form of content delivery in MOOCs and other non-course forms of online learning (Hansch et al., p. 1). The authors also state that "the use of video in this field has been taken for granted, despite a relative lack of evidence as to video's effectiveness for learning" (p. 1). Video is often "central to the student learning experience" in MOOCs (Guo, Kim, & Rubin, 2014, p. 1). A student may watch multiple brief videos or a single long video for a lesson. Often the videos in MOOCs feature the instructor delivering a lecture or demonstration, comparable to what he or she would present in a classroom. However, other types of videos are popular as well, such as a video of animated equations with the instructor's voice as disembodied audio discussing what is being shown.

One popular method for initiating the instructor's presence in a course is representing oneself through video, which is a form of multimedia. Multimedia technology competence is one area which online teaching may require more so than face-to-face teaching. Bigatel, Ragan, Kennan, May, & Redmond (2012) surveyed professors, adjuncts, instructors, administrators, lecturers, staff, instructional designers, and other individuals with experience related to online teaching to determine which are considered the most important teaching behaviors associated with successful online teaching; the results led to the creation of a list of seven competences for online teaching success (p. 64). Multimedia technology is one of the seven competencies considered requisite for online teaching success. The authors conducted an exploratory factor analysis and verified the reliability of this competency by calculating Cronbach's alpha at 0.84. The two statements comprising this competency were "The instructor uses a variety of multimedia technologies to achieve course objectives" and "The instructor uses multimedia technologies that are appropriate for the learning activities" (Bigatel, Ragan, Kennan, May, & Redmond, 2012, p. 66).

A later, qualitative study from an entirely student perspective shows additional support for the use of multimedia to foment teaching success and instructor-student connect. Joyner, Fuller, Holzweiss, Henderson, & Young (2014) studied the importance of student-instructor connections in graduate level online courses and identified four primary themes that helped students feel connected: connections through interactions outside of the classroom, connections through classroom technology and assignments, connections through instructor feedback, and overall connections with instructors (p. 440). For the second theme, "Technology that incorporates audio and/or video, such as podcasts and synchronous meeting software, was identified in 22 comments as a good way to build connections with instructors" (Joyner, Fuller, Holzweiss, Henderson, & Young, 2014, p. 440).

Griffiths and Graham (2009) piloted a study comparing students in two versions of the same class: a face-to-face version and an online version in which the instructor presented the face-to-face topics, assignment feedback, discussion replies, and assignment instructions via recorded video and students responded by creating their own asynchronous videos (p. 65). The instructor found that asynchronous video communications between he and the students did establish social presence and instructor immediacy (p. 73). Griffiths and Graham (2009) also reported finding "...a result of using the asynchronous video communications is that the instructor-student relationship seems to have been stronger" (p. 73). Overall the student ratings scores for the online course section were much higher than the face-to-face version, which was above average (p. 74). The promising results of their study and call for additional research specifically focused upon asynchronous video in online courses underscore the need to examine the most effective uses of asynchronous video in establishing online community.

Videos: Pedagogical rationale and financial investment

There are at least two primary factors to consider when pondering whether to create or include videos in an online course: the pedagogical value of video and the financial investment in video development.

Video, like other media, should be chosen for use when it is the best tool to achieve the desired instructional objective and learning strategy (Williams, 1998, p. 1447). The pedagogical reasons for video's inclusion should influence the decisions made during its development.

Financially, video is a particularly expensive medium. In their interviews with MOOC producers and video experts and digital media specialists at universities, Hansch et al. (2015)

heard from interviewees that video is the most resource-intensive part of the MOOC production process (p. 3). The authors caution that expensive production techniques are frequently chosen, even in the absence of any scientific evidence of an association between production value and learning outcomes (p. 14). Hollands and Tirthali (2014) estimated the cost to shoot and edit a single hour of high-quality video to be $4,300. Yet many free to low-budget options for creating video exist: learning management systems such as Canvas include their own video recording tool, Windows computers offer free screen-recording tools, online websites such as Jing and Screencast-o-Matic offer free screen-recording, YouTube Live offers free video streaming and recording, and countless smartphone applications exist to allow for video recording and sharing online.

Are these costs justified? What purposes are videos in online courses serving? Hansch (2015) provides a series of affordances for video in online learning (p. 12).

Figure 1. Hansch's video's affordances for online learning.

More broadly, video developed for online courses is created for one of at least three types of value for an educational context according to Koumi (2006); he describes these as cognitive, experiential, and nurturing (Koumi, 2006). The cognitive purpose is meant to aid in learning, the experience purpose is meant to allow students to see someone else's experience they may not otherwise experience, and the nurturing purpose is meant to motivate students and connect them emotionally. For any of the types of videos below, the videos may be pre-recorded, also known as asynchronous, or synchronous, in which students view the video as it is being recorded.

Instructional videos. The majority of research on video in online courses has focused on instructional videos, i.e. videos meant for lectures, demonstrations, and other cognitive purposes. Recent research has begun to examine which elements make compelling instructional video (Hibbert, 2014; Salazar, 2010), which elements students perceive as influencing their learning (Muller, 2008), and which types of videos are often produced (Hansch, 2015). Williams (1998) summarizes and lists previous research findings which guide the use of multimedia in instruction, including the use of text in videos, ideal lengths, dramatization, editing, camera techniques, and other considerations, and Ibrahim (2012) offers models for designing instructional video according to cognitive theory of multimedia learning. Copious research exists on this particular type of video.

Course introduction video. Another type of introductory video is the course introduction video. A course introduction video is meant to orient students to the structure of a course, its policies, its navigation, and other functional and technical logistics.

Instructor introductory video. One common video developed for online courses is often a pre-recorded, asynchronous video of less than five minutes' duration embedded or linked at the beginning of the course, with the intent of introducing students to the instructor. This type of video is the focus of this study, though other formats exist. Salazar (2010) suggests podcasts, chats, or discussion boards as alternatives to video clips or interactive bios (p. 54). Regardless of the format, the intent is to establish an online presence at the start of the course.

The inclusion of an instructor introductory video is rapidly becoming a point of parity in online courses. Quality Matters, a nationally-recognized nonprofit organization which is tasked with defining and maintaining quality assurance in online learning, specifically mentions the inclusion of an instructor introduction video in its standards for online courses. Such a video satisfies Quality Matters standard 1.7: "The self-introduction by the instructor is appropriate and is available online" (Standards from the *Quality Matters Higher Education Rubric*, 5th Edition). Although the standard does not require the format of the introduction to be a video, it asks that the introduction be available electronically in the event students miss a synchronous or face-to-face introduction, and this leads many instructors to choose to create video or text. The annotation for 1.7 elaborates further, stating that the introduction "creates a sense of connection between the instructor and the students," "presents the instructor as professional as well as approachable," "includes the essentials, such as the instructor's name, title, field of expertise, email address, phone number, and times when the instructor is typically online or may be reached by phone" (Standards from the *Quality Matters Higher Education Rubric*, 5th Edition, 2011, p. 2). The annotation gives examples of what might be included in this introduction: "comments on teaching philosophy, a summary of past experiences with teaching online courses, personal information such as hobbies, family, travel experiences, etc., a photograph" (*Quality Matters Higher Education Rubric*, 5th Edition, 2011, p. 2). This list is not intended to be comprehensive but rather to provide inspiration for the content of this introduction beyond the necessities. Finally, the annotation includes a specific caution that expectations of instructor and student roles are culturally influenced and offers the vague guideline that "including information about the role of the instructor in the particular course and how to address the instructor is helpful to students from all backgrounds" (*Quality Matters Higher Education Rubric*, 5th Edition, 2011, p. 2).

Unlike instructional videos occurring within the course, the primary intent of the instructor introductory video is to create connection between the instructor and students and initiate the instructor's teaching and social presence (Salazar, 2010; Jones, Naugle, & Kolloff, 2008). In Hansch's (2015) series of affordances described earlier, this type of video would fall into the categories of building rapport, telling stories, and motivating learners. To accomplish these purposes, many of these videos tend to describe the instructor's background, interest in this subject area, and to welcome the students. It can be used to gain students' attention, ignite or reaffirm their interest in the course, and share expectations for the instructor and student roles. Instructors may wish to emphasize elements of their background to establish credibility or provide personal details to develop rapport and a sense of approachability. Using Koumi's (2006) framework of three types of value for videos in educational contexts, the instructor introduction video may belong best to the nurturing value, as it is often intended to "stimulate appetite to learn" and "alleviate isolation of the distance learner by showing the teacher or fellow students" (p. 4). As such, this type of video has a distinctly different purpose from the course introduction video and instructional videos.

One might ask whether instructor introductory videos are created specifically for each course section and offering or are reused. This decision depends upon the instructor. The advantage of an asynchronous video which can be reused "…across multiple courses gives the advantage of not having to create multiple or last-minute videos" (How to Create Instructor and Course Introduction Videos, p. 2).

Statement of the Problem

Video is a commonly used format in the growing realm of online education, and it has nearly become taken for granted as a tool for pedagogy and building instructor presence. Yet, scholars still have much to uncover with student expectations and perceptions of the effectiveness of varying types of video, so instructors can maximize their use of this medium. In particular, there is a paucity of research on the purpose, development, and evaluation of instructor introduction videos.

Van Merriënboer (2001) lamented that little is known about the optimal combination of audio, screen texts, and illustrations in images or video (Koumi, 2006, p. 194). Researchers have since conducted a bevy of surveys on multimedia in online learning, but the instructor introductory video often has not been separated out. After their pilot examining asynchronous video in online classes, Griffiths and Graham (2009) recommend that the asynchronous video communications be further tested and studied in other contexts (p. 74).

This study was needed to address the questions left unanswered by previous literature, namely how teaching and social presence can be initiated by the instructor introductory video and which characteristics of introductory videos optimize students' perceptions of teaching and social presence.

Purpose of this study

To summarize, teaching and social presence are essential elements in online instruction for student engagement and learning. Instructors face challenges in initiating their presence in online learning contexts, and they strive to create connection to ameliorate students' potential sense of isolation, which can hinder their learning. An instructor introductory video offers educators an opportunity to initiate the students' sense of teaching and social presence. Without adequate understanding of how students are perceiving their instructor through instructor introductory videos, a vital opportunity to initiate instructor presence may be squandered.

This study expands the current understanding of teaching and social presence in online courses by homing in on introductory videos as a particularly ripe moment to engage students and cultivate presence from the beginning of the online course. Through quantitative analysis of students' expectations of course introductions and their perceptions of instructors through introductory videos, this study sought to identify which characteristics of the introductory video contribute positively to students' sense of teaching and social presence.

Research Questions

This study addresses the following research questions:

1. Which characteristics of students are related to their expectations of online instructors' qualities?
2. Which characteristics of students are related to their preferences regarding online course video introductions?
3. Which characteristics of online course video introductions are associated with students' perceptions of the teaching and social presence of the instructor?

Significance of the Study

Thus, instructor introductory videos are a common strategy for enhancing teaching and social presence, which are key for student engagement and indirectly, learning. Observation of the influence of characteristics of these types of videos upon students' perceptions of their instructors' teaching and social presence can yield meaningful academic and practical benefits.

Academic significance. The examination of student expectations of their instructor's presence in an online context is imperative; insight into student expectations and perceptions can contribute to understanding of teaching and social presence's role in learning and how teaching and social presence are initiated in an online course.

Practical significance. Consequently, educators and instructional designers need to know which elements of instructor introductory videos make them most effective in influencing students' positive perceptions of their instructor's teaching and social presence. This study can potentially provide practical guidance to instructors developing introductory videos for the mass of online courses currently being offered and in-development, so instructors can maximize their presence online to the benefit of their students.

CHAPTER TWO: LITERATURE REVIEW

The effects of the characteristics of an instructor introductory video upon students' perceptions of their online instructor's teaching and social presence is not yet fully understood. However, preceding literature related to this topic provides enlightening context and necessary insight upon which to build this study. The following literature review is organized by providing a brief review of studies related to the framework for teaching and social presence, leveraging educational multimedia for enhancing presence, and finally characteristics of videos which pertain to student perceptions. This review attempts to identify gaps in the knowledge of characteristics of videos especially so as to unveil the need for variables of focus for this study and future studies.

Additionally, this review is intentionally comprised of primarily empirical studies. Certainly insightful *a priori* literature exists and may provide useful ideation of further directions to pursue for study in this area, but the decision to limit the review to *a posteriori* studies was made to share what is currently known and has been tested.

Framework for Teaching and Social Presence

The instructor-student connection in online courses is vital for learning. One of the preeminent frameworks for deconstructing the elements of this connection and visualizing the shared space between those elements is the Community of Inquiry model, or CoI, proposed by Garrison, Anderson, and Archer (2000). The following figure represents a visualization of this model and depicts how social presence, cognitive presence, and teaching presence interlink and overlap with one another to provide the foundation for an educational experience. These types of presence can be designed in an online course to generate interaction between the students, instructor, and instructional content (Arbaugh, 2007; Swan, 2003; Anderson, Rourke, Garrison, & Archer, 2001).

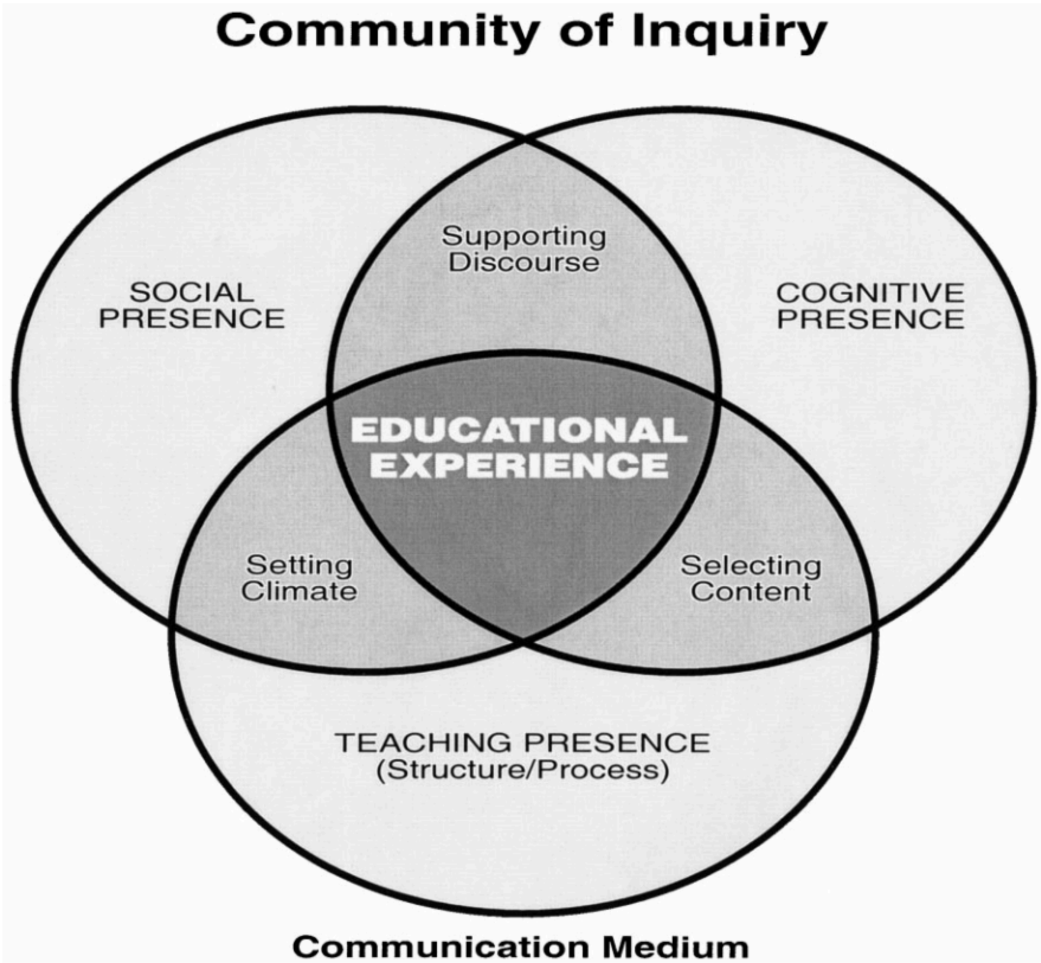

Figure 2. Elements of an Educational Experience. Garrison, Anderson, & Archer, 1999, p. 88.

An extensive body of literature elaborating on this framework exists both for face-to-face and online courses. As a brief primer, the three types of presence are interrelated. Cognitive presence, as described originally by the authors, is "the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication" (Garrison, Anderson, & Archer, 1999, p. 89).

Teaching presence refers to the instructor's role in the online learning environment. The authors describe it as "the design, facilitation, and direction of [student] cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Anderson, Rourke, Garrison, & Archer, 2001). Ling (2007) states that teaching presence in an online learning environment is "regarded as main responsibility of the teacher" (p. 155). This statement is controversial; each element of the model is vital for an ideal online learning environment. Regardless of the hierarchy of the types of presence, the instructor is responsible for initiating each of these types of presence, and the students are expected to participate in response.

The next type of presence, social presence, is defined by the authors as "the ability of participants in the Community of Inquiry to project their personal characteristics into the community, thereby presenting themselves to the other participants as 'real people'" (Garrison, Anderson, & Archer, 1999, p. 89).

Campbell and Cleveland (2005) contribute a much-needed perspective on the CoI model: the students' view. They conclude that students' emotion is an integral, indispensable ingredient for learning processes (Campbell & Cleveland, 2005, p. 1). As such, examining how emotion from instructors is managed and expressed through the instructor introductory video will be a point of interest.

Where and how does the instructor introductory video fit into this framework? This dissertation takes the position that the instructor introductory video, with its dual purpose of setting the climate for personally meaningful learning outcomes and initiating the social community, fits into the space between social presence and teaching presence.

A series of subscales have been developed to operationalize the framework and evaluate the types of presence more quantitatively. Shea, Swan, Li, & Pickett (2005) use a modified CoI survey to measure the student perception of teaching presence and online community. Using this survey, many predictive relationships have been confirmed, linking instructor teaching presence with online student learning, cognition, motivation (Baker, 2010). Some studies have observed the social presence does not significantly predict student satisfaction (Leong, 2011; Joo, Lim, & Kim, 2001), and yet other studies have shown students rate affective social presence most highly among desirable faculty behaviors (Meyer, Bruwelheide, & Poulin, 2009). The literature is immensely varied on the correlation between social presence and various student outcomes. As Pollard, Minor, and Swanson (2014) succinctly note, “A need for an examination of instructor social presence still exists” (p. 2).

Part of the variation is due to the lack of agreement on how to operationalize social presence. The CoI survey subscale questions pertaining to social presence addresses only the students’ perception of his or her own role and peers; it is the position of this dissertation that the subscale does not adequately address the role of the instructor. Other researchers have called for improved operationalization of the social presence construct (Kreijns, Van Acker, & Vermeulen, 2014). A main driver for reviewing how social presence can be measured is that it may actually be two constructs rather than one. Short et al. (1976) is credited with being the first to define social presence, and these authors bifurcated social presence into two: “the degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationship” (p. 65). Similarly, Swan and Shih (2005) distinguished between student social presence and instructor social presence as separate, though related, constructs; this study is primarily concerned with instructor social presence. Rovai (2002) developed a scale to measure students’ sense of classroom community, and yet this scale primarily covers the second definition of social presence, which is the interpersonal relationships.

The instructor introductory video falls within the first category of social presence as defined by Short et al. (1967), as students are evaluating the degree of salience of the instructor through the video medium. The video conveys the instructor’s social presence, a fact which is supported by Short et al. (1976)'s argument that media attributes affect the degree of social presence (p. 65).

As such, a method to examine social presence quantitatively is needed for this study. This study relies upon the scale used by Widmeyer and Loy (1988), which will be incorporated to serve as a method to operationalize social presence by examining students' perceptions of the warm/cold effect. The warm/cold effect has relevance to the students' perception of social presence, as Kelley (1950) found students who perceived instructors with a central quality he called "warmth" to rank these instructors more highly with other positive attributes.

Leveraging Multimedia for Teaching and Social Presence

As established in the Introduction, leveraging multimedia to enhance teaching and social presence is clearly a common method in online courses. Evaluating the effectiveness of the use of video for these purposes is less clear. A variety of frameworks and guidelines have emerged in the literature in recent years in an attempt to define and standardize the use of video in online courses, though much more work needs to be done.

Evaluating video effectiveness should vary by type of video. Student evaluations of videos may be misleading, as students may struggle to differentiate between engagement and learning (Hansch, 2015; Muller, Bewes, Sharma, & Reimann, 2008). Koumi (2014) provides a screenwriting framework of micro-level design principles for pedagogically effective video design. Others have taken more functional approaches for evaluation, such as analyzing video analytics such as views, play-through rate, and downloads (Hibbert, 2014).

Many have viewed video through the lens of the Community of Inquiry model, and most have homed in on the teaching presence portion of the model (Lowenthal & Parscal, 2008; Jones, Naugle, & Kollof, 2008). As an example, Lazarevic (2011) studied the role of introductory videos in online instruction in forming students' perceptions of teaching presence, and using a subscale based on the Community of Inquiry model's teaching presence, his study revealed that the introductory video had a significant impact upon only the facilitation component of teaching presence (p. 95). Social presence was not evaluated in the scope of the research design of that particular study and thus remains to be seen whether the introductory video has a significant effect in that area, which this study partially addresses. Other studies have approached this question in other ways; for example, Motteram & Forrester (2005) at Manchester University in the U.K. conducted a qualitative study and found that it "facilitated the distance void between tutors and peers" (p. 285).

It is reasonable to conclude that evaluating video effectiveness cannot be a one-size-fits-all; rather, the approach for evaluation should be tied to the purpose of the videos. With respect to the instructor introductory video, the evaluation should connect to the purported intent of the video, which is to introduce the instructor in such a way as to initiate social presence, and thus the survey for this study states questions in a manner consistent with the purpose of the video.

Student viewing behavior varies by video purpose. Analyzing the instructor introductory video and questioning the relevance of what studies have found to be true about other types of video is warranted when one considers that students engage differently with different types of videos. Guo, Kim, & Rubin (2014) examined lecture videos and tutorials and found that student viewing behavior varied according to the purpose and intent of the video; for example, students watch 2-3 minutes of a tutorial then return to re-watch tutorials. For lectures they tend to watch the lecture once through. The authors recommend that instructors use different production strategies for lectures and tutorials, since students use them in different ways. Extrapolating from that recommendation, likewise we should examine student expectations and behavior related to instructor introduction videos to determine how to optimize them for their purpose. To borrow the authors' descriptions of how students watch videos, I would hypothesize that student viewing of instructor introduction videos is more continuous and a one-time experience, given that students likely watch the video at the start of the course then proceed with their course activities, and no assessments typically ask them to revisit the instructor introduction video.

Characteristics of Video Pertaining to Student Perceptions

A review of extant literature on empirical studies which identify characteristics of video in online courses which may influence student perceptions of their instructors and courses resulted in three primary categories emerging: instructor physical presence, instructor verbal presence, and video production style and quality. As aforementioned, the intent of this review is to identify empirical studies as much as possible and outline what is known about characteristics of videos affecting student perceptions.

An assumption undergirding the inclusion of the following studies is that there is a relationship between introductory videos and student perceptions of instructor presence. One study supporting that assumption is a dissertation from 2011; as part of the study, the researcher analyzed two groups of students. One group received video-based announcements while the other group received text-based announcements. Afterwards, students responded to a survey on the role of their instructor, specifically on the teaching presence, which is another critical element of the aforementioned Community of Inquiry model. The researcher concluded, "Students who received the video-based announcements perceived a higher level of online coursework facilitation throughout the semester" (Lazarevic, 2011, p. 138). As such, a significant relationship was found between the delivery format and student perception of one element of instructor presence. The following studies are included because they build upon the notion that the relationship between the video format and student perception is significant, and they deconstruct characteristics of the video format in various ways.

Another core construct which supports the relevance of studies related to instructor physical and verbal presence in videos is the theory of instructor immediacy. First introduced in 1969 by Mehrabian, the concept of immediacy refers to a set of measures relating to a communicator's attitude towards his or her audience, and Mehrabian provides criteria for scoring categories of movement, facial expression, and verbalization (p. 204). This theory of affective learning expresses that instructor verbal and nonverbal behaviors positively predict online student attitudes and instructional outcomes (Rodríguez, Plax, & Kearney, 2009; Richardson & Swan, 2003; Rovai, 2000). The inherent goal of this theory in regards to distance learning is to humanize the online learning experience (Ducharme, 2013, p. 37; Richardson & Swan, 2003). Jones, Kolloff, and Kolloff (2008) found that using video in online learning is not only important for enhancing the level of teaching presence but also for establishing teacher immediacy. These two constructs have linkages in face-to-face and online learning contexts.

As such, the first two dimensions of characteristics of instructor introductory videos align with this theory of instructor immediacy.

Physical presence

The following studies are grouped together because they pertain to the instructor's physical presence within video.

As video combines the audio and visual senses, the instructor's physical presence is a major component in most instructor introductory videos. Literature from face-to-face classes has addressed various perspectives on the influence of an instructor's physical presence upon student perceptions. In 1950, Kelley found that "student subjects had greater rates of interaction with a warm stimulus person posing as a guest lecturer," and thus coined the phrase "warm/cold effect." In a follow-up study nearly forty years later, Widmeyer and Loy (1989) replicated the study and likewise found that "student subjects gave higher ratings to indices of teaching ability to a warm stimulus person posing as a guest lecturer" (Widmeyer & Loy, 1988, p. 120). This warm stimulus in both studies was operationalized by informing subjects the lecturer was a warm person prior to even meeting or seeing the person. This study examines this construct in another way, which is to have the instructor on video engage in warm behaviors, such as smiling and gesturing.

Mehrabian (1969) provides a detailed summary of nonverbal behaviors based on previous experiments. He categorizes them into scoring criteria for immediacy cues, movements, facial expressions, and verbalizations (p. 204, 206). See Appendix for full scoring criteria, which was useful to me in setting up the videos embedded within the survey for this study.

Appearance, especially attractiveness, is a complex aspect of instructor physical presence. Lombardo and Tocci (1979) asked students to rate photos of instructors according to warmth, sensitivity, ability to communicate, knowledge of subject matter, and superiority. They found students attribute more positive characteristics to instructors based on perceived attractiveness and whether the subject taught is perceived to be more feminine or masculine. Additionally, Lombardo & Tocci (1979) found that "unattractive instructors were thought to be harder working their their [sic] attractive counterparts (F=5.26, p<.05)" (p.494). Both male and female subjects were found to be biased towards more attractive instructors. Also, the subjects rated the attractive individuals as more superior instructors, more sensitive, warmer, and better communicators (Lombardo & Tocci, 1979, p. 495). To attempt to account for this bias, the videos created for the purpose of this study featured the same instructor.

Body language, facial expressions, and other visual cues by means of physical presence have long been an area of research interest due to the nature of online courses. Often researchers warn about the loss of student engagement without these cues and due to the temporal delays of online communication (Jones, Naugle, & Kolloff, 2008; Russo & Campbell, 2004). By incorporating more instructor immediacy practices, such as smiles, head nods, use of inclusive language, and eye contact, educators can improve student motivation which indirectly improves learning (Christensen & Menzel, 1998; Christophel, 1990).

Verbal presence

The following studies are grouped together because they pertain to the instructor's verbal presence within video.

The dimension of instructor verbal presence presents countless directions to explore. Researchers have identified verbal phrases, tones, and even specific statements which affect student engagement. The element of voice can have a profound impact upon students' perceptions of instructors' teaching presence, especially when audio is used in delivering feedback (Ice, Curtis, Phillips, & Wells, 2007; Belfer & Morgan, 2005). Hackman and Walker (1990) combined a nonverbal and verbal immediacy scale to assess immediacy as they investigated the effects of system design and social presence through teacher immediacy on learning and satisfaction in a televised classroom. They operationalized instructor verbal immediacy behaviors such as "using personal examples, asking questions, using humor, initiating discussion" and found the use of these can strongly affect student learning and satisfaction positively (Hackman & Walker, 1990, p. 200).

Student-oriented, empathetic language has also been an area of interest for researchers in this area. Ducharme (2013) gives guidelines for building online community, facilitating instruction, and humanizing the online course. This type of language was described as "conversational" by Hibbert (2014), who also expanded the content of the language to encourage the use of humor and past experiences. An extensive body of literature on the use of humor in education is summarized by Banas, Dunbar, Rodriguez, and Liu (2011), who state the following:

> *"The use of positive, nonaggressive humor has been associated with a more interesting and relaxed learning environment, higher instructor evaluations, greater perceived motivation to learn, and enjoyment of the course" "the use of negative or aggressive humor aimed at students has been associated with many of the opposite outcomes, including a more anxious and uncomfortable learning environment, lower evaluations of instructors, increased student distraction, and less enjoyment of class" (p. 137)*

This is supported by earlier correlational research by Wanzer & Frymier (1999), who found a positive association between instructors' humor orientation and student perceptions of affecting learning and learning behaviors. Again, as the focus of this study is on student perceptions, the use of humor in the video scripts may likely have relevance in identifying characteristics of instructor introductory videos which are associated with student perceptions of instructor presence.

Another element of instructor verbal presence is speaking rate, or in the way it is often operationalized, which is words per minute. Guo, Kim, and Rubin (2014) found that students engaged more with videos where instructors spoke faster. Their mean was 156 words per minute, with a standard deviation of 31 words per minute. They state, "within a particular length range, engagement usually increases (up to 2x) with speaking rate" (Guo, Kim, & Rubin, 2014, p. 7). They share that some practitioners recommend 160 words per minute as the optimum speaking rate, but this is for live presentations, and in online courses videos featuring faster-speaking instructors were more engaging for students. 187 words per minute was the range the authors found to be more engaging. Their hypothesis for why this might be true is that fast-speaking instructors may be conveying more "energy and enthusiasm." For this study, each video script is approximately 200 words and is spoken over approximately 1.5 minutes in order for the speech rate will be held as constant as possible.

Video production

The following studies are grouped together because they pertain to the way the video was planned and developed.

Video production style is defined as “the main method of visual organization that is employed to realize a video’s goals and achieve specific results when the video is viewed.” (Hansch, 2015, p. 20).

As aforementioned, there is a multitude of production styles for videos used in educational contexts. Hansch (2015) provides a typology of video production styles. Importantly, Hansch emphasizes that production style is independent of production value, which is good news for instructors with challenged budgets. Hansch (2015) states, “…we encourage an approach that makes use of existing resources and prioritizes learning and pedagogy over glossy, high production value videos” (p. 12). The author does state, however, that students do state they prefer high production value.

The purpose of videos ought to inform the production style, as different production styles evoke differing affordances (Hansch, 2015). What is the ideal production style for instructor introductory videos to enhance teaching and social presence, or is there a singular ideal approach? Many videos may also incorporate multiple production styles within one video, though the majority exhibit a dominant style.

Researchers have called specifically for a closer look at video production styles’ influence upon student perception:

> *“Also, it would be intriguing to explore whether or not there would be a difference in the level of students" perception of teaching*

> *presence if further research interventions went beyond the standard "talking- head" approach in shooting video clips. Further intervention may use video in a way that better reflects real instructional settings (e.g., video that shows the instructor in the entomology laboratory or in the office) and personalities of the instructors." (Lazarevic, 2011, p. 155-156)*

As yet another gap, the question remains as to how to evaluate whether the choice of video production style was most effective for the purpose of the video. How might this evaluation be accomplished and measured? Considerations such as the financial investment and resources at hand might be practical, but pedagogical considerations such as the style's level of distraction from the content or alignment with learning objectives are also highly important. Guo, Kim, and Rubin (2014) chose to examine how video production style affects student engagement by tracking the video retention rate. They used their own typology, as the Hansch (2015) article had not been published yet, and so limited their video production style types to slides, code, Khan-style, classroom, studio, and office desk. They determined that the talking head is more engaging than Khan-style tutorials which were more engaging than slides or code screencasts, and like Hansch (2015) reiterates, high production value may not matter. However, research design challenges within their study such as showing videos from multiple disciplines with differing types of content may confound how much of the video retention rate is due to production style versus those other factors. This study holds elements such as discipline constant so as to avoid the same lurking variable bias. The authors also point out a particular limitation which will also pertain to this study: we do not know if students are actively watching the video or playing it in the video while performing other tasks or even walking away from the computer.

Length

Length, or duration, is another key characteristic of video format when observing student perception and behavior. The majority of studies have found an average viewing time of three to four minutes to have influenced instructional design and strategic production and resulted in highest engagement (Hibbert, 2014; Guo, Kim, & Rubin, 2014). Longer videos can certainly be created, but the prevailing recommendation is to edit those videos into smaller clips. Guo, Kim, and Rubin (2014) speculate that shorter videos tend to be more carefully planned and thus present more high-quality instructional content, but they state that they do not have data available to confirm this hypothesis (p. 4). It remains to be seen whether particular populations of students vary in their ideal length of engagement, whether other types of video differ in this engagement period, and whether techniques such as insertion of interactive activities would increase this engagement time; this is yet another gap.

In light of these conclusions regarding length, this study presents participants with introductory videos all less than three minutes.

Conclusion and Gaps

In conclusion, the brief literature review scaffolds the way for this study by providing a primer on social presence, how multimedia has been used to develop and enhance social presence in online courses, and three dimensions of the relevant characteristics of the introductory video. The trend in the literature seems to be a focus on instructional videos more so than course introduction videos or instructor introduction videos; this is unsurprising as instructional videos far outweigh the other types in number, and yet the instructor introduction video deserves an examination as well due to the critical role it plays at the start of the course.

This review reveals the following gaps and questions yet to be empirically addressed:

- If students’ emotion is a central factor in learning processes according to the CoI model, how are instructors’ emotions best expressed and managed, especially through the instructor introductory video?
- To what degree does the instructor introductory video set the climate for social presence within a course?
- Does seeing the instructor within a video result in students’ increased perception of instructor immediacy?
- Does a more expressive approach, using smiling and gesturing and other body language associated with warmth result in students’ increased perception of the instructor’s social presence?
- Do personal anecdotes or empathetic language result in students’ increased perception of the instructor’s social presence?
- Why is the length of video engagement hovering around three to four minutes, and does this differ by production style or purpose of video or by student population characteristics?
- How can instructor introductory videos be evaluated in terms of effectiveness? What would standards for this type of video entail?

As demonstrated by the list above, which represents only a portion of the myriad questions raised by the literature review, many other critical research questions could be explored. In order to be feasible, the focus of this study is limited to selected characteristics within the dimensions of instructor physical presence, instructor verbal presence, and video production styles. Future studies have ample opportunity to address the underexplored variables in these dimensions. No one literature review could encompass the vast body of literature pertaining to the topic of effective use of video in online learning to develop and enhance social presence; this study merely highlights core literature to advance understanding of key characteristics of interest.

As other scholars and practitioners contribute together to the understanding of this vital area, further theories and guidelines will emerge to aid educators in adapting evidence-based practices to their own circumstances efficiently and effectively. As Hansch (2015) concluded, “Finally, we should encourage the sharing of experiences amongst practitioners in this field, especially with regards to creative approaches to video production and use, such as lightweight production techniques, or synchronous co-watching” (p. 15).

The following table is a summary of research findings related to educational videos as described earlier in this chapter.

Table 1. Summary of research findings related to educational videos.

Relevance	**Study**	**Finding**
Evaluating educational videos	Koumi (2014)	Screenwriting framework of micro-level principles for pedagogically effective video design
Evaluating educational videos	Hibbert (2014)	Analyzing video analytics through views, play-through rate, and downloads

Table 2. Summary of research findings related to educational videos (continued).

Relevance	**Study**	**Finding**
Social and teaching purpose of video in online courses	Lowenthal & Parscal (2008); Jones, Naugle, & Kolloff (2008)	Viewed video through the CoI model
Social and teaching purpose of video in online courses	Lazarevic (2011)	Studied the role of video announcements in online instruction in forming students' perceptions of teaching presence; revealed video had a significant impact upon only the facilitation component of teaching presence
Social and teaching purpose of video in online courses	Motteram & Forrester (2005)	Qualitative study found video facilitated distance voice between tutors and peers
Social and teaching purpose of video in online courses	Guo, Kim, & Rubin (2014)	Examined lecture videos and tutorials and found student viewing behavior varies according to purpose and intent of video
Social and teaching purpose of video in online courses	Jones, Kolloff, & Kolloff (2008)	Using video in online learning enhances teaching presence and establishes teacher immediacy

Table 1. Summary of research findings related to educational videos (continued).

Relevance	**Study**	**Finding**
Physical techniques for increasing student engagement through video	Kelley (1950)	Student subjects rated interactions with warm stimulus person posing as guest lecturer in-person higher than cold stimulus – “warm/cold effect”
Physical techniques for increasing student engagement through video	Widmeyer & Loy (1988)	Student subjects rated teaching ability higher for warm stimulus person posing as guest lecturer in-person
Biases	Lombardo & Tocci (1979)	Students rated unattractive instructors as harder working and attractive instructors as more warm, sensitive, able to communicate, knowledgeable, and superior
Physical techniques for increasing student engagement through video	Jones, Naugle, & Kolloff (2008); Russo & Campbell (2004)	Student engagement declines without body language, facial expressions, and other physical cues in online communication

Table 1. Summary of research findings related to educational videos (continued).

Relevance	Study	Finding
Physical techniques for increasing student engagement through video	Christensen & Menzel (1998); Christophel (1990)	Educators can improve student motivation through teacher immediacy practices such as smiles, nods, inclusive language, and eye contact.
Verbal techniques for increasing student engagement through video	Ice, Curtis, Phillips, & Wells (2007); Belfer & Morgan (2005)	Voice can significantly impact students' perceptions of instructor teaching presence, especially when delivering feedback.
Verbal techniques for increasing student engagement through video	Hackman & Walker (1990)	Combined nonverbal and verbal immediacy scale to assess immediacy in televised class and found using personal examples, asking questions, using humor, and initiating discussion can affect student learning and satisfaction.
Verbal techniques for increasing student engagement through video	Ducharme (2013)	Provides guidelines for building online community

Table 1. Summary of research findings related to educational videos (continued).

Relevance	**Study**	**Finding**
Verbal techniques for increasing student engagement through video	Banas, Dunbar, Rodriguez & Liu (2011); Wanzer & Frymier (1990)	Use of positive, nonaggressive humor can result in higher instructor evaluations and student perceptions of learning
Verbal techniques for increasing student engagement through video	Guo, Kim, & Rubin (2014)	Students engage more with videos where instructors speak more quickly, such as 187 words per minute. Speaking rate does affect attention retention.
Production style	Hansch (2015)	Video production style typology presented for how video can be used in educational environments. Insights include that the purpose of videos should inform the production style, and style is independent of value.
Production style	Hibbert (2014); Guo, Kim, & Rubin (2014)	3-4 minutes in length results in highest engagement but requires strategic production and instructional design.

CHAPTER THREE: RESEARCH METHOD

This chapter presents the methods used within the study. I will reiterate the purpose and research questions, describe the research design and population, outline the methods used for sampling, describe the instrumentation, the procedures for data collection and analysis, and the reliability and validity considerations.

Purpose of the Study

The main purpose of this study was to examine the association between student characteristics and their expectations of online instructors and introductions, and the association between selected characteristics of an introductory video from the physical, verbal, and video production dimensions and students' perceptions of the instructor's teaching and social presence.

Research Questions

Three research questions were posed:

1. Which characteristics of students are related to their expectations of online instructors' qualities?
2. Which characteristics of students are related to their preferences regarding online course video introductions?
3. Which characteristics of online course video introductions are associated with students' perceptions of the teaching and social presence of the instructor?

Research Hypotheses

For Question 1:

Null Hypothesis: There will be no significant differences in students' expectations of online instructors' qualities associated with the student characteristics of experience with online courses, gender type, age, university status, English as a first language status, or major field of study.

Prediction: Students with more experience with online courses will expect different instructor qualities than students with less experience with online courses. Other student characteristics will have non-significant results.

For Question 2:

Null Hypothesis: There will be no significant differences in students' preferences of online course video introductions associated with the student characteristic of experience with online courses, experience with online courses, gender type, age, university status, English as a first language status, or major field of study.

Prediction: Students with more experience with online courses will expect different online course video introduction qualities than students with less experience with online courses. Other student characteristics will have non-significant results.

For Question 3:

Null Hypothesis: There will be no significant differences in students' perceptions of online instructors' teaching and social presence associated with online course video introduction characteristics.

Predictions: Online course video introductions with the instructor physically present, using expressive body language, will result in the most positive perceptions of teaching presence. Online course video introductions with the instructor using the most student-oriented scripted language will result in positive perceptions of instructor approachability and care for students' learning, whereas the instructor-oriented scripted language will result in positive perceptions of instructor will result in more positive perceptions of instructor knowledgeability and self-assurance. Online course video introductions with the instructor speaking to students in a more casual, relaxed style will result in the most positive perceptions of teaching presence in terms of good-naturedness, sociability, and pleasantness, and possibly higher rankings of interest. Online course video introductions with the instructor in a studio environment will result in higher rankings of instructor formality.

Research Design

This study used a quantitative design, which involved collecting data from participants through an online survey. After reading the description of the study and its potential benefits and rights, students first indicated their informed consent on the online consent form. If students gave consent, the next page of the survey presented questions about the student's background and then the sets of videos and follow-up questions. If participants did not give consent or responded that they were not a student, the survey concluded by redirecting to the final page.

Population and Sample

The focus of this study is on higher education. Therefore the sampled population included students enrolled in higher education online courses either as undergraduate students, graduate students, or non-degree seeking students. This sample was distributed to multiple universities, including UNC-Greensboro, NC State University, the University of Mississippi, Auburn University, High Point University, Hodges University, Clemson University, the University of Alabama-Birmingham, and other institutions, through email, word-of-mouth, and social media.

The intent of this study is to observe how students in higher education respond to instructors in video introductions to online courses, regardless of which institution the students are enrolled in, and to determine whether characteristics such as age, gender, number of online courses taken, English as a primary language, and university status as an undergraduate or graduate student are influential factors in expectations for instructor qualities and preferences for online introduction formats. As such, a broad variety of students is preferred.

The videos were closed captioned in order to aid students with auditory impairments. It is not a requirement for students to be enrolled in online courses presently or in the past. They must have an Internet-enabled device and Internet access.

It is expected to have over 60 participants for the study. More respondents are of course welcome, as the larger the sample size the more stable and reliable the results will be. My goal was to include participants who represent a variety of fields of study, age, gender, and experience with online courses. Findings from this population might not be generalizable to the student population across the U.S. The sample was limited to the volunteers. No financial compensation was provided as part of this study.

Instrumentation

Surveys. Quantitative and qualitative data was collected from the participants' anonymous responses to the online survey. I created an online survey using the web-based survey program Qualtrics and distributed the survey via social media, email, and through submission to the professional organization AECT. Through posting to Facebook.com and emailing instructors and graduate students at NC State University and the University of North Carolina at Greensboro, the survey was distributed to Hodges University, Auburn University, the University of Mississippi, multiple institutions in New York state, Clemson University, the University of Alabama-Birmingham, Barry University, and others, primarily on the eastern seaboard of the U.S. The survey actively collected responses for 13 days, from September 16-28, 2018.

Certain demographic pre-survey questions are taken from the National Center for Education Statistics' The National Postsecondary Student Aid Study (NPSAS), which examines the characteristics of students in postsecondary education.

To measure students' perception of teaching presence, I used a portion of the Teaching Presence Survey, one of the three subscales of the Community of Inquiry. This survey was developed, tested, and validated by Ben Arbaugh, Marti Cleveland-Innes, Sebastian Diaz, D. Randy Garrison, Phil Ice, Jennifer Richardson, Peter Shea, and Karen Swan, to quantify the Community of Inquiry model. The CoI survey in its entirety assesses teaching presence, social presence, and cognitive presence, as students self-report their perspective. The survey includes 34 questions, each on a five-point Likert scale. This study relied upon the CoI Teaching Presence subscale, specifically in the area of design and organization, which includes four questions and two questions from facilitation. These questions were selected as they can be measured at the start of the course when the introductory video is shown, whereas the other questions refer to interactions which necessarily would occur during a course, such as providing feedback. The six questions are listed below:

- The instructor clearly communicated important course topics.
- The instructor clearly communicated important course goals.
- The instructor provided clear instructions on how to participate in course learning activities.
- The instructor clearly communicated important due dates/time frames for learning activities.
- The instructor encouraged course participants to explore new concepts in this course.

- Instructor actions reinforced the development of a sense of community among course participants.

To assess students' sense of their instructor's social presence, with a focus on the warm/cold effect, I have selected items from the same scale used by Widmeyer and Loy (1988) which was modified from Kelley's (1950) original study on this effect. This scale evaluates students' perceptions of personality and teaching ability. As discussed earlier, Widmeyer and Loy (1988) replicated Kelley's 1950 study, and their results confirmed that "warm/cold manipulation influences perceptions of a stimulus person's teaching ability" (p. 120). In sharing the implications of these findings, Widmeyer and Loy (1988) state "Student ratings of professors can lead to student expectations for these instructors" (p. 120). As such, this study examines whether there is a significant relationship between students' perceptions of instructors as warm or cold and their expectations of instructors.

Independent and Dependent Variables. The variables within this study include the eight video approaches as independent variables, described in detail within this section. The dependent variables include two measures of teaching presence and one measure of social presence. These variables will be generated based on the means of student responses to Likert-scale type questions following each video.

The eight videos within the survey will be developed with UNC-Greensboro's Digital Media Commons staff and resources. The videos all feature the same instructor so as to hold constant the student bias towards race, gender, attractiveness, accent, and other characteristics between the videos. The video scripts were based upon actual scripts used in online educational leadership courses at UNCG Online. The video scripts were written to represent an instructor introductory video for a fictitious course; again, all videos were developed to be for the same fictitious course, so as to hold constant the student bias towards various disciplines and course levels. As referenced in the literature review, students can exhibit biases towards instructors based on gender and association of gender with certain disciplines. By having the same instructor and same discipline for all of the videos for this study, these factors should not introduce further bias between videos other than by subject.

The videos will vary according to the three dimensions of variables of interest (instructor physical presence, instructor verbal presence, and video quality). There are eight videos in total. The following table describes each video and how it differs from the others in the instructor's level of physical presence, to whom the script is oriented, and the production type.

Table 2. Videos and Variables.

Video	**Instructor physical presence**	**Script orientation**	**Production Type**
Video 1	Active body language; frequent gesturing and smiling.	Student-oriented	Green screen studio
Video 2	Stoic facial expression; still body language.	Student-oriented	Green screen studio
Video 3	Not visible.	Student-oriented	PowerPoint slides recording
Video 4	Stoic facial expression; still body language.	Instructor-oriented, with one personal note	Green screen studio
Video 5	Stoic facial expression; still body language.	Course-oriented	Green screen studio

Table 2. Videos and Variables (continued).

Video	Instructor physical presence	Script orientation	Production Type
Video 6	Relaxed. Smiling but mostly still body language.	Course-oriented, with one personal note	Green screen studio
Video 7	Relaxed. Smiling but mostly still body language.	Course-oriented, with one personal note	Talking head, residential setting
Video 8	Relaxed. Smiling but mostly still body language.	Course-oriented, with one personal note	Conversation style with two individuals, green screen studio

Video Set #1: Instructor Physical Presence

Constants: All using same script, all shot in a professional studio

(1) video with instructor visible and using active body language, including noticeable gestures and frequent smiles.

(2) video with instructor visible but remaining very still and stoic.

(3) video with no instructor visible.

In the first set of videos, the videos vary by the first dimension: instructor physical presence. The videos use the same script and are all shot and edited professionally in a studio.

The first video shows the instructor physically visible on-screen from the torso to the head, including the arms. In this video, the instructor gestures, smiles, and displays relaxed and demonstrative body language during the video.

In the second video, the instructor is again physically visible on-screen from the torso to the head, including the arms. In this video, the instructor stands still and remains stoic, abstaining from smiling or gesturing any more than minimally.

In the third video, the instructor is not physically visible on-screen. His voice can be heard as text appears on-screen to reinforce the key points of his narration.

Video Set #2: Instructor Verbal Presence

Constants: Instructor is visible, standing still and remaining stoic, all edited professionally.

(4) instructor using instructor-oriented language, emphasizing his professional accomplishments and relevant experiences.

(5) instructor using course-oriented language, using no personal examples nor empathetic language, only straightforward factual statements regarding the course.

In the second set of videos, the dimension of instructor verbal presence is the variable of focus. Each video has the same instructor physically visible. The instructor makes eye contact but is physically still and facially stoic in all videos. In this set, the script varies (See Appendix for scripts).

In the first set of videos video, the instructor used empathetic language to convey a sense of caring for the students. Repeatedly the instructor stated he cares about the students and their learning, and he orients the script to focus on the students' interests and motivations. He emphasizes the value of this course to the students.

In this set of videos, the script changes.

In video 4, the instructor expresses a teacher-centric approach to the course, sharing his experience and background. He shares at least one personal anecdote pertinent to the course. He emphasizes his credibility and the value of this course to the field and makes no mention of the students' role in the course.

In video 5, the instructor shares a factual approach to the course. He abstains from empathetic language and personal anecdotes. He simply delivers the information about the course and welcomes the students matter-of-factly without any information about himself or overtly empathetic statements about the students. He speaks to the student as "the student" rather than as "you."

Video Set #3: Video Production Style

Constants: Instructor is visible, script is as similar as possible.

(6) Talking Head Style: video is casually created in a residential setting, no special editing or music.

(7) Green Screen Style: Video is professionally created in a studio (instructor is clearly in a studio against a green screen backdrop which is edited out for a digitized background, with edited camera angles).

(8) Conversation Style: video features a dialogue between two people in a studio setting.

In the third set of videos, the instructor is visible, and the script is as similar as possible given the differing production styles. The video production style varies. In all three the instructor is seated and shown from the torso up.

In the first video, the instructor is physically visible against a green screen, chroma-key background, which is professionally edited to be replaced with a background image.

In the second video, the instructor is in a residential setting, with regular lighting. The background shows a piece of furniture and painted wall.

In the third video, the instructor is facing a second person in a studio setting, with a green screen background replaced with an illustrated background. The script varies slightly for this video in order to incorporate a second person, but it remains as close as possible to the first two videos in this set.

Data Collection

Prior to the study, I developed a consent form, survey questions, eight videos, and description of the study. I submitted the study for approval to the Institutional Review Board (IRB), which approved the study on August 21, 2018. I developed the videos with the aid of the UNC-Greensboro Digital Media Commons team and its resources. I recruited participants through emails, word-of-mouth, and social media describing the study. I also submitted the survey for distribution through the Association for Educational Communications & Technology (AECT), which emailed the study link to its members.

Participants completed an online consent form detailing the study (see Appendix for a copy of the consent form). Upon their agreement, the participants then completed the survey, which began with a set of questions asking about their demographics and their expectations of online instructors and online course introductions. The final sets of questions display a video to the student followed by questions asking the student to rank from 1-7 various teaching and personality characteristics of the instructor. The Qualtrics Randomizer tool was set to randomly display three of the possible eight videos to each participant. The same questions followed each of the videos. Qualtrics reported that it presented each video as evenly as possible. YouTube provided analytics for the average duration each video was watched. This data in this table is useful in showing that for the most part, respondents did watch the majority of each video, and that each video was presented approximately the same amount of times for this study.

Table 3. Qualtrics Video Display Counts and Actual Response Case Count.

	Video1	**Video2**	**Video3**	**Video4**	**Video5**	**Video6**	**Video7**	**Video8**
Qualtrics Reported Video Display Count	82	82	82	82	81	81	82	82
Actual Response Case Count	66	64	63	68	65	66	69	66
YouTube Reported Duration (m:sec)	1:20 (runtime: 1:34)	1:18 (runtime: 1:34)	1:21 (runtime: 1:35)	1:31 (runtime: 1:39)	1:16 (runtime: 1:38)	1:15 (runtime: 1:32)	1:16 (runtime: 1:37)	1:20 (runtime: 1:34)

Video 1, Video 2, Video 3, Video 4, Video 7, and Video 8 were shown 82 times, and Video 5 and Video 6 were shown 81 times. By counting the instances of responses to each video, participants addressed questions for each video also approximately evenly (Video 7 received 69 responses, Video 4 received 68 responses, Video 1, 6, and 8 received 66 responses, Video 5 received 65 responses, Video 2 received 42 responses, Video 3 received 63 responses. The Qualtrics count and the close number of response case counts show that these videos were approximately evenly represented in the sample.

The survey was created in Qualtrics, and responses were stored in Qualtrics. The study protocol was approved by the Institutional Review Board at N.C. State University. Informed consent will be obtained from all study participants prior to data collection.

Data Analysis

To analyze the responses, I first downloaded the raw data in the form of a .csv file to Excel. I treated the data by removing incomplete responses and ineligible responses. Responses were ineligible if participants marked that they were 17 or younger or any status other than graduate student or undergraduate student. I used the Qualtrics Reporting tool to view the descriptive statistics and develop the cross-tabulations. I reverse-coded scales which were in reverse and screened the data for any errors. Then, I using the open source R and R Studio programs to importing the data into R Studio to run chi-square tables, correlations, and the regression analyses. I exported the data as a .csv file from Qualtrics and imported it as a package into R version 3.5.1. for Mac OSX. R is an open source software for statistical analysis. RStudio was used as the open source interface to run the R program.

Descriptive Analysis

In Chapter IV: Results, I provide a summary of the descriptive statistics by conducting a univariate analysis. I report the number of participants and describe the demographics and perceptions of the introductory videos, course, and instructor.

To describe the sample, I provide descriptive statistics, including the Gender (Q3), Age (Q4), University Status (Q5), English as a Primary Language (Q6), Field of Study (Q7), and Experience with Online Courses (Q8), as well as the total number of respondents.

Inferential Analysis.

I reviewed the data in Qualtrics Reporting tool and R Studio for significant age, gender differences, experience with online courses, which may predict student expectations of online instructor qualities. Using R Studio, I then reviewed the data to see if any of the independent variables predict students' perceptions of teaching presence and social presence as measured by the means of the Likert-type scales based upon existing instruments.

I ran the following analyses to address the research questions:

1. Which characteristics of students are related to their expectations of online instructors' qualities?

Statistical analyses from the survey will show whether students of different genders, ages, university statuses (undergraduate vs. graduate), fields of study, and experiences with online courses have trends in their expectations of online instructor qualities. Conducting chi-square tests for the goodness-of-fit will enable me to decide if there are differences between the expected values for these variables and the actual, observed values, indicating an association exists between the variables.

Chi-Squared Tests (categorical independent and dependent variables):

- Gender (Q3) with Expected Instructor Qualities (Q9)
- Age (Q4) with Expected Instructor Qualities (Q9)
- University Status (Q5) with Expected Instructor Qualities (Q9)
- English as a primary language (Q6) with Expected Instructor Qualities (Q9)
- Field of Study (Q7) with Expected Instructor Qualities (Q9)
- Experience with Online Courses (Q8) with Expected Instructor Qualities (Q9)

If any of the expected counts from the contingency tables were less than five or had expected frequency below one, I merged categories or conducted a Fisher's Exact test in lieu of a chi-squared test, as the chi-square value would be unusable (Marshall & Boggis, 2016, p. 30).

2. Which characteristics of students are related to their preferences regarding online course video introductions?

Statistical analyses from the survey will show whether students of different genders, ages, university statuses (undergraduate vs. graduate), fields of study, and experiences with online courses have trends in their expectations of online course introduction formats.

Statistical analyses to conduct:

Chi-Squared Test (categorical independent and dependent variables):

- Gender (Q3) with Preferred Instructor Introduction Format (Q11)
- Age (Q4) with Preferred Instructor Introduction Format (Q11)
- University Status (Q5) with Preferred Instructor Introduction Format (Q11)
- English as Primary Language (Q6) with Preferred Instructor Introduction Format (Q11)
- Field of Study (Q7) with Preferred Instructor Introduction Format (Q11)
- Experience with Online Courses (Q8) with Preferred Instructor Introduction Format (Q11)

Following the same process of analyzing the first research question, if any of the expected counts from the contingency tables were less than five or had expected frequency below one, I merged categories or conducted a Fisher's Exact test in lieu of a chi-squared test, as the chi-square value would be unusable
(Marshall & Boggis, 2016, p. 30).

3. Which characteristics of online course video introductions are associated with students' perceptions of the teaching and social presence of the instructor?

There are 3 dimensions of the independent variables which align with the video types: instructor physical presence, instructor verbal presence, and video quality/style. A regression analysis can reveal which characteristics are associated with students' perception of the instructor's teaching and social presence.

First, I calculated a mean teaching presence and social presence per respondent per video by averaging the selected items from the teaching and social presence subscales.

To generate a new teaching presence variable (TP1), from the Community of Inquiry teaching presence subscale, the following six questions' scores on a Likert scale of 1-7 were averaged:

- Clearly communicating important course topics
- Clearly communicating important course goals
- Providing clear instructions on how to participate in course learning activities
- Clearly communicating important due dates/time frames for learning activities
- Encouraging course participants to explore new concepts in this course
- Reinforcing the development of a sense of community among course participants

To generate a second new teaching presence variable (TP2), from the Widmeyer and Loy scale for instructor warmth and teaching presence, the following six questions' scores on a Likert scale of 1-7 were averaged:

- To what degree does this instructor know the material?
- How considerate of the class is this instructor?
- How organized is this instructor?
- How intelligent is this instructor?
- How well does this instructor communicate?
- How interesting is this instructor?

To generate a third new variable for social presence (SP), from the Widmeyer and Loy scale for instructor warmth, the following ten questions' scores on a Likert scale of 1-7 were averaged:

- How pleasant is this instructor?
- How sociable is this instructor?
- How strong is this instructor's personality?
- How good-natured is this instructor?
- How humane is this instructor?
- How formal is this instructor?
- How proud is this instructor?
- How self-assured is this instructor?
- How humorous is this instructor?
- How dominant is this instructor?

Regression (continuous dependent variables of teaching presence and social presence and categorical independent variables):

With the intent to see if any of the independent variables such as the video approaches or the student characteristics could be predictive of students' perceptions of teaching presence or social presence, I ran three linear regression analyses.

As for other analyses, I developed three additional questions beyond the scales to serve as a soft indicator of students' interest in taking a course with the instructor, likelihood of comfortably engaging with the instructor by asking them a question, and perception of the instructor's level of caring for the student. These questions were set up as 7-point Likert scales:

- How interested are you in taking a course taught by this instructor?
- How comfortable would you be asking this instructor a question?
- To what degree does this instructor care about your learning?

Reliability and Validity

To report the internal consistency of the TP1 scale, TP2 scale, and SP scale I calculated Cronbach's alpha for each set of items comprising the scales. According to Kline (1999), Cronbach's alpha for values over 0.7 indicate good reliability; these three scales are all over 0.7, as shown in the table, and thus these three scales may be considered reliable.

Table 4. Cronbach's alpha for TP1, TP2, and SP Scales.

	TP1 Scale	**TP2 Scale**	**SP Scale**
Cronbach's alpha	$\alpha = 0.89$	$\alpha = 0.93$	$\alpha = 0.75$

Delimitations

This study is limited by the nature of its quantitative research design, the selection of video characteristics to only those examined, sampling, variations between videos, and the generalizability of results.

Quantitative research design. This perception of teaching presence due to introductory videos to online courses may be further explained by qualitative data collection, such as interviewing students. Additionally, the responses students gave may be different than if the students were actually enrolled in the online course and viewing this video. However, I believe that by setting up this experiment rather than conducting a quasi-experiment in which students know they are contributing to research but also earning a grade from the instructor, this study helps to ensure the responses are solely attributable to responses to the videos, not from the motivation to earn better grades.

Ecological validity. It may be argued that conducting this study with students not enrolled in a specific class reduces the ecological validity of their perceptions of online instructors as they view the introductory videos. However, I see the disconnection of this experiment from a specific course as a strength; the students are not influenced by any other elements contributing to their perspective of instructor presence, and thus the effect of the introductory video is isolated.

Additionally, this study is limited to online courses. Students' perceptions of online instructors may differ widely from their expectations of face-to-face instructors, and the conclusions regarding teaching and social presence will also likely differ between online and face-to-face learning environments.

Other course introduction formats. I delimited this study by focusing on eight common approaches to delivering introductory videos that I have encountered through my time as an instructional designer at a higher educational institution. There are myriad other ways introductory videos could be created, but these eight are often chosen and thus I felt they may be of particular interest. Also, I delimited this study by disregarding other formats for course introductions besides video. There are many ways to conduct a successful meeting between students and instructors beyond the scope of this study, such as meetings in a classroom building or local establishment like a coffee shop, synchronous video conferences, audio phone calls, photo with text, a podcast, and more. In the survey, respondents could voice their preference for these alternative formats through a text entry question as well as stating their level of preference (No Preference Either Way, Do Not Prefer, Prefer, Strongly Prefer).

Self-reported data. Students responded to the survey of their perceptions on teaching presence with their own information.

Sampling. Students who volunteered to participate in this study may not be representative of students in other contexts. Descriptive statistics will be provided so readers can determine whether this sample represents their own population of interest.

Variations between videos. The videos were organized into categories to provide a way to isolate one variable from the others. In the first set, videos were identical in their scripts and video production style, but they varied in what the instructor was physically doing or not doing on-screen. In the second set, videos were identical in what they were physically doing and video production style, but they varied in the verbal language used by the instructor. In the third set, the video production style varied, but the instructor's physical behaviors and verbal language were held constant. Though the goal was to hold two dimensions of variables constant so as to focus students on one dimension of variables at a time. However, the variables may not have been perfectly constant, as there may be small unintentional variations between the videos within each set.

CHAPTER FOUR: RESULTS

The purpose of this chapter is to address the research questions of this study by describing the sample which responded to the survey and sharing the results according to the hypotheses. This chapter is divided into four sections: (a) Sample Description, (b) Research Questions and Hypotheses, and (c) Other Analyses.

Sample Description

The following table shows the descriptive statistics of the sample for the 200 total responses received by the survey close date. 105 undergraduate students, 94 graduate students, and one non-degree seeking student responded. Of the respondents, 160 identified as female, 37 identified as male, 2 preferred not to say, and one identified as non-binary/third gender. Faculty members and staff were not eligible to participate in this survey.

Table 5. Intersection of Respondents' Gender and University Status Percentages and Counts.

	Female		**Male**		**Prefer not to say**		**Prefer to self-describe:**		**Non-binary/ third gender**		**Total**
	%.	*Count*	*%.*	*Count*	*%.*	*Count*	*%.*	*Count*	*%.*	*Count*	
an undergraduate student	84.76 %	89	15.24 %	16	0%	0	0%	0	0%	0	105
a non-degree seeking student	100%	1	0%	0	0%	0	0%	0	0%	0	1
a graduate student	74.47 %	70	22.34 %	21	2.13%	2	0%	0	1.06%	1	94
a faculty member	0%	0	0%	0	0%	0	0%	0	0%	0	0
a staff member	0%	0	0%	0	0%	0	0%	0	0%	0	0
Total		160		37		2				1	200

195 of the 200 total responses were used for calculating the statistical analyses. Five responses were removed from consideration as their categories held too few responses to make any statistical determinations (non-degree seeking students, gender responses other than male and female, and one response from a female graduate student in which no data after the demographic questions were recorded).

Table 6. Responses Used in Statistical Analyses: Gender, Age, University Status, English-Speaking, Online Courses Taken, and Field of Study.

Variable	***N***	**%**
Gender		
Male	37	19%
Female	158	81%
Age (banded)		
18-20	83	43%
21-23	26	13%
24-26	20	10%
27-29	17	9%
30-32	7	4%
33-35	11	5%
36-38	9	5%
39 or older	22	11%
University status		
Graduate student	90	46%
Undergraduate student	105	54%
English as a Primary Language		
Yes	180	92%
No	15	8%
Online Courses Taken (banded)		
0	52	26.67%

Table 6. Responses Used in Statistical Analyses: Gender, Age, University Status, English-Speaking, Online Courses Taken, and Field of Study (continued).

Variable	***N***	**%**
1-5	93	47.69%
6-10	19	9.74%
11-15	13	6.67%
16-20	14	7.18%
Field of Study		
Business/management	25	12.82%
Computer/information science	2	1.02%
Education	33	16.92%
Engineering	1	0.51%
Health	76	38.97%
Humanities	12	6.15%
Law	2	1.02%
Life sciences	6	3.08%
Math	2	1.02%
Other technical/professional	3	1.54%
Physical sciences	8	4.10%
Social/behavior sciences	23	11.79%
Vocational/technical	1	0.51%

Research Questions and Hypotheses

Following are the results pertaining to the research questions and hypotheses within this study.

To analyze Research Questions 1 and 2, I created cross-tabulations within Qualtrics with these variables, focusing especially on variables which may have influence on students' perceptions of instructors based upon the literature. Along with the cross-tabs, I conducted

Pearson's chi-squared test (χ^2) in R Studio to assess the likelihood that differences were due to chance or to a relationship between the variables. If the chi-square value for a variable proved significant according to the goodness of fit statistic, then the null hypothesis of no statistically significant relationship is rejected, and I have listed that variable as significant in the table below.

When variable counts for a table had 80% of cells expected to be below five, I conducted an alternate test on the variable pairing or merged categories if logical, as the assumptions for the Pearson's chi-squared test are violated when the expected counts are lower than five (Marshall & Boggis, 2016).

Responses with missing values were not considered. I conducted cross-tabulation and chi-squared tests; the tables below reveal which pairings resulted in significant *p*-values ($p<.05$), indicating a statistically significant association between the two variables.

Research Question 1.

Which characteristics of students are related to their expectations of online instructors' qualities?

$H_0$1: There is no statistically significant relationship between students' expectations of online instructors' qualities and the student characteristics of experience with online courses, gender type, age, university status, English as a first language status, or major field of study.

Result: After chi-square tests of independence were performed to examine the relationships between student characteristics and student expectations of online instructor qualities, there are some statistically significant relationships between variables.

Results Summary: Females were more likely than males to expect online instructors to be humane. Undergraduate students were more likely than graduate students to expect online instructors to be pleasant, sociable, and have a strong personality, and graduate students were more likely than undergrads to expect online instructors to be humane, considerate of the class, and interesting. Students aged 18-20 are more likely than students of other ages to expect online instructors to be formal and to have a strong personality. Students who speak English as a primary language are more likely to expect online instructors to be organized and to communicate well. Students who are studying health are more likely to expect their online instructor to be self-assured than students in other fields of study.

To investigate the statistically significant chi-square test results, I calculated residuals of specific cells to see which made the most contribution to the chi-square test result by comparing the difference between the observed and expected values. The results include:

- Humane|Gender $\chi 2(1, N = 196) = 0.41, p = .03$. Females were more likely than males to expect online instructors to be humane.
- Pleasant|University Status $\chi 2(1, N = 196) = 8.38, p = .003$. Undergraduate students were more likely than graduate students to expect online instructors to be pleasant.
- Sociable|University Status $\chi 2(1, N = 196) = 8.03, p = .004$. Undergraduate students were more likely than graduate students to expect online instructors to be sociable.
- Strong Personality|University Status $\chi 2(1, N = 196) = 11.64, p <.001$. Undergraduate students were more likely than graduate students to expect online instructors to have a strong personality.
- Humane|University Status $\chi 2(1, N = 196) = 19.58, p <.001$. Graduate students were more likely than undergraduate students to expect online instructors to be humane.
- Considerate of the class|University Status $\chi 2(1, N = 196) = 4.59, p = .03$. Undergraduate students were less likely than graduate students to expect online instructors to be humane.

- Interesting|University Status $\chi2(7, N = 196) = 5.31, p = .02$. Graduate students were more likely than undergraduate students to expect online instructors to be interesting.
- Strong Personality|Age $\chi2(7, N = 196) = 21.08, p = .003$. Students aged 18-20 are more likely than students of other ages to expect an online instructor to have a strong personality.
- Formal|Age $\chi2(7, N = 196) = 25.32, p <.001$. Students aged 18-20 are more likely than students of other ages to expect an online instructor to be formal.
- Organized|English as Primary $\chi2(1, N = 196) = 7.39, p = .006$. Students who speak English as their primary language are more likely to expect an online instructor to be organized.
- Communicates Well|English as Primary $\chi2(1, N = 196) = 7.35, p = .006$. Students who speak English as their primary language are more likely to expect an online instructor to communicate well.
- Self-assured|Field of Study $\chi2(12, N = 196) = 14.73, p = .03$. Students in the health field of study were more likely to expect an online instructor to be self-assured than students studying other fields.

First, it may be useful to examine the relative counts of responses to each of the desired online instructor qualities. The table and bar graph below depict the most frequently selected trait, “Organized,” along with “Communicates well” and “Knows the material,” through the least frequently selected traits, “Proud” and “Dominant.”

Table 7. Responses to the multiple-answer survey question, "Which Qualities Do You Expect of an Online Instructor?"

Answer	Comparative Percentage of Responses	Count
Organized	12.87%	198
Communicates well	12.42%	191
Knows the material	12.03%	185
Considerate of the class	10.79%	166
Pleasant	8.97%	138
Intelligent	7.35%	113
Good natured	6.63%	102
Interesting	6.50%	100
Sociable	5.79%	89
Humorous	3.51%	54
Formal	3.38%	52
Humane	3.25%	50
Strong personality	2.80%	43
Self-assured	2.67%	41
Proud	0.59%	9
Dominant	0.46%	7
Total	**100%**	**1538**

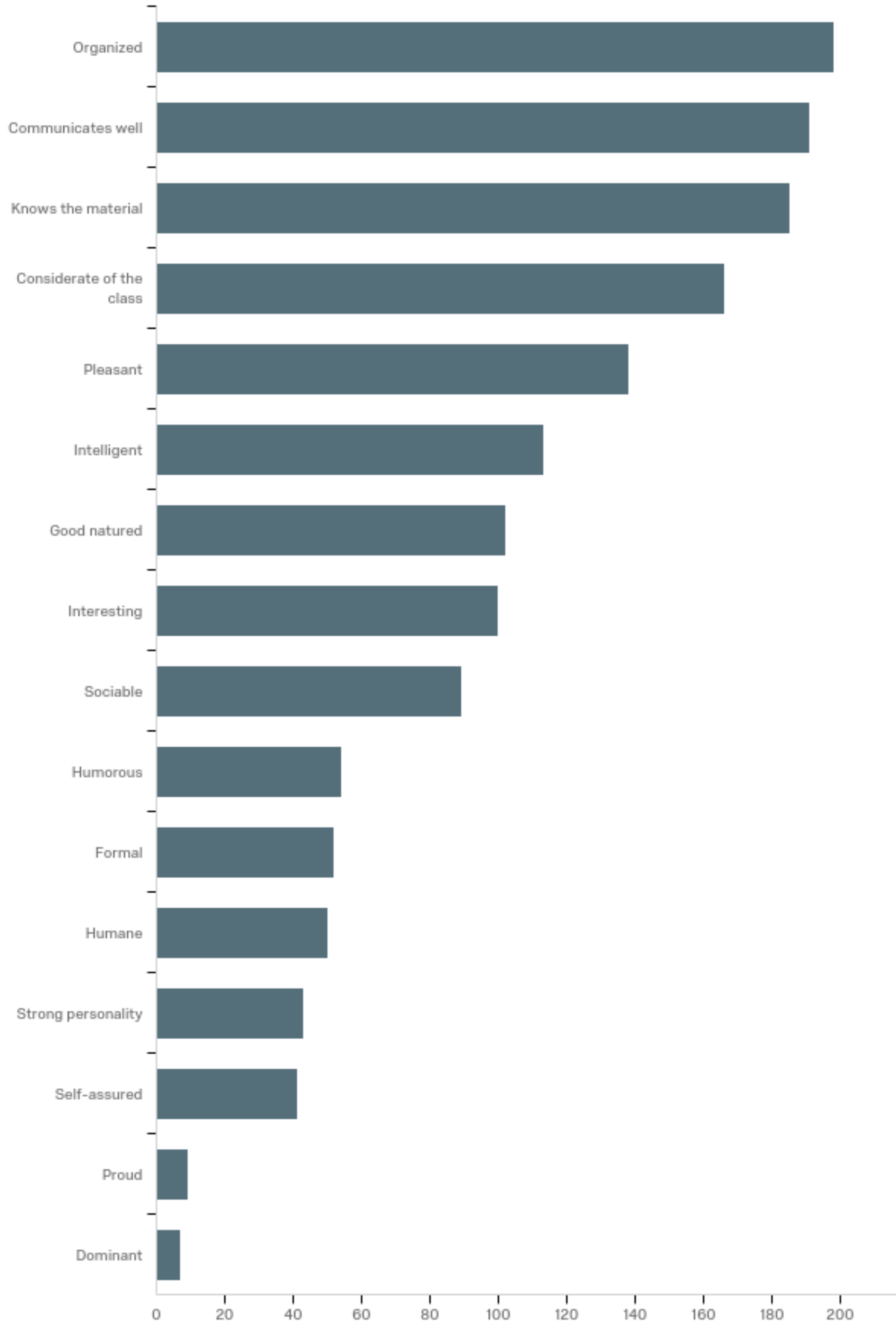

Figure 3. Horizonal bar chart of responses to the multiple-answer survey question, "Which Qualities Do You Expect of an Online Instructor?"

The following tables are the cross-tabulations of student characteristics and the expected online instructor qualities they selected.

Table 8. Cross-tabs of Expected Online Instructor Qualities and University Status and Online Classes Taken.

Expected Online Instructor Quality	Frequency	University Status			Online Classes Taken				
		Under-graduate	*Grad-uate*	*Non-degree seeking*	*0*	*1-5*	*6-10*	*11-15*	*16-20*
Pleasant	*Actual*	79	52	1	33	67	17	6	9
	Expected	69.3	62.04	0.66	34.32	63.36	16.5	8.58	9.24
Sociable	*Actual*	55	30	0	24	37	10	8	6
	Expected	44.63	39.95	0.42	22.1	40.8	10.63	5.53	5.95
Strong personality	*Actual*	33	10	0	17	18	6	1	1
	Expected	22.57	20.21	0.21	11.18	20.64	5.38	2.79	3.01
Good natured	*Actual*	54	44	0	24	49	9	7	9
	Expected	51.45	46.06	0.49	25.48	47.04	12.25	6.37	6.86
Humane	*Actual*	25	23	0	12	21	9	3	3
	Expected	25.2	22.56	0.24	12.48	23.04	6	3.12	3.36
Formal	*Actual*	41	11	0	20	24	3	1	4
	Expected	27.3	24.44	0.26	13.52	24.96	6.5	3.38	3.64
Self-assured	*Actual*	25	14	0	17	15	2	3	2
	Expected	20.48	18.33	0.2	10.14	18.72	4.88	2.54	2.73
Humorous	*Actual*	30	21	0	16	20	8	3	4
	Expected	26.77	23.97	0.26	13.26	24.48	6.38	3.31	3.57
Dominant	*Actual*	6	1	0	1	5	0	0	1
	Expected	3.67	3.29	0.04	1.82	3.36	0.88	0.46	0.49
Knows the material	*Actual*	90	86	1	48	80	25	12	12
	Expected	92.92	83.19	0.89	46.02	84.96	22.13	11.51	12.39
Considerate of the class	*Actual*	89	68	1	44	72	23	9	10
	Expected	82.95	74.26	0.79	41.08	75.84	19.75	10.27	11.06

Table 8. Cross-tabs of Expected Online Instructor Qualities and University Status and Online Classes Taken (continued).

Expected Online Instructor Quality	**Frequency**	**University Status**			**Online Classes Taken**				
		Under-graduate	*Grad-uate*	*Non-degree seeking*	*0*	*1-5*	*6-10*	*11-15*	*16-20*
Organized	*Actual*	98	91	1	49	90	24	13	14
	Expected	99.75	89.3	0.95	49.4	91.2	23.75	12.35	13.3
Intelligent	*Actual*	56	54	0	28	51	16	5	10
	Expected	57.75	51.7	0.55	28.6	52.8	13.75	7.15	7.7
Communicates well	*Actual*	93	90	0	47	88	23	12	13
	Expected	96.08	86.01	0.92	47.58	87.84	22.88	11.89	12.81
Interesting	*Actual*	41	52	1	27	38	17	5	7
	Expected	49.35	44.18	0.47	24.44	45.12	11.75	6.11	6.58
Proud	*Actual*	8	0	0	2	6	0	0	0
	Expected	4.2	3.76	0.04	2.08	3.84	1	0.52	0.56

Table 9. Cross-tabs of Expected Online Instructor Qualities and Gender and Age.

Expected Online Instructor Quality	**Frequency**	**Age**									**Gender**		
		≤ 17	*21-23*	*24-26*	*27-29*	*30-32*	*18-20*	*33-35*	*36-38*	*≥ 39*	*F*	*M*	*Non-binary*
Pleasant	*Actual*	0	22	15	9	3	62	6	9	14	113	26	1
	Expected	0	20.7	14.7	13.3	5.33	55.3	7.33	8	15.33	112	26	2
Sociable	*Actual*	0	13	6	8	2	42	2	4	12	70	19	0
	Expected	0	13.1	9.32	8.48	3.39	35.2	4.66	5.09	9.75	71.2	16.53	1.27
Strong personality	*Actual*	0	5	4	0	0	30	1	0	3	36	7	0
	Expected	0	6.35	4.5	4.1	1.64	17	2.25	2.46	4.71	34.4	7.99	0.61
Good natured	*Actual*	0	16	12	5	5	43	6	7	10	82	20	2
	Expected	0	15.4	10.9	9.9	3.96	41.1	5.45	5.94	11.39	83.2	19.31	1.49

Table 9. Cross-tabs of Expected Online Instructor Qualities and Gender and Age (continued).

Expected Online Instructor Quality	Frequency	Age									Gender		
		≤ 17	*21-23*	*24-26*	*27-29*	*30-32*	*18-20*	*33-35*	*36-38*	*≥ 39*	*F*	*M*	*Non-binary*
Humane	*Actual*	0	10	5	5	1	18	0	5	7	45	5	1
	Expected	0	7.53	5.34	4.86	1.94	20.2	2.67	2.91	5.59	40.8	9.47	0.73
Formal	*Actual*	0	6	3	3	1	36	1	0	3	39	13	1
	Expected	0	7.82	5.55	5.05	2.02	21	2.78	3.03	5.8	42.4	9.84	0.76
Self-assured	*Actual*	0	3	3	2	1	22	1	1	8	34	7	0
	Expected	0	6.05	4.3	3.9	1.56	16.2	2.15	2.34	4.49	32.8	7.61	0.59
Humorous	*Actual*	0	7	5	6	3	26	1	3	3	45	9	0
	Expected	0	7.97	5.66	5.14	2.06	21.3	2.83	3.09	5.91	43.2	10.03	0.77
Dominant	*Actual*	0	0	0	1	0	6	0	0	0	6	1	0
	Expected	0	1.03	0.73	0.67	0.27	2.77	0.37	0.4	0.77	5.6	1.3	0.1
Knows the material	*Actual*	0	30	19	19	7	71	9	11	21	149	35	3
	Expected	0	27.6	19.6	17.8	7.12	73.9	9.8	10.7	20.48	149.6	34.73	2.67
Considerate of the class	*Actual*	0	24	18	14	6	70	8	11	17	136	30	2
	Expected	0	24.8	17.6	16	6.4	66.4	8.8	9.6	18.4	134.4	31.2	2.4
Organized	*Actual*	0	30	22	20	7	76	11	12	22	161	36	3
	Expected	0	29.5	21	19.1	7.62	79.1	10.5	11.4	21.9	160	37.14	2.86
Intelligent	*Actual*	0	17	13	12	5	43	5	6	14	88	25	2
	Expected	0	17	12.1	11	4.38	45.5	6.02	6.57	12.6	92	21.36	1.64
Communicates well	*Actual*	0	28	22	19	7	73	11	11	22	156	34	3
	Expected	0	28.5	20.2	18.4	7.35	76.3	10.1	11	21.14	154.4	35.84	2.76
Interesting	*Actual*	0	15	13	11	3	31	4	9	14	79	20	1
	Expected	0	14.8	10.5	9.52	3.81	39.5	5.24	5.71	10.95	80	18.57	1.43
Proud	*Actual*	0	2	0	0	0	7	0	0	0	7	2	0
	Expected	0	1.33	0.94	0.86	0.34	3.56	0.47	0.51	0.99	7.2	1.67	0.13

Table 10. Cross-tabs of Expected Online Instructor Qualities and English as a Primary Language.

Expected Online Instructor Quality	Frequency	Is English your primary language? Yes	Is English your primary language? No
Pleasant	*Actual*	125	7
	Expected	122.1	9.9
Sociable	*Actual*	79	6
	Expected	78.63	6.38
Strong personality	*Actual*	41	2
	Expected	39.77	3.23
Good natured	*Actual*	92	6
	Expected	90.65	7.35
Humane	*Actual*	43	5
	Expected	44.4	3.6
Formal	*Actual*	47	5
	Expected	48.1	3.9
Self-assured	*Actual*	36	3
	Expected	36.08	2.92
Humorous	*Actual*	47	4
	Expected	47.17	3.83
Dominant	*Actual*	6	1
	Expected	6.47	0.53
Knows the material	*Actual*	164	13
	Expected	163.72	13.28
Considerate of the class	*Actual*	147	11
	Expected	146.15	11.85
Organized	*Actual*	178	12
	Expected	175.75	14.25
Intelligent	*Actual*	103	7
	Expected	101.75	8.25

Table 10. Cross-tabs of Expected Online Instructor Qualities and English as a Primary Language (continued).

Expected Online Instructor Quality	Frequency	Is English your primary language? Yes	Is English your primary language? No
Communicates well	*Actual*	172	11
	Expected	169.28	13.72
Interesting	*Actual*	87	7
	Expected	86.95	7.05
Proud	*Actual*	6	2
	Expected	7.4	0.6

Table 11. Cross-tabs of Expected Online Instructor Qualities and Field of Study A-L.

Expected Online Instructor Quality	Frequency	Business/ management	Computer/ information science	Educ-ation	Engineer-ing	Health	Human-ities	Life sciences
Pleasant	*Actual*	18	2	24	1	40	5	4
	Expected	17.33	2	23.33	0.67	37.33	6.67	4
Sociable	*Actual*	9	1	13	0	30	4	2
	Expected	11.02	1.27	14.83	0.42	23.73	4.24	2.54
Strong personality	*Actual*	3	1	2	0	19	2	0
	Expected	5.32	0.61	7.17	0.2	11.47	2.05	1.23
Good natured	*Actual*	12	2	16	1	29	4	2
	Expected	12.88	1.49	17.33	0.5	27.73	4.95	2.97
Humane	*Actual*	6	0	9	0	15	3	1
	Expected	6.31	0.73	8.5	0.24	13.6	2.43	1.46
Formal	*Actual*	6	1	2	0	20	4	1
	Expected	6.56	0.76	8.83	0.25	14.13	2.52	1.51
Self-assured	*Actual*	2	1	6	0	13	2	0
	Expected	5.08	0.59	6.83	0.2	10.93	1.95	1.17
Humorous	*Actual*	3	1	5	0	20	5	0

Table 11. Cross-tabs of Expected Online Instructor Qualities and Field of Study A-L (continued).

Expected Online Instructor Quality	Frequency	Business/ management	Computer/ information science	Education	Engineering	Health	Humanities	Life sciences
	Expected	6.69	0.77	9	0.26	14.4	2.57	1.54
Dominant	*Actual*	0	0	0	0	3	1	0
	Expected	0.87	0.1	1.17	0.03	1.87	0.33	0.2
Knows the material	*Actual*	24	3	31	0	50	9	5
	Expected	23.15	2.67	31.17	0.89	49.87	8.9	5.34
Considerate of the class	*Actual*	20	3	29	0	43	8	5
	Expected	20.8	2.4	28	0.8	44.8	8	4.8
Organized	*Actual*	25	3	35	1	52	9	6
	Expected	24.76	2.86	33.33	0.95	53.33	9.52	5.71
Intelligent	*Actual*	15	2	18	0	28	7	5
	Expected	14.24	1.64	19.17	0.55	30.67	5.48	3.29
Communicates well	*Actual*	24	3	35	1	50	8	6
	Expected	23.9	2.76	32.17	0.92	51.47	9.19	5.51
Interesting	*Actual*	12	1	17	1	25	6	6
	Expected	12.38	1.43	16.67	0.48	26.67	4.76	2.86
Proud	*Actual*	1	0	0	0	5	0	0
	Expected	1.11	0.13	1.5	0.04	2.4	0.43	0.26

Table 12. Cross-tabs of Expected Online Instructor Qualities and Field of Study M-Z.

Expected Online Instructor Quality	Frequency	Math	Other	Other technical/ professional	Physical sciences	Social/behavior sciences	Undecided	Vocational/technical
Pleasant	*Actual*	2	24	2	4	13	0	1
	Expected	1.33	24	2	5.33	15.33	0	0.67
Sociable	*Actual*	1	16	1	4	7	0	1
	Expected	0.85	15.26	1.27	3.39	9.75	0	0.42

Table 12. Cross-tabs of Expected Online Instructor Qualities and Field of Study M-Z (continued).

Expected Online Instructor Quality	Frequency	Math	Other	Other technical/ professional	Physical sciences	Social/behavior sciences	Undecided	Vocational/technical
Strong personality	*Actual*	1	8	1	1	5	0	0
	Expected	0.41	7.37	0.61	1.64	4.71	0	0.2
Good natured	*Actual*	1	20	2	4	10	0	1
	Expected	0.99	17.83	1.49	3.96	11.39	0	0.5
Humane	*Actual*	0	7	2	2	5	0	1
	Expected	0.49	8.74	0.73	1.94	5.59	0	0.24
Formal	*Actual*	0	10	1	1	6	0	1
	Expected	0.5	9.09	0.76	2.02	5.8	0	0.25
Self-assured	*Actual*	0	12	1	0	3	0	1
	Expected	0.39	7.03	0.59	1.56	4.49	0	0.2
Humorous	*Actual*	0	11	1	1	6	0	1
	Expected	0.51	9.26	0.77	2.06	5.91	0	0.26
Dominant	*Actual*	0	1	0	0	2	0	0
	Expected	0.07	1.2	0.1	0.27	0.77	0	0.03
Knows the material	*Actual*	2	32	3	7	20	0	1
	Expected	1.78	32.06	2.67	7.12	20.48	0	0.89
Considerate of the class	*Actual*	2	30	2	7	18	0	1
	Expected	1.6	28.8	2.4	6.4	18.4	0	0.8
Organized	*Actual*	2	34	3	7	22	0	1
	Expected	1.9	34.29	2.86	7.62	21.9	0	0.95
Intelligent	*Actual*	0	24	2	2	11	0	1
	Expected	1.1	19.71	1.64	4.38	12.6	0	0.55
Communicates well	*Actual*	2	32	3	6	22	0	1
	Expected	1.84	33.09	2.76	7.35	21.14	0	0.92
Interesting	*Actual*	0	15	2	2	12	0	1
	Expected	0.95	17.14	1.43	3.81	10.95	0	0.48

Table 12. Cross-tabs of Expected Online Instructor Qualities and Field of Study M-Z (continued).

Expected Online Instructor Quality	Frequency	Math	Other	Other technical/professional	Physical sciences	Social/behavior sciences	Undecided	Vocational/technical
Proud	*Actual*	0	3	0	0	0	0	0
	Expected	0.09	1.54	0.13	0.34	0.99	0	0.04

To analyze this research question, I conducted Pearson's chi-squared analyses to determine if there were significant associations between the student characteristics and their expected online instructor qualities. The tables showing the full results for the comparison of expected instructor characteristics among genders, between undergraduate and graduate students, students who speak English as a primary language versus those who do not, different ages, different number of online classes taken are shown in the Appendix.

Based upon the results of the chi-squared analyses conducted above, the results for the significant relationships are shown in this table below.

Table 13. Results for Significant Chi-Square Pairings Between Student Characteristics and Expected Online Instructor Qualities.

Pairing	Results	Chi-Square Value
Humane|Gender	45 females, 5 males	$\chi2(1)=0.41$, $p=.03$*
Pleasant|University Status	79 undergraduates, 59 graduate students	$\chi2(1)=8.38$, $p=.003$**
Sociable|University Status	56 undergraduates, 33 graduate students	$\chi2(1)=8.03$, $p=.004$**
Strong Personality|University Status	33 undergraduates, 10 graduate students	$\chi2(1)=11.64$, $p=.0006$***
Humane|University Status	25 undergraduates, 26 graduate students	$\chi2(1)=19.58$, $p<.001$***

Table 13. Results for Significant Chi-Square Pairings Between Student Characteristics and Expected Online Instructor Qualities (continued).

Pairing	Results	Chi-Square Value
Considerate of the class|University Status	90 undergraduates, 76 graduate students	$\chi2(1)=4.59$, $p=.03$*
Interesting|University Status	42 undergraduates, 57 graduate students	$\chi2(1)=5.31$, $p=.02$*
Strong Personality|Age	30 from age 18-20	$\chi2(7)=21.08$ $p=.003$**
	5 from age 21-23	
	4 from age 24-26	
	0 from 27-29	
	0 from 30-32	
	1 from age 33-35	
	0 from age 36-38	
	3 from age 39+	
Formal|Age	36 from age 18-20	$\chi2(7)=25.32$, $p=.0007$***
	6 from age 21-23	
	2 from age 24-26	
	3 from 27-29	
	1 from 30-32	
	1 from age 33-35	
	0 from age 36-38	
	3 from age 39+	
Organized|English as Primary	186 from Yes, 13 from No	$\chi2(1)=7.39$ $p=.006$**
Communicates Well|English as Primary	180 from Yes, 12 from No	$\chi2(1)=7.35$, $p=.006$**

Table 13. Results for Significant Chi-Square Pairings Between Student Characteristics and Expected Online Instructor Qualities (continued).

Pairing	Results	Chi-Square Value
Self-assured|Field of Study	13 from Health	$\chi 2(12)=14.73$, $p=.03$*
	12 from Other (please describe)	
	6 from Education	
	3 from Social/behavior sciences	
	2 from Business/management	
	2 from Humanities	
	1 from Computer/information science	
	1 from Other technical/professional	
	1 from Vocational/technical	
	0 from Engineering	
	0 from Life sciences	
	0 from Physical sciences	
	0 from Math	

***Significant at $p<.001$, **Significant at $p<.01$, *Significant at $p<.05$.

Research Question 2.

Which characteristics of students are related to their preferences regarding online course video introductions?

$H_0 2$: There is no statistically significant relationship between students' preferences of online course introductions and the student characteristics of experience with online courses, experience with online courses, gender type, age, university status, English as a first language status, or major field of study.

Result: After chi-square tests of independence were performed to examine the relationships between student characteristics and student preferences for introduction formats, there are some statistically significant relationships between variables.

Results Summary: Undergraduate students were more likely to strongly prefer text and photo introductions than graduate students, though graduate students were more likely to prefer text than undergraduate students. Students who do not speak English as a primary language were more likely to strongly prefer or prefer synchronous video chat. Students studying humanities or business/management were more likely than students in other fields of study to strongly prefer or prefer multimedia presentation introductions from their online instructors. Students studying health were more likely than students in other fields of study to not prefer multimedia presentations introductions. Students studying social/behavioral sciences were more likely than other students in other fields of study to have no preference on multimedia presentation introductions.

To interpret which of the variables in each association was more likely, I conducted a residual analysis by observing the difference between the expected and actual results to see which variable contributes the most to the chi-square test result. These include:

- Text|University Status $\chi2(3)=8.05$, $p=.05$. Undergraduate students were more likely to strongly prefer text introductions than graduate students, though graduate students were more likely to prefer text than undergraduate students.
- Photo|University Status $\chi2(3)=7.89$, $p=.05$. Undergraduate students were more likely to strongly prefer photo introductions than graduate students, though graduate students were more likely to prefer photo introductions.

- Synchronous Video Chat|English as Primary, $\chi2(3)=7.89$, $p=.05$. Students who do not speak English as a primary language were more likely to strongly prefer or prefer synchronous video chat, and students who speak English as a primary language were more likely to not prefer synchronous video chat or have no preference.
- Multimedia Presentations|Field of Study $\chi2(36)=52.31$, $p=.04$. Students studying humanities or business/management were more likely than students in other fields of study to strongly prefer or prefer multimedia presentation introductions from their online instructors. Students studying health were more likely than students in other fields of study to not prefer multimedia presentations introductions. Students studying social/behavioral sciences were more likely than other students in other fields of study to have no preference on multimedia presentation introductions.

The following bar graph shows the responses to each of the types of instructor introductions as well as the respondents' level of preference for each. From the graph, it is evident that prerecorded video was the most strongly preferred format. Text, photo, and multimedia presentations were preferred as well, though not as strongly as prerecorded video. Audio and synchronous, real time video chat were both not preferred by the respondents.

Table 14. Overall responses to the multiple-answer survey question, "Which form(s) of instructor introduction to an online course do you prefer?"

Format	**Strongly Prefer**		**Prefer**		**Do Not Prefer**		**No Preference Either Way**		**Total**
Prerecorded video	38.94%	81	29.33%	61	12.02%	25	19.71%	41	208
Audio	7.69%	16	22.60%	47	43.27%	90	26.44%	55	208
Text	25.96%	54	45.19%	94	15.87%	33	12.98%	27	208
Photo	21.15%	44	45.19%	94	8.65%	18	25.00%	52	208

Table 14. Overall responses to the multiple-answer survey question, "Which form(s) of instructor introduction to an online course do you prefer?" (continued).

Format	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
Synchronous, real time video chat	16.35%	34	14.90%	31	42.31%	88	26.44%	55	208
Multimedia presentation	16.35%	34	36.54%	76	13.46%	28	33.65%	70	208
Other (please describe)	9.13%	19	10.10%	21	8.17%	17	72.60%	151	208

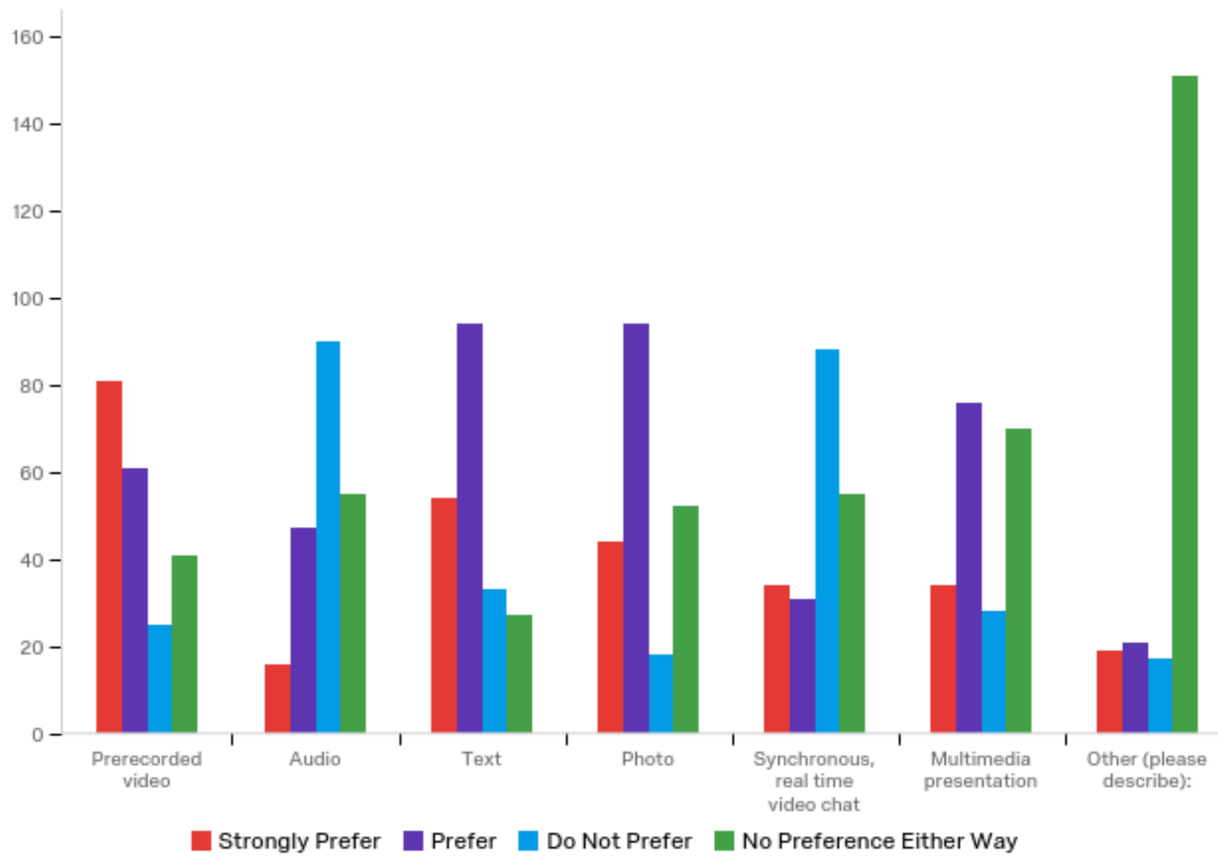

Figure 4. Responses to the multiple-answer survey question, "Which form(s) of instructor introduction to an online course do you prefer?"

To analyze this research question, I created cross-tabs and conducted Pearson's chi-squared analyses.

Table 15. Cross-tabs of Preferred Introduction Formats and University Status and Online Classes Taken.

	Frequency	Online Classes Taken				University Status			
		0	*1-5*	*6-10*	*11-15*	*16-20*	*Under-graduate*	*Non-degree seeking*	*Graduate*
Video									
Strongly Prefer	Actual	15	5	7	7	8	36	1	41
	Expected	20.28	7.8	5.46	10.53	10.14	40.95	0.39	36.66
Prefer	Actual	16	7	3	10	10	33	0	26
	Expected	15.34	5.9	4.13	7.96	7.67	30.98	0.29	27.73
Do Not Prefer	Actual	12	3	0	3	3	14	0	9
	Expected	5.98	2.3	1.61	3.1	2.99	12.07	0.12	10.81
No Preference	Actual	9	5	4	7	5	22	0	18
	Expected	10.4	4	2.8	5.4	5.2	21	0.2	18.8
Audio									
Strongly Prefer	Actual	6	0	0	1	3	12	0	4
	Expected	4.16	1.6	1.12	2.16	2.08	8.4	0.08	7.52
Prefer	Actual	17	4	1	6	8	28	0	18
	Expected	11.96	4.6	3.22	6.21	5.98	24.15	0.23	21.62
Do Not Prefer	Actual	18	11	7	12	9	38	1	46
	Expected	22.1	8.5	5.95	11.47	11.05	44.63	0.42	39.95
No Preference	Actual	11	5	6	8	6	27	0	26
	Expected	13.78	5.3	3.71	7.16	6.89	27.82	0.27	24.91

Table 15. Cross-tabs of Preferred Introduction Formats and University Status and Online Classes Taken (continued).

Frequency		**Online Classes Taken**					**University Status**		
		0	*1-5*	*6-10*	*11-15*	*16-20*	*Under-graduate*	*Non-degree seeking*	*Graduate*
Text									
Strongly Prefer	Actual	11	8	4	11	4	34	1	16
	Expected	13.26	5.1	3.57	6.88	6.63	26.77	0.26	23.97
Prefer	Actual	28	4	7	12	12	46	0	44
	Expected	23.4	9	6.3	12.15	11.7	47.25	0.45	42.3
Do Not Prefer	Actual	5	3	1	3	5	16	0	16
	Expected	8.32	3.2	2.24	4.32	4.16	16.8	0.16	15.04
No Preference	Actual	8	5	2	1	5	9	0	18
	Expected	7.02	2.7	1.89	3.65	3.51	14.18	0.14	12.69
Photo									
Strongly Prefer	Actual	12	4	4	6	6	30	0	12
	Expected	10.92	4.2	2.94	5.67	5.46	22.05	0.21	19.74
Prefer	Actual	25	10	7	10	11	45	1	47
	Expected	24.18	9.3	6.51	12.55	12.09	48.83	0.47	43.71
Do Not Prefer	Actual	4	1	0	3	1	7	0	8
	Expected	3.9	1.5	1.05	2.02	1.95	7.88	0.07	7.05
No Preference	Actual	11	5	3	8	8	23	0	27
	Expected	13	5	3.5	6.75	6.5	26.25	0.25	23.5

Table 15. Cross-tabs of Preferred Introduction Formats and University Status and Online Classes Taken (continued).

Frequency		Online Classes Taken					University Status		
		0	*1-5*	*6-10*	*11-15*	*16-20*	*Under-graduate*	*Non-degree seeking*	*Graduate*
Other									
Strongly Prefer	Actual	2	0	2	4	3	15	0	4
	Expected	4.94	1.9	1.33	2.56	2.47	9.97	0.1	8.93
Prefer	Actual	9	3	1	1	4	16	0	5
	Expected	5.46	2.1	1.47	2.83	2.73	11.03	0.1	9.87
Do Not Prefer	Actual	6	2	0	3	2	7	0	10
	Expected	4.42	1.7	1.19	2.29	2.21	8.93	0.09	7.99
No Preference	Actual	35	15	11	19	17	67	1	75
	Expected	37.18	14.3	10.01	19.3	18.59	75.08	0.71	67.21
Multimedia Presentation									
Strongly Prefer	Actual	8	2	1	5	2	23	0	8
	Expected	8.06	3.1	2.17	4.18	4.03	16.27	0.15	14.57
Prefer	Actual	22	6	5	13	10	41	0	31
	Expected	18.72	7.2	5.04	9.72	9.36	37.8	0.36	33.84
Do Not Prefer	Actual	6	2	1	4	4	13	0	14
	Expected	7.02	2.7	1.89	3.65	3.51	14.18	0.14	12.69
No Preference	Actual	16	10	7	5	10	28	1	41
	Expected	18.2	7	4.9	9.45	9.1	36.75	0.35	32.9

Table 15. Cross-tabs of Preferred Introduction Formats and University Status and Online Classes Taken (continued).

Synchronous real-time video chat									
Frequency		**Online Classes Taken**					**University Status**		
		0	*1-5*	*6-10*	*11-15*	*16-20*	*Under-graduate*	*Non-degree seeking*	*Graduate*
Strongly Prefer	Actual	11	2	1	3	3	13	0	18
	Expected	8.06	3.1	2.17	4.18	4.03	16.27	0.15	14.57
Prefer	Actual	10	2	2	7	3	16	0	15
	Expected	8.06	3.1	2.17	4.18	4.03	16.27	0.15	14.57
Do Not Prefer	Actual	16	13	6	11	9	44	1	39
	Expected	21.84	8.4	5.88	11.34	10.92	44.1	0.42	39.48
No Preference	Actual	15	3	5	6	11	32	0	22
	Expected	14.04	5.4	3.78	7.29	7.02	28.35	0.27	25.38

Table 16. Cross-tabs of Preferred Introduction Formats and Gender and Age.

Level of Preference	**Frequency**	**Age**									**Gender**		
		≤ 17	*21-23*	*24-26*	*27-29*	*30-32*	*18-20*	*33-35*	*36-38*	*≥ 39*	*F*	*M*	*Non-binary*
Video													
Strongly Prefer	Actual	0	13	6	8	3	25	6	8	12	58	18	2
	Expected	0	12	8.49	7.71	3.09	32	4.24	4.63	8.87	62.4	14.4	0.78
Prefer	Actual	0	8	7	3	5	26	4	3	5	47	11	0
	Expected	0	9	6.39	5.81	2.32	24.1	3.2	3.49	6.68	47.2	10.9	0.59
Do Not Prefer	Actual	0	4	4	3	0	13	0	1	1	20	3	0
	Expected	0	3.84	2.72	2.48	0.99	10.3	1.36	1.49	2.85	18.4	4.25	0.23
No Preference	Actual	0	6	5	6	0	19	1	0	5	35	5	0
	Expected	0	6.2	4.4	4	1.6	16.6	2.2	2.4	4.6	32	7.4	0.4

Table 16. Cross-tabs of Preferred Introduction Formats and Gender and Age (continued).

Level of Preference	Frequency	Age									Gender		
		≤ 17	*21-23*	*24-26*	*27-29*	*30-32*	*18-20*	*33-35*	*36-38*	*≥ 39*	*F*	*M*	*Non-binary*
Audio													
Strongly Prefer	Actual	0	5	1	1	1	8	0	0	0	10	6	0
	Expected	0	2.36	1.68	1.52	0.61	6.32	0.84	0.91	1.75	12.8	2.96	0.16
Prefer	Actual	0	4	5	4	1	24	2	3	4	39	7	0
	Expected	0	6.94	4.92	4.48	1.79	18.6	2.46	2.69	5.15	36.8	8.51	0.46
Do Not Prefer	Actual	0	12	11	8	3	31	5	7	14	67	16	1
	Expected	0	13.4	9.53	8.67	3.47	36	4.77	5.2	9.97	68	15.7	0.85
No Preference	Actual	0	10	5	7	3	20	4	2	5	44	8	1
	Expected	0	8.27	5.87	5.33	2.13	22.1	2.93	3.2	6.13	42.4	9.8	0.53
Text													
Strongly Prefer	Actual	0	6	4	6	1	30	2	2	3	43	8	0
	Expected	0	7.97	5.66	5.14	2.06	21.3	2.83	3.09	5.91	40.8	9.44	0.51
Prefer	Actual	0	13	12	9	5	37	6	5	9	73	15	1
	Expected	0	14.2	10.1	9.14	3.66	37.9	5.03	5.49	10.51	72	16.7	0.9
Do Not Prefer	Actual	0	7	2	3	1	8	1	3	8	22	10	0
	Expected	0	4.87	3.46	3.14	1.26	13	1.73	1.89	3.61	25.6	5.92	0.32
No Preference	Actual	0	5	4	2	1	8	2	2	3	22	4	1
	Expected	0	3.99	2.83	2.57	1.03	10.7	1.41	1.54	2.96	21.6	5	0.27

Table 16. Cross-tabs of Preferred Introduction Formats and Gender and Age (continued).

Level of Preference	**Frequency**	**Age**									**Gender**		
		≤ 17	*21-23*	*24-26*	*27-29*	*30-32*	*18-20*	*33-35*	*36-38*	*≥ 39*	*F*	*M*	*Non-binary*
Photo													
Strongly Prefer	Actual	0	7	2	3	1	23	1	5	2	35	6	1
	Expected	0	6.5	4.61	4.19	1.68	17.4	2.3	2.51	4.82	33.6	7.77	0.42
Prefer	Actual	0	9	11	10	3	37	8	5	12	75	17	0
	Expected	0	14	9.95	9.05	3.62	37.6	4.98	5.43	10.4	74.4	17.2	0.93
Do Not Prefer	Actual	0	6	2	2	1	5	0	1	1	10	5	0
	Expected	0	2.66	1.89	1.71	0.69	7.11	0.94	1.03	1.97	12	2.77	0.15
No Preference	Actual	0	9	7	5	3	18	2	1	8	40	9	1
	Expected	0	7.82	5.55	5.05	2.02	21	2.78	3.03	5.8	40	9.25	0.5
Other													
Strongly Prefer	Actual	0	6	0	1	1	9	0	0	2	11	8	0
	Expected	0	2.8	1.99	1.81	0.72	7.51	1	1.09	2.08	15.2	3.52	0.19
Prefer	Actual	0	3	1	2	0	13	1	0	1	17	4	0
	Expected	0	3.1	2.2	2	0.8	8.3	1.1	1.2	2.3	16.8	3.88	0.21
Do Not Prefer	Actual	0	2	2	2	1	6	1	1	2	11	6	0
	Expected	0	2.51	1.78	1.62	0.65	6.72	0.89	0.97	1.86	13.6	3.15	0.17
No Preference	Actual	0	20	19	15	6	55	9	11	18	121	19	2
	Expected	0	22.6	16	14.6	5.83	60.5	8.01	8.74	16.76	114.4	26.5	1.43

Table 16. Cross-tabs of Preferred Introduction Formats and Gender and Age (continued).

Level of Preference	**Frequency**	**Age**									**Gender**		
		≤ 17	*21-23*	*24-26*	*27-29*	*30-32*	*18-20*	*33-35*	*36-38*	*≥ 39*	*F*	*M*	*Non-binary*
Multimedia Presentation													
Strongly Prefer	Actual	0	9	1	0	4	17	0	1	2	23	7	1
	Expected	0	5.02	3.56	3.24	1.3	13.4	1.78	1.94	3.72	24.8	5.74	0.31
Prefer	Actual	0	10	6	11	0	34	4	4	7	58	13	0
	Expected	0	11.2	7.96	7.24	2.9	30	3.98	4.34	8.32	57.6	13.3	0.72
Do Not Prefer	Actual	0	2	2	3	2	12	3	2	3	19	8	0
	Expected	0	4.28	3.04	2.76	1.1	11.5	1.52	1.66	3.18	21.6	5	0.27
No Preference	Actual	0	10	13	6	2	20	4	5	11	60	9	1
	Expected	0	10.5	7.44	6.76	2.7	28.1	3.72	4.06	7.78	56	13	0.7
Synchronous real-time video chat													
Strongly Prefer	Actual	0	4	5	8	1	11	0	0	5	24	6	1
	Expected	0	5.02	3.56	3.24	1.3	13.4	1.78	1.94	3.72	24.8	5.74	0.31
Prefer	Actual	0	5	3	1	1	15	1	4	2	26	5	0
	Expected	0	4.72	3.35	3.05	1.22	12.7	1.68	1.83	3.5	24.8	5.74	0.31
Do Not Prefer	Actual	0	18	7	6	3	32	7	6	9	65	18	0
	Expected	0	13	9.22	8.38	3.35	34.8	4.61	5.03	9.64	67.2	15.5	0.84
No Preference	Actual	0	4	7	5	3	25	3	2	7	45	8	1
	Expected	0	8.27	5.87	5.33	2.13	22.1	2.93	3.2	6.13	43.2	9.99	0.54

Table 17. Cross-tabs of Preferred Introduction Formats and English as a Primary Language.

Preferred Format	Level of Preference	Frequency	Is English your primary language?	
			Yes	*No*
Video	**Strongly Prefer**	Actual	71	7
		Expected	72.15	5.85
	Prefer	Actual	55	4
		Expected	54.58	4.42
	Do Not Prefer	Actual	22	1
		Expected	21.27	1.73
	No Preference Either Way	Actual	37	3
		Expected	37	3
Audio	**Strongly Prefer**	Actual	16	0
		Expected	14.8	1.2
	Prefer	Actual	41	5
		Expected	42.55	3.45
	Do Not Prefer	Actual	79	6
		Expected	78.63	6.38
	No Preference Either Way	Actual	49	4
		Expected	49.02	3.98
Text	**Strongly Prefer**	Actual	46	5
		Expected	47.17	3.83
	Prefer	Actual	85	5
		Expected	83.25	6.75
	Do Not Prefer	Actual	28	4
		Expected	29.6	2.4
	No Preference Either Way	Actual	26	1
		Expected	24.98	2.02

Table 17. Cross-tabs of Preferred Introduction Formats and English as a Primary Language (continued).

Preferred Format	**Level of Preference**	**Frequency**	**Is English your primary language?**	
			Yes	*No*
Photo	**Strongly Prefer**	Actual	40	2
		Expected	38.85	3.15
	Prefer	Actual	85	8
		Expected	86.03	6.97
	Do Not Prefer	Actual	13	2
		Expected	13.88	1.13
	No Preference Either Way	Actual	47	3
		Expected	46.25	3.75
Other	**Strongly Prefer**	Actual	16	3
		Expected	17.57	1.43
	Prefer	Actual	18	3
		Expected	19.43	1.57
	Do Not Prefer	Actual	15	2
		Expected	15.72	1.27
	No Preference Either Way	Actual	136	7
		Expected	132.28	10.72
Multimedia Presentation	**Strongly Prefer**	Actual	28	3
		Expected	28.68	2.33
	Prefer	Actual	63	9
		Expected	66.6	5.4
	Do Not Prefer	Actual	26	1
		Expected	24.98	2.02
	No Preference Either Way	Actual	68	2
		Expected	64.75	5.25

Table 17. Cross-tabs of Preferred Introduction Formats and English as a Primary Language (continued).

Preferred Format	Level of Preference	Frequency	Is English your primary language?	
			Yes	*No*
Synchronous real-time video chat	**Strongly Prefer**	Actual	28	3
		Expected	28.68	2.33
	Prefer	Actual	25	6
		Expected	28.68	2.33
	Do Not Prefer	Actual	80	4
		Expected	77.7	6.3
	No Preference Either Way	Actual	52	2
		Expected	49.95	4.05

Table 18. Cross-tabs of Preferred Introduction Formats and Field of Study A-L.

Level of Preference	Frequency	Business/ Management	Computer /information science	Educa -tion	Engineer -ing	Health	Human -ities	Life sciences
Video								
Strongly Prefer	Actual	8	1	15	0	18	3	5
	Expected	10.03	1.16	13.5	0.39	21.6	3.86	2.31
Prefer	Actual	8	0	12	1	17	3	1
	Expected	7.55	0.87	10.17	0.29	16.27	2.9	1.74
Do Not Prefer	Actual	5	0	3	0	9	2	0
	Expected	3.22	0.37	4.33	0.12	6.93	1.24	0.74
No Preference	Actual	5	2	5	0	12	2	0
	Expected	5.2	0.6	7	0.2	11.2	2	1.2

Table 18. Cross-tabs of Preferred Introduction Formats and Field of Study A-L (continued).

Level of Preference	Frequency	Business/ Management	Computer /information science	Educa-tion	Engineer-ing	Health	Human-ities	Life sciences
Audio								
Strongly Prefer	Actual	6	0	0	0	5	0	0
	Expected	1.98	0.23	2.67	0.08	4.27	0.76	0.46
Prefer	Actual	4	1	5	0	18	2	1
	Expected	5.82	0.67	7.83	0.22	12.53	2.24	1.34
Do Not Prefer	Actual	10	1	22	1	19	8	2
	Expected	11.27	1.3	15.17	0.43	24.27	4.33	2.6
No Preference	Actual	6	1	8	0	14	0	3
	Expected	6.93	0.8	9.33	0.27	14.93	2.67	1.6
Text								
Strongly Prefer	Actual	4	1	5	1	15	2	2
	Expected	6.69	0.77	9	0.26	14.4	2.57	1.54
Prefer	Actual	13	2	22	0	24	6	0
	Expected	11.89	1.37	16	0.46	25.6	4.57	2.74
Do Not Prefer	Actual	6	0	6	0	8	2	3
	Expected	4.09	0.47	5.5	0.16	8.8	1.57	0.94
No Preference	Actual	3	0	2	0	9	0	1
	Expected	3.34	0.39	4.5	0.13	7.2	1.29	0.77
Photo								
Strongly Prefer	Actual	4	1	4	0	11	2	2
	Expected	5.45	0.63	7.33	0.21	11.73	2.1	1.26
Prefer	Actual	17	1	20	0	25	3	0
	Expected	11.76	1.36	15.83	0.45	25.33	4.52	2.71
Do Not Prefer	Actual	2	0	2	0	7	2	0
	Expected	2.23	0.26	3	0.09	4.8	0.86	0.51
No Preference	Actual	3	1	9	1	13	3	4
	Expected	6.56	0.76	8.83	0.25	14.13	2.52	1.51

Table 18. Cross-tabs of Preferred Introduction Formats and Field of Study A-L (continued).

Level of Preference	Frequency	Business/ Management	Computer /information science	Educa-tion	Engineer-ing	Health	Human-ities	Life sciences
Other								
Strongly Prefer	Actual	3	0	2	1	5	0	1
	Expected	2.35	0.27	3.17	0.09	5.07	0.9	0.54
Prefer	Actual	4	1	2	0	9	1	0
	Expected	2.6	0.3	3.5	0.1	5.6	1	0.6
Do Not Prefer	Actual	3	0	2	0	4	2	1
	Expected	2.1	0.24	2.83	0.08	4.53	0.81	0.49
No Preference	Actual	16	2	29	0	38	7	4
	Expected	18.94	2.19	25.5	0.73	40.8	7.29	4.37
Multimedia Presentation								
Strongly Prefer	Actual	2	1	4	0	10	1	2
	Expected	4.21	0.49	5.67	0.16	9.07	1.62	0.97
Prefer	Actual	13	1	10	1	21	7	1
	Expected	9.41	1.09	12.67	0.36	20.27	3.62	2.17
Do Not Prefer	Actual	4	0	5	0	9	1	1
	Expected	3.59	0.41	4.83	0.14	7.73	1.38	0.83
No Preference	Actual	7	1	16	0	16	1	2
	Expected	8.79	1.01	11.83	0.34	18.93	3.38	2.03
Synchronous real-time video chat								
Strongly Prefer	Actual	2	1	6	0	14	3	1
	Expected	4.21	0.49	5.67	0.16	9.07	1.62	0.97
Prefer	Actual	4	0	7	0	11	2	1
	Expected	3.96	0.46	5.33	0.15	8.53	1.52	0.91
Do Not Prefer	Actual	13	2	14	1	16	4	2
	Expected	10.9	1.26	14.67	0.42	23.47	4.19	2.51
No Preference	Actual	7	0	8	0	15	1	2
	Expected	6.93	0.8	9.33	0.27	14.93	2.67	1.6

Table 19. Cross-tabs of Preferred Introduction Formats and Field of Study M-Z.

Level of Preference	Frequency	Math	Other	Other technical/ professional	Phys-ical sciences	Social/ Behave-ior sciences	Undecided	Vocational/ technical
Video								
Strongly Prefer	Actual	1	14	1	6	9	0	0
	Expected	0.77	13.89	1.16	3.09	8.87	0	0.39
Prefer	Actual	0	7	0	2	9	0	1
	Expected	0.58	10.46	0.87	2.32	6.68	0	0.29
Do Not Prefer	Actual	0	4	1	0	2	0	0
	Expected	0.25	4.46	0.37	0.99	2.85	0	0.12
No Preference	Actual	1	11	1	0	3	0	0
	Expected	0.4	7.2	0.6	1.6	4.6	0	0.2
Audio								
Strongly Prefer	Actual	0	4	0	0	1	0	0
	Expected	0.15	2.74	0.23	0.61	1.75	0	0.08
Prefer	Actual	1	6	1	1	6	0	1
	Expected	0.45	8.06	0.67	1.79	5.15	0	0.22
Do Not Prefer	Actual	1	14	1	5	7	0	0
	Expected	0.87	15.6	1.3	3.47	9.97	0	0.43
No Preference	Actual	0	12	1	2	9	0	0
	Expected	0.53	9.6	0.8	2.13	6.13	0	0.27
Text								
Strongly Prefer	Actual	1	13	1	2	6	0	1
	Expected	0.51	9.26	0.77	2.06	5.91	0	0.26
Prefer	Actual	1	16	1	2	9	0	0
	Expected	0.91	16.46	1.37	3.66	10.51	0	0.46
Do Not Prefer	Actual	0	3	1	1	3	0	0
	Expected	0.31	5.66	0.47	1.26	3.61	0	0.16
No Preference	Actual	0	4	0	3	5	0	0
	Expected	0.26	4.63	0.39	1.03	2.96	0	0.13

Table 19. Cross-tabs of Preferred Introduction Formats and Field of Study M-Z (continued).

Level of Preference	Frequency	Math	Other	Other technical/ professional	Physical sciences	Social/ Behaveior sciences	Undecided	Vocational/ technical
Photo								
Strongly Prefer	Actual	0	11	1	3	4	0	1
	Expected	0.42	7.54	0.63	1.68	4.82	0	0.21
Prefer	Actual	1	14	1	2	11	0	0
	Expected	0.9	16.29	1.36	3.62	10.4	0	0.45
Do Not Prefer	Actual	0	2	0	0	3	0	0
	Expected	0.17	3.09	0.26	0.69	1.97	0	0.09
No Preference	Actual	1	9	1	3	5	0	0
	Expected	0.5	9.09	0.76	2.02	5.8	0	0.25
Other								
Strongly Prefer	Actual	0	3	0	1	3	0	0
	Expected	0.18	3.26	0.27	0.72	2.08	0	0.09
Prefer	Actual	0	3	0	0	1	0	0
	Expected	0.2	3.6	0.3	0.8	2.3	0	0.1
Do Not Prefer	Actual	0	3	0	1	1	0	0
	Expected	0.16	2.91	0.24	0.65	1.86	0	0.08
No Preference	Actual	2	27	3	6	18	0	1
	Expected	1.46	26.23	2.19	5.83	16.76	0	0.73
Multimedia Presentation								
Strongly Prefer	Actual	1	6	0	3	4	0	0
	Expected	0.32	5.83	0.49	1.3	3.72	0	0.16
Prefer	Actual	1	12	3	1	5	0	0
	Expected	0.72	13.03	1.09	2.9	8.32	0	0.36
Do Not Prefer	Actual	0	4	0	1	4	0	0
	Expected	0.28	4.97	0.41	1.1	3.18	0	0.14
No Preference	Actual	0	14	0	3	10	0	1
	Expected	0.68	12.17	1.01	2.7	7.78	0	0.34

Table 19. Cross-tabs of Preferred Introduction Formats and Field of Study M-Z (continued).

Level of Preference	Frequency	Math	Other	Other technical/ professional	Phys-ical sciences	Social/ Behave-ior sciences	Undecided	Vocational/ technical
Synchronous real-time video chat								
Strongly Prefer	Actual	0	2	2	1	2	0	0
	Expected	0.32	5.83	0.49	1.3	3.72	0	0.16
Prefer	Actual	0	4	0	1	2	0	0
	Expected	0.3	5.49	0.46	1.22	3.5	0	0.15
Do Not Prefer	Actual	1	18	1	4	12	0	0
	Expected	0.84	15.09	1.26	3.35	9.64	0	0.42
No Preference	Actual	1	12	0	2	7	0	1
	Expected	0.53	9.6	0.8	2.13	6.13	0	0.27

The tables showing the full results for the comparison of preferences for different formats among genders, between undergraduate and graduate students, students who speak English as a primary language versus those who do not, different ages, different number of online classes taken are shown in the Appendix.

Based upon the results of the chi-squared analyses conducted above, the results for the significant relationships are shown in Table 20.

Table 20. Significant Chi-Squared Analyses Between Student Characteristics and Preferred Introduction Formats.

Pairing	Results	Chi-Squared Value
Text|University Status	Undergraduates:	$\chi2(3)=8.05$, p=.05*
	34 Strongly Prefer	
	46 Prefer	
	16 Do Not Prefer	
	9 No Preference Either Way	
	Graduate Students:	
	16 Strongly Prefer	
	44 Prefer	
	16 Do Not Prefer	
	18 No Preference Either Way	
Photo|University Status	Undergraduates:	$\chi2(3)=7.89$, p=.05*
	30 Strongly Prefer	
	45 Prefer	
	7 Do Not Prefer	
	23 No Preference Either Way	
	Graduate Students:	
	12 Strongly Prefer	
	47 Prefer	
	8 Do Not Prefer	
	27 No Preference Either Way	

Table 21. Significant Chi-Squared Analyses Between Student Characteristics and Preferred Introduction Formats.

Pairing	Results	Chi-Squared Value
Synchronous Video Chat|English as Primary	Yes: 30 Strongly Prefer 25 Prefer 84 Do Not Prefer 54 No Preference Either Way No: 4 Strongly Prefer 6 Prefer 4 Do Not Prefer 2 No Preference Either Way	$\chi2(3)=8.28$, $p=.04$
Multimedia Presentations|Field of Study	(see Appendix due to length)	$\chi2(36)=52.31$, $p=.04$*

***Significant at p<.001, **Significant at p<.01, *Significant at p<.05.

Research Question 3.

Which characteristics of online course video introductions are associated with students' perceptions of the teaching and social presence of the instructor?

$H_0$3: There is no statistically significant relationship between students' perceptions of online instructors' teaching presence as measured by the Teaching Presence Survey subscale of the Community of Inquiry metric, or social presence, as measured by the warm/cold scale developed by Widmeyer and Loy (1988), associated with online course video introduction characteristics.

In order to test this hypothesis, I first calculated three new variables to serve as the dependent variables to be predicted: two measures of teaching presence (TP1) and (TP2) and one measure of social presence (SP) based upon the sum of students' responses to selected questions following each video.

TP1 was calculated by taking the mean of the scores from the six items related to Teaching Presence drawn from the COI subscale. TP2 was calculated by taking the mean of the scores from the six items related to Teaching Presence from Widmeyer and Loy's scale. Social Presence was calculated by taking the mean of the scores from the ten items related to Social Presence and warmth from Widmeyer and Loy's scale after reversing certain Likert-scale questions which had the undesirable traits with 7 as the highest and 1 as the lowest so that all desirable traits were scaled with 7 as the highest and 1 as the lowest.

The table below shows the resulting single TP1, TP2, and SP scores for each video. The videos have been ordered according to their characteristics of interest. Video 5 starts the table, as it is the most straightforward, standard video type against which the other videos are compared. Its course-oriented script, passive physical presence, and green screen result in a common approach for an introductory video. Videos 2, 4, and 3 are listed next, as they represent the passive physical presence of the instructor but now with a script that is either student or instructor-oriented. Videos 6, 7, and 8 show relaxed behavior of the instructor, and Video 1 shows the most active physical presence of the instructor. These videos were developed with the intent of emphasizing certain characteristics and keeping others as constant as possible, in order to analyze the effects of the specific video elements of instructor physical presence, script orientation, and production type. The corresponding teaching presence and social presence scores are shown next to each video, and the observation count of each video is shown beneath each video title.

It is interesting to note that the social presence score and teaching presence 2 score per video tends to rise with the level of instructor physical presence, though not consistently.

Table 22. Differences in the mean TP1, TP2, and SP scores per video.

	Video 5 (n=65)	**Video 4** (n=68)	**Video 2** (n=64)	**Video 3** (n=63)	**Video 6** (n=66)	**Video 7** (n=69)	**Video 8** (n=66)	**Video 1** (n=66)
Instructor Physical Presence	Passive	Passive	Passive	Not visible	Relaxed	Relaxed	Relaxed	Active
Script Orientation	Course	Instructor	Student	Student	Course	Course	Course	Student
Production Type	Green screen	Green screen	Green screen	Slides	Green screen	Talking head	Interview	Green screen
Teaching Presence (TP1)	27.28 SD=8.76	18.71 SD=11.06	25.17 SD=8.52	28.03 SD=7.58	29.62 SD=7.28	30.84 SD=7.37	29.64 SD=8.54	29.32 SD=8.90
Teaching Presence (TP2)	27.64 SD=9.00	28.69 SD=7.30	29.33 SD=7.67	32.78 SD=8.75	34.28 SD=6.46	34.94 SD=5.31	33.56 SD=8.01	35.23 SD=5.96
Social Presence (SP)	36.35 SD=8.92	39.94 SD=7.26	40.77 SD=8.45	48.74 SD=7.43	48.02 SD=6.65	49.45 SD=6.02	49.61 SD=6.27	52.40 SD=6.37

As described in Chapter III: Methods, the videos differed by key characteristics under observation for this study; in essence, they differed by the instructor's physical presence, script orientation, and production type. A brief description is included below:

- Video 1: The instructor employed active body language, frequent gesturing and smiling. The script was student-oriented, meaning the instructor specifically and repeatedly addressed the students as "you," described how this course will benefit them, and oriented his statements around their interests. The production type was a professional green screen: the instructor speaking in front of a green screen, which was swapped out for a graphic background during the post-edit phase.

- Video 2: The instructor's body language was stoic and still, with little to no smiling. The script was the same student-oriented script used in Video 1, verbatim. The production type was also a professional green screen, identical to the one used in Video 1.
- Video 3: The video shows a series of bullet points on slides, designed in Microsoft PowerPoint; the instructor is not physically visible at all. The script was the same student-oriented script used in Video 1 and 2, verbatim. The production type was recorded PowerPoint slides with voiceover narration.
- Video 4: The instructor's body language was stoic and still, with little to no smiling. The script is instructor-oriented, in which the instructor speaks at length of his educational and career background, various publications he has authored, and a personal anecdote from his professional experience as a principal. The production type was also a professional green screen, identical to the one used in Video 1 and 2.
- Video 5: The instructor's body language was stoic and still, with little to no smiling. The script is course-oriented, in which the instructor focuses on the course structure and goals and impersonally addresses students in the third person as "the students" rather than as "you." He includes no personal details about himself. The production type was also a professional green screen, identical to the one used in Video 1 and 2.
- Video 6: The instructor's body language is relaxed, with a level of friendly expressions and smiling that is not as frequent as Video 1 nor as stoic as Videos 2, 4, and 5. The script is course-oriented, in which the instructor focuses on the course structure and goals and impersonally addresses students in the third person as "the students" rather than as "you." He includes two sentences of personal details about himself. The production type was also a professional green screen, identical to the one used in Video 1 and 2.

- Video 7: The instructor's body language is relaxed, with a level of friendly expressions and smiling that is not as frequent as Video 1 nor as stoic as Videos 2, 4, and 5. The script is course-oriented, in which the instructor focuses on the course structure and goals and impersonally addresses students in the third person as "the students" rather than as "you." He includes no personal details about himself. The production type is a talking head, with the instructor seated at a kitchen table in a residential setting, speaking into his laptop webcam rather than into a professional video camera.
- Video 8: The instructor's body language is relaxed, with a level of friendly expressions and smiling that is not as frequent as Video 1 nor as stoic as Videos 2, 4, and 5. The script is course-oriented, in which the instructor focuses on the course structure and goals. He includes two sentences of personal details about himself. The production type is an interview in a studio, professionally edited to replace the green screen backdrop with a graphic illustration. He is joined by a female portraying a graduate student who asks questions, to which he replies.

All scripts may be viewed in full in the Appendix, and the link to the YouTube playlist of videos is also included in the Appendix for accessing the videos used in this study.

A single average score for the three dependent variables for each video does not fully address the research question of whether these scores can be predicted based upon the introductory video approach.

With the intent to see if any of the independent variables such as the video approaches or the student characteristics could be predictive of students' perceptions of teaching presence or social presence, I ran three multiple regression analyses.

Before running the regressions, the missing values within the dataset had to be treated in order to develop a predictive model. Due to the decision to present each participant with only three of the eight possible videos, there were typically five empty responses per participant for the five videos they were not shown. As such, the dataset appears to contain a high number of missing values. The command to omit missing values removed entire rows of data, which would have removed all rows of data in this dataset, as no participant responded to all eight videos and thus every participant had missing values in their response row. This type of missingness is referred to as "Missingness that depends on unobserved predictors," if predictive information has simply not been recorded, according to Gelman and Hill (2006, p. 542). Researchers and statisticians have developed formal and informal approaches using regressions and multivariate normal distributions to impute data as a method of remediating missingness (King et al., 2001; Schafer, 1997; Liu, 1995; Rubin, 1976). In order to run a regression successfully, I entered the command into R-Studio to use only positive values. I organized the dependent variables into teaching presence 1, teaching presence 2, and social presence, all three of which were calculated by summing and averaging the responses which were received. Then I developed a model for regression to observe which of the independent variables, namely the introductory video approaches and student characteristics, would assist in predicting the newly generated dependent variables.

Multiple Linear Regression Assumptions

The multiple linear regression equations are run based upon the following assumptions:

A. Linear relationship. The relationship between the independent variables (introductory video approach and the student characteristics) and the dependent variables (TP1, TP2, or SP) is linear.

- To test this, I created scatterplots to check to see whether there was potentially a linear or curvilinear relationship between variables. The scatterplots below confirm there is no curvilinear relationship, and thus linear regression is appropriate for these distributions.

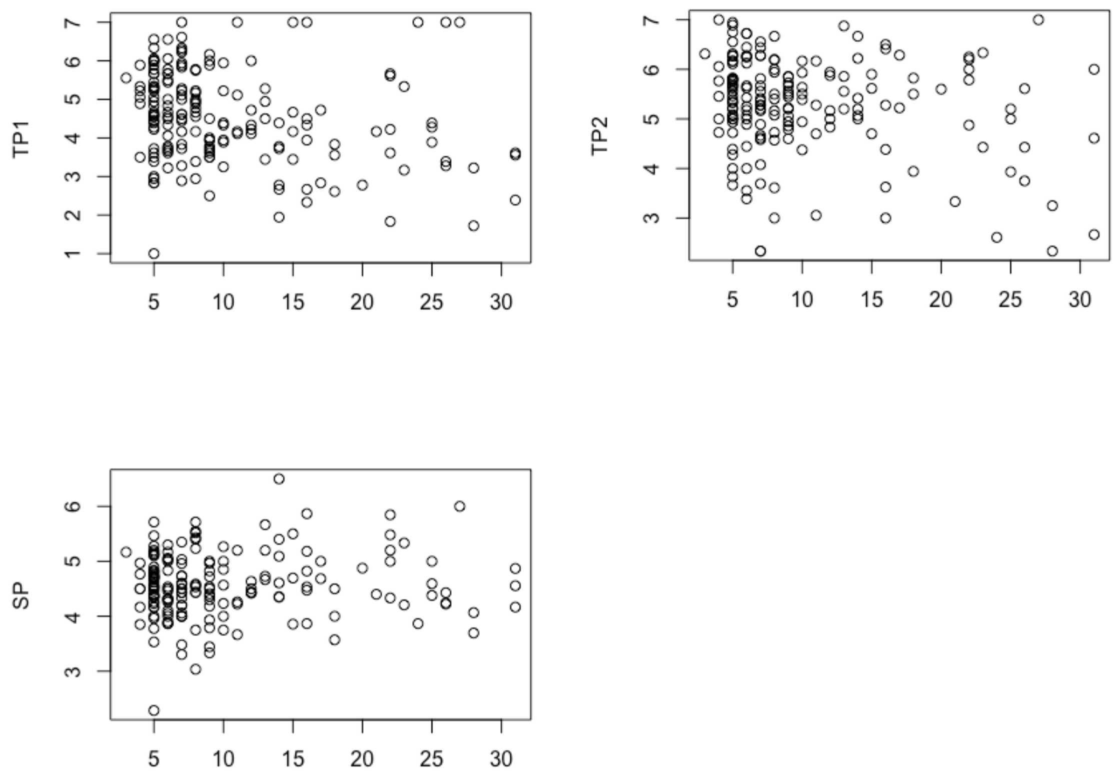

Figure 5. Scatterplots showing linear relationship between independent variables and dependent variables TP1, TP2, and SP.

B. Multivariate normality. Errors between observed and predicted values ought to be normally distributed.

To test this, I created histograms for TP1, TP2, and SP. All three demonstrated a normal distribution that was slightly right skewed distribution, indicating that the mean was greater than the median.

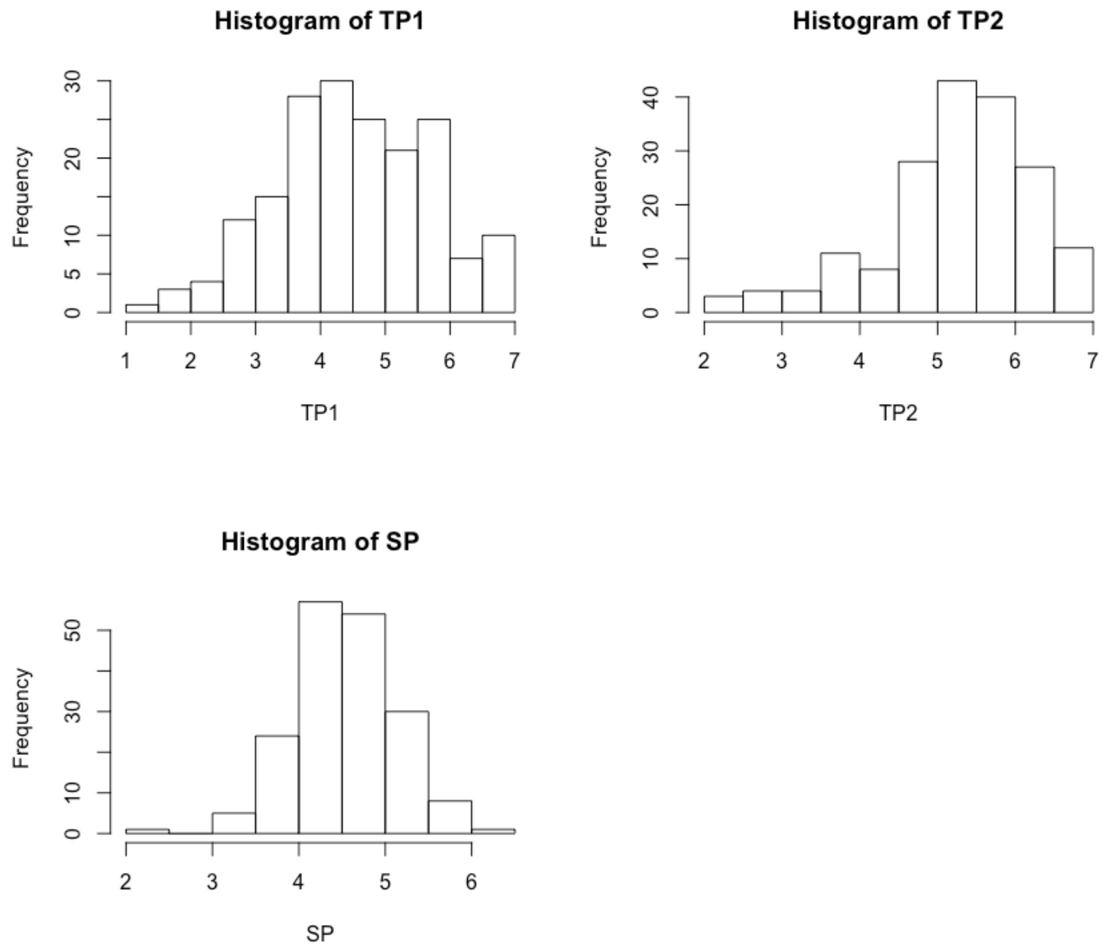

Figure 6. Histograms of TP1, TP2, and SP showing normal, slightly right skewed distributions.

C. No multicollinearity. Independent variables should not be collinear.

- To check this, I conducted Pearson's correlations between the independent variables to ensure that no two variables were correlated higher than .80, positive or negative. (See the correlations table in the Appendix to see that none of the independent variables were correlated higher than .80 with one another.)

D. Homoscedasticity. The residuals ought to be approximately equal across the regression line; if not, it is heteroscedastic.

- To verify homoscedasticity, I created a scatterplot of residuals versus predicted values with the regression line visible to observe whether the points were more or less equally distributed across the line.

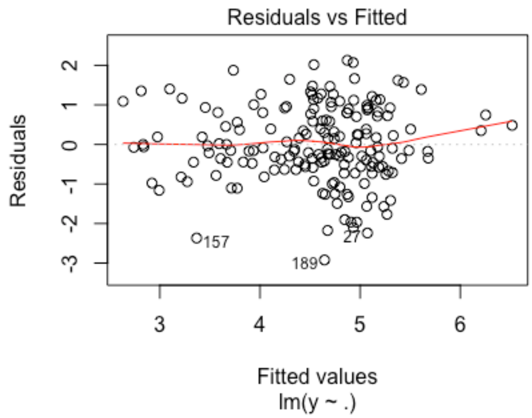

Figure 7. Scatterplot of residuals versus predicted values with the regression line.

The data appeared to meet these assumptions, and so I proceeded to run three regression equations through R Studio. For the regression, I created dummy variables for the categorical variables, “Gender,” “English as a Primary Language,” “University Status,” “Field of Study,” and “Age,” which was banded. Online courses taken was a continuous variable with a minimum of zero and a maximum of twenty.

I chose Video 5 to serve as the constant and thus exclude from the regressions. Though any video could have served in this capacity, Video 5 logically was the preferred choice because it contains the most straightforward script and production approach out of the eight total videos. Video 5’s script is neither instructor-oriented nor student-oriented; the instructor merely describes the course. Video 5’s production style is neither the most professional nor the most informal. Thus, the regressions were run by excluding Video 5. When an independent variable within a regression includes a finite number of categories, one category must be excluded to calculate the coefficients; otherwise, the multiple linear regression assumption of no perfect collinearity is violated, because the variables would correlate perfectly to one another. Removing Video 5 allows me to run the regression without bias.

Regression Equation 1

TP1 = $\beta_0 + \beta_{1x1}$ (video) + β_{2x2} (gender) + β_{2x2} (age) + β_{3x3} (university status) + β_{4x4} (English language) + β_{5x5} (online courses taken) + β_{6x6} (field of study) + e_i

Where,

Video = a vector of dummy variables that capture the eight possible videos: Video 1, 2, 3, 4, 5, 6, 7, and 8. Video 5 was the omitted variable in this equation.

Gender = a vector of dummy variables that capture the respondents' gender: female, male. The survey offered options for non-binary/third gender and prefer not to say, but these received so few responses they were not included in this analysis. Male was the omitted variable in this analysis.

Age = a vector of dummy variables that capture the respondents' age bands: 17 or younger, 18-20, 21-23, 24-26, 27-29, 30-32, 33-35, 36-38, 39 or older. 17 or younger received no responses and thus was not included in this analysis. 18-20 was the omitted variable in this equation.

University Status = a vector of dummy variables that capture the respondents' university status: graduate student, undergraduate student. The survey offered options for non-degree seeking student, faculty, and staff, but non-degree seeking student received so few responses it was not included in this analysis, and faculty and staff were not eligible for this survey. Graduate student was the omitted variable in this analysis.

English Language = a vector of dummy variables that capture the respondents' English speaking status as a primary speaker: Yes, No. No was the omitted variable in this analysis.

Online Courses Taken = a continuous variable that captures the respondents' number of online classes taken, with a minimum of 0 and a maximum of 20

Field of Study: a vector of dummy variables that captures the respondents' field of study: Undecided, Humanities, Social/behavior sciences, Life sciences, Physical sciences, Math, Computer/information science, Engineering, Education, Business management, Health, Vocational/technical, Other technical/professional. Undecided received no responses and thus was not included in this analysis. Education was the omitted variable in this analysis.

TP1 = Teaching Presence 1 is the predicted dependent variable of students' perceptions of teaching presence based upon the Community of Inquiry teaching presence subscale.

Table 23. Residuals of OLS, Dependent Variable = Teaching Presence 1.

Min	1Q	Median	3Q	Max
-2.9484	-0.5513	-0.0444	0.7567	2.1781

Table 24. Results of OLS, Dependent Variable = Teaching Presence 1.

Variable	**Coefficient**	**Std. Error**	**t-value**	**p-value**
(Intercept)	4.751261	0.734026	6.473	<.001***
Video 1	0.252409	0.223925	1.127	0.261505
Video 2	0.071307	0.237211	0.301	0.764143
Video 3	0.212357	0.227944	0.932	0.353072
Video 4	-0.092317	0.210414	-0.439	0.661499
Video 5 (omitted)	-	-	-	-
Video 6	0.276195	0.221996	1.244	0.21544
Video 7	0.139507	0.219996	0.634	0.526987
Video 8	0.239941	0.212775	1.128	0.261307
Age 18-20 (omitted)	-	-	-	-
Age 21-23	-0.517058	0.352881	-1.465	0.145004
Age 24-26	-0.611209	0.446881	-1.368	0.173501
Age 27-29	-0.801645	0.478862	-1.674	0.096259
Age 30-32	-1.081326	0.675921	-1.6	0.111809
Age 33-35	-1.103867	0.576663	-1.914	0.057547
Age 36-38	-1.433459	0.603674	-2.375	0.01887*
Age 39 or older	-1.992786	0.592551	-3.363	0.000985***
Gender-Female	-0.313853	0.248447	-1.263	0.208509
Gender-Male (omitted)	-	-	-	-
English-Yes	-0.172019	0.308224	-0.558	0.577634
English-No (omitted)	-	-	-	-

Table 24. Results of OLS, Dependent Variable = Teaching Presence 1 (continued).

Variable	Coefficient	Std. Error	t-value	p-value
University Status-Undergraduate	-0.220883	0.357597	-0.618	0.537744
University Status-Graduate (omitted)	-	-	-	-
Online Classes Taken	0.037057	0.020296	1.826	0.069919
Field: Humanities	-0.003781	0.453119	-0.008	0.993354
Field: Social/behavior sciences	0.040212	0.376858	0.107	0.915171
Field: Life sciences	1.275896	0.552295	2.31	0.02228*
Field: Physical sciences	0.611632	0.515149	1.187	0.23704
Field: Math	0.564124	0.834909	0.676	0.500318
Field: Computer information science	-0.251163	0.89088	-0.282	0.778399
Field: Engineering	-0.726145	1.144871	-0.634	0.526904
Field: Education (omitted)	-	-	-	-
Field: Business management	0.770878	0.389751	1.978	0.049825*
Field: Health	0.479811	0.327878	1.463	0.145512
Field: Vocational/technical	0.154511	1.143864	0.135	0.892736
Field: Other technical/professional	-0.412881	0.73176	-0.564	0.573464

***Significant at $p<.001$, **Significant at $p<.01$, *Significant at $p<.05$.

Residual standard error: 1.071 on 146 degrees of freedom. (19 observations deleted due to missingness). Multiple R-squared: 0.333, Adjusted R-squared: 0.2006. F-statistic: 2.514 on 29 and 146 DF, p-value: 0.0001736.

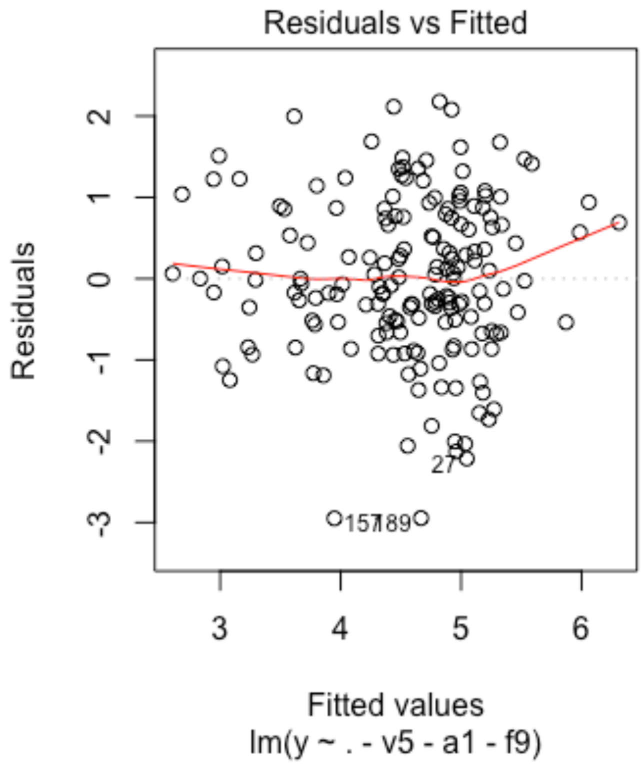

Figure 8. Residuals vs Fitted for Regression Equation 1: TP1.

According to this regression model, the results do not indicate that the chosen video approach significantly influences students' perceptions of teaching presence as measured by the CoI teaching presence subscale.

However, multiple dummy variables pertaining to the age of the student demonstrated significant p-values, indicating the presence of an important relationship between age and perception of teaching presence. The 36-38 and 39 or older age bands in particular displayed a significant relationship to perceptions of teaching presence according to this regression model in comparison with the 18-20 age band, which was omitted for the regression. Additionally, the data from the students in the field of study of either Life sciences of Business management also expressed a significant, predictive relationship to teaching presence in this regression model.

The coefficient of determination, also known as the R-squared value, is 0.333, which indicates that 33% of the dependent variable's variance can be explained by introductory video type, age, gender, university status, English as a primary language, and field of study as shown above. The remainder is explained by unobserved variables.

Regression Equation 2

TP2 = $\beta_0 + \beta_{1x1}$ (video) + β_{2x2} (gender) + β_{2x2} (age) + β_{3x3} (university status) + β_{4x4} (English language) + β_{5x5} (online courses taken) + β_{6x6} (field of study) + e_i

Where,

Video = a vector of dummy variables that capture the eight possible videos: Video 1, 2, 3, 4, 5, 6, 7, and 8. Video 5 was the omitted variable in this equation.

Gender = a vector of dummy variables that capture the respondents' gender: female, male. The survey offered options for non-binary/third gender and prefer not to say, but these received so few responses they were not included in this analysis. Male was the omitted variable in this analysis.

Age = a vector of dummy variables that capture the respondents' age bands: 17 or younger, 18-20, 21-23, 24-26, 27-29, 30-32, 33-35, 36-38, 39 or older. 17 or younger received no responses and thus was not included in this analysis. 18-20 was the omitted variable in this equation.

University Status = a vector of dummy variables that capture the respondents' university status: graduate student, undergraduate student. The survey offered options for non-degree seeking student, faculty, and staff, but non-degree seeking student received so few responses it was not included in this analysis, and faculty and staff were not eligible for this survey. Graduate student was the omitted variable in this analysis.

English Language = a vector of dummy variables that capture the respondents' English speaking status as a primary speaker: Yes, No. No was the omitted variable in this analysis.

Online Courses Taken = a continuous variable that captures the respondents' number of online classes taken, with a minimum of 0 and a maximum of 20

Field of Study: a vector of dummy variables that captures the respondents' field of study: Undecided, Humanities, Social/behavior sciences, Life sciences, Physical sciences, Math, Computer/information science, Engineering, Education, Business management, Health, Vocational/technical, Other technical/professional. Undecided received no responses and thus was not included in this analysis. Education was the omitted variable in this analysis.

TP2 = Teaching Presence 2 is the predicted dependent variable of students' perceptions of teaching presence based upon the Widmeyer and Loy teaching presence subscale.

Table 25. Residuals of OLS, Dependent Variable = Teaching Presence 2.

Min	1Q	Median	3Q	Max
-3.09559	-0.39417	0.09416	0.55903	1.76839

Table 25. Results of OLS, Dependent Variable = Teaching Presence 2.

Variable	**Coefficient**	**Std. Error**	**t-value**	**p-value**
(Intercept)	4.94112	0.67724	7.296	<.001***
Video 1	0.51444	0.20776	2.476	0.0144*
Video 2	0.07305	0.21867	0.334	0.7388
Video 3	0.34789	0.2101	1.656	0.0999

Table 25. Results of OLS, Dependent Variable = Teaching Presence 2 (continued).

Variable	**Coefficient**	**Std. Error**	**t-value**	**p-value**
Video 4	0.27683	0.19407	1.426	0.1559
Video 5 (omitted)	-	-	-	-
Video 6	0.24577	0.20461	1.201	0.2316
Video 7	0.24038	0.20336	1.182	0.2391
Video 8	0.25508	0.19784	1.289	0.1993
Age 18-20 (omitted)	-	-	-	-
Age 21-23	-0.0359	0.32612	-0.11	0.9125
Age 24-26	-0.23409	0.41249	-0.568	0.5712
Age 27-29	0.04407	0.44182	0.1	0.9207
Age 30-32	-0.66964	0.62307	-1.075	0.2843
Age 33-35	-0.52547	0.53232	-0.987	0.3252
Age 36-38	-0.41801	0.55642	-0.751	0.4537
Age 39 or older	-0.60022	0.54715	-1.097	0.2745
Gender-Female	-0.02681	0.22908	-0.117	0.907
Gender-Male (omitted)	-	-	-	-
English-Yes	-0.02376	0.28421	-0.084	0.9335
English-No (omitted)	-	-	-	-
University Status-Undergraduate	-0.17663	0.32952	-0.536	0.5928

Table 25. Results of OLS, Dependent Variable = Teaching Presence 2 (continued).

Variable	Coefficient	Std. Error	t-value	p-value
University Status-Graduate (omitted)	-	-	-	-
Online Classes Taken	-0.02376	0.01886	-1.26	0.2098
Field: Humanities	-0.12807	0.4176	-0.307	0.7595
Field: Social/behavior sciences	-0.04455	0.3473	-0.128	0.8981
Field: Life sciences	0.67977	0.50895	1.336	0.1838
Field: Physical sciences	0.1162	0.47477	0.245	0.807
Field: Math	0.27752	0.76936	0.361	0.7188
Field: Computer information science	0.39699	0.82095	0.484	0.6294
Field: Engineering	-0.01828	1.05498	-0.017	0.9862
Field: Education (omitted)	-	-	-	-
Field: Business management	0.26922	0.35934	0.749	0.455
Field: Health	-0.0862	0.30251	-0.285	0.7761
Field: Vocational/technical	1.61536	1.05516	1.531	0.128
Field: Other technical/professional	-1.18936	0.67488	-1.762	0.0801

***Significant at p<.001, **Significant at p<.01, *Significant at p<.05.

Residual standard error: 0.9865 on 145 degrees of freedom. 20 observations deleted due to missingness. Multiple R-squared: 0.1631, Adjusted R-squared: -0.00433. F-statistic: 0.9741 on 29 and 145 DF, p-value: 0.5105.

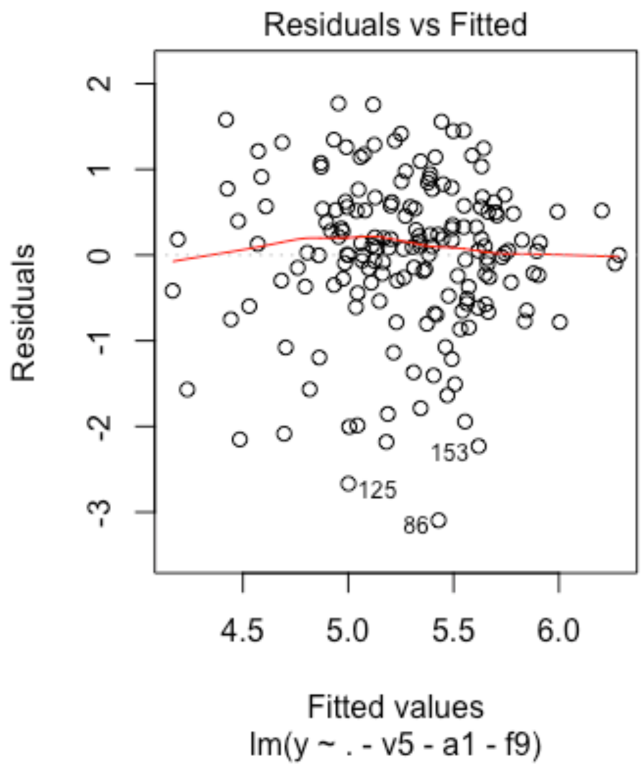

Figure 9. Residuals vs Fitted for Regression Equation 2: TP2.

The results of this regression indicate that only one of these independent variables are statistically effective in predicting the value of Teaching Presence 2, and that particular variable is Video 1. Based upon the results of this regression analysis, we can reasonably infer that the other introductory video approach types and all of the student characteristics do not have a significant effect on the Teaching Presence 2 score, as measured by the Widmeyer and Loy warmth scale. However, this model could indicate that choosing the Video 1 approach (active body language, smiling, professional production), may result in a higher student perception of Teaching Presence, as measured by the CoI teaching presence subscale.

This R-squared indicate that only 16.31% of the teaching presence effects are explained by introductory video type, age, gender, university status, English as a primary language, and field of study. This reveals to me that comparatively, the scale used to generate teaching presence 1 may be a better fit for the data than the scale used to generate teaching presence 2. If limited to using the scale developed by Widmeyer and Loy to assess teaching presence through online introductory videos, one might consider identifying and including other key variables in the error term which may not be held constant in this model and which could have a more significant relationship with the dependent variable of teaching presence. However, selecting the CoI teaching presence subscale in this study, analyzed through a regression model as aforementioned, seems to be a more effective instrument for capturing the effects of student perceptions of teaching presence as mediated through introductory videos.

Regression Equation 3

$SP = \beta_0 + \beta_{1x1}$ (video) + β_{2x2} (gender) + β_{2x2} (age) + β_{3x3} (university status) + β_{4x4} (English language) + β_{5x5} (online courses taken) + β_{6x6} (field of study) + e_i

Where,

Video = a vector of dummy variables that capture the eight possible videos: Video 1, 2, 3, 4, 5, 6, 7, and 8. Video 5 was the omitted variable in this equation.

Gender = a vector of dummy variables that capture the respondents' gender: female, male. The survey offered options for non-binary/third gender and prefer not to say, but these received so few responses they were not included in this analysis. Male was the omitted variable in this analysis.

Age = a vector of dummy variables that capture the respondents' age bands: 17 or younger, 18-20, 21-23, 24-26, 27-29, 30-32, 33-35, 36-38, 39 or older. 17 or younger received no responses and thus was not included in this analysis. 18-20 was the omitted variable in this equation.

University Status = a vector of dummy variables that capture the respondents' university status: graduate student, undergraduate student. The survey offered options for non-degree seeking student, faculty, and staff, but non-degree seeking student received so few responses it was not included in this analysis, and faculty and staff were not eligible for this survey. Graduate student was the omitted variable in this analysis.

English Language = a vector of dummy variables that capture the respondents' English speaking status as a primary speaker: Yes, No. No was the omitted variable in this analysis.

Online Courses Taken = a continuous variable that captures the respondents' number of online classes taken, with a minimum of 0 and a maximum of 20

Field of Study: a vector of dummy variables that captures the respondents' field of study: Undecided, Humanities, Social/behavior sciences, Life sciences, Physical sciences, Math, Computer/information science, Engineering, Education, Business management, Health, Vocational/technical, Other technical/professional. Undecided received no responses and thus was not included in this analysis. Education was the omitted variable in this analysis.

SP = Social Presence is the predicted dependent variable of students' perceptions of social presence based upon the Widmeyer and Loy social presence subscale.

Table 26. Residuals of OLS, Dependent Variable = Social Presence.

Min	1Q	Median	3Q	Max
-1.51443	-0.29488	-0.01539	0.29797	1.56569

Table 27. Results of OLS, Dependent Variable = Social Presence.

Variable	Coefficient	Std. Error	t-value	p-value
(Intercept)	3.9581336	0.3861055	10.251	<.001***
Video 1	0.4420257	0.1184459	3.732	0.000272***
Video 2	0.1140384	0.1246655	0.915	0.361839
Video 3	0.2891366	0.1197799	2.414	0.01703*
Video 4	0.1792059	0.110644	1.62	0.107478
Video 5 (omitted)	-	-	-	-
Video 6	0.3297037	0.1166534	2.826	0.005373**
Video 7	0.3071832	0.1159419	2.649	0.008956**
Video 8	0.3201811	0.1127915	2.839	0.00518**
Age 18-20 (omitted)	-	-	-	-
Age 21-23	0.0207585	0.1859251	0.112	0.911255
Age 24-26	-0.078892	0.2351677	-0.335	0.737754
Age 27-29	-0.123547	0.2518882	-0.49	0.624533
Age 30-32	-0.2578861	0.355224	-0.726	0.46902
Age 33-35	-0.2323564	0.3034846	-0.766	0.445142
Age 36-38	-0.3393983	0.3172241	-1.07	0.286442
Age 39 or older	-0.1785265	0.3119388	-0.572	0.567996
Gender-Female	0.070389	0.1306052	0.539	0.590751
Gender-Male (omitted)	-	-	-	-
English-Yes	0.1418896	0.1620314	0.876	0.382646
English-No (omitted)	-	-	-	-
University Status-Undergraduate	-0.1923837	0.1878674	-1.024	0.307522
University Status-Graduate	-	-	-	-
Online Classes Taken	0.0046693	0.010754	0.434	0.664797

Table 27. Results of OLS, Dependent Variable = Social Presence (continued).

Variable	Coefficient	Std. Error	t-value	p-value
Field: Humanities	-0.357088	0.2380844	-1.5	0.135831
Field: Social/behavior sciences	-0.287793	0.1980001	-1.453	0.148246
Field: Life sciences	0.2605125	0.2901613	0.898	0.37077
Field: Physical sciences	-0.1878394	0.2706742	-0.694	0.488812
Field: Math	0.4764478	0.4386252	1.086	0.27918
Field: Computer information science	0.0005531	0.4680415	0.001	0.999059
Field: Engineering	-0.0987354	0.6014626	-0.164	0.869835
Field: Education (omitted)	-	-	-	-
Field: Business management	0.0354556	0.2048691	0.173	0.862842
Field: Health	-0.2381687	0.1724684	-1.381	0.169422
Field: Vocational/technical	0.4711892	0.6015691	0.783	0.434748
Field: Other technical/professional	-0.6617992	0.3847604	-1.72	0.087561

Residual standard error: 0.5632 on 144 degrees of freedom. Multiple R-squared: 0.2395.

Adjusted R-squared: 0.08109 . F-statistic: 1.512 on 30 and 144 DF, p-value: 0.05731

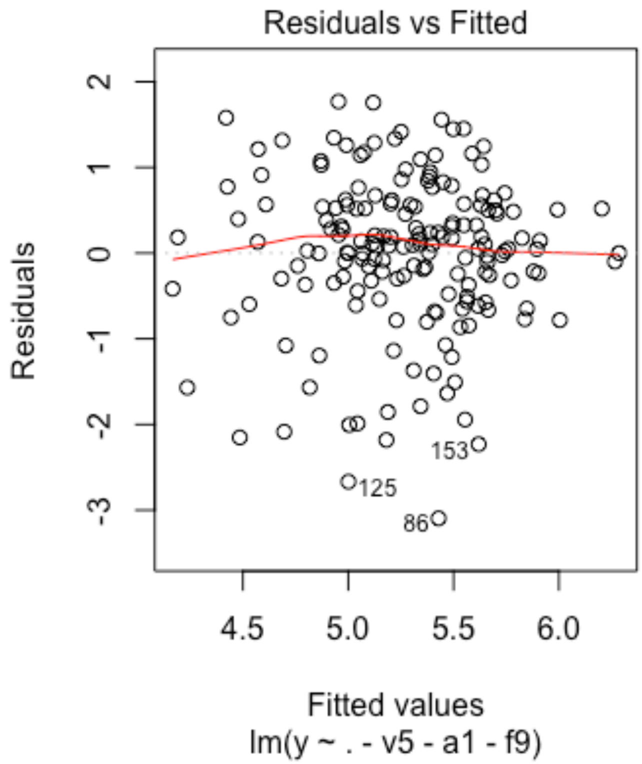

Figure 10. Residuals vs Fitted for Regression Equation 3: SP.

Ceteris paribus, or holding all other factors constant, this model predicts that choosing an alternate introductory video approach such as Video 1(active body language and smiling), Video 3(voiceover only with no instructor visible, student-oriented script), Video 6 (professional studio setting), or Video 8 (the interview style in a studio), may result in a higher student perception of Social Presence, as measured by the Widmeyer and Loy warmth subscale, as compared to choosing the Video 5 (course-oriented, stoic body language, green screen) approach.

Based upon the results of this regression analysis, we can reasonably infer that certain video types similar to Video 1, Video 3, Video 6, Video 7, and Video 8, has a positive effect on student perceptions of teaching presence, and it is statistically significant. Specifically, choosing a video approach such as Video 1 which emphasizes using active body language and positive facial expressions can potentially predict a higher social presence score by 0.44. Video 3 represented the instructor's approach of not being visible on camera but rather recording voiceover narration over a series of graphics and slides; the regression model indicates here that choosing this approach could predict a social presence score which would be higher by 0.29. Choosing a video approach such as Video 6, in which the instructor is seated, delivering a script in a studio setting, has edited the video professionally, and is speaking a script which is a mix of course-oriented with a personal touch, can result in a 0.33 uptick on this social presence scale. Video 7, representing the instructor's informal talking head recording in a residential setting rather than a studio while voicing course-oriented script with a brief personal touch, may be an approach which also could predict a high social presence score; the regression model indicated this approach could result in 0.31 units higher in students' perception of social presence. Lastly, selecting a video approach similar to Video 8, the interview style video in a studio, professionally edited, can result in a predicted 0.005 unit rise in the social presence score.

The R-squared value is 0.2364, which indicates that nearly 24% of the dependent variable's variance can be explained by introductory video type, age, gender, university status, English as a primary language, and field of study, and the rest would be explained by unobserved variables.

Other Analyses

"Not able to determine from the video." I was interested to see to what degree students felt they could gauge instructors' characteristics as a result of only the introductory video, and whether various styles of videos enabled students to gauge instructors on more characteristics than other styles. As such, I calculated the totals of how many "Not able to determine from the video" responses were received by each video and by each instructor characteristic.

Table 28. "Not able to determine from the video" response counts by video, ordered from greatest to least.

Video 5	**Video 7**	**Video 6**	**Video 4**	**Video 3**	**Video 8**	**Video 1**	**Video 2**
249	207	193	188	181	179	177	148

Chi-square goodness-of-fit test results: Students' "Not able to determine from the video" responses did differ by video type, X^2(df = 7, n = 8) = 0.000059, p = .001.

Video 5 had the highest count of "Not able to determine from the video" responses; Video 5 entailed the course-oriented script filmed in a professional studio in which the instructor is stoic and straightforward. Unlike other videos in which the script was more instructor-oriented (Video 4) or student-oriented (Videos 1, 2, and 3), or which were filmed informally in a residence (Video 7) or formally in a studio individually (Video 6) or as an interview (Video 8), Video 5 is perhaps one of the most common formats and thus is used as the baseline for the regression model in this study. Interestingly, even the voiceover-only video in which the instructor is not visible (Video 3) had fewer "Not able to determine from the videos" than Video 5, as shown in the table.

Table 29. "Not able to determine from the video" responses by instructor characteristic, ordered from greatest to least.

Instructor Characteristic	Count of "Not able to determine from Video Responses"	Instructor Characteristic	Count of "Not able to determine from Video Responses"
Unintelligent	168	**Good-natured**	69
Doesn't Know Material	160	**Weak Personality**	51
Modest	138	**Unsociable**	48
Submissive	136	**Boring**	32
Humane	134	**Informal**	25
Not Organized	126	**Interested**	24
Self-centered	113	**Pleasant**	14
Humorless	100	**Difficulty Communicating**	13
Cares	88	**Comfortable**	12
Uncertain of Self	71		

Chi-square goodness-of-fit test results: Students' "Not able to determine from the video" responses did differ by instructor quality, X^2(df = 18, n = 19) = 3.7302E-124, p = .001.

Teaching Presence Correlation with Social Presence. The warm/cold scale originally developed by Kelley (1950) and updated by Widmeyer and Loy (1988) enables student respondents to rank instructors on the quality of their warmth. The authors state that if students perceive an instructor as warm, this can influence students' perceptions of the instructor's teaching abilities (Widmeyer & Loy, 1988, p. 120). To test whether this was true in the context of online education, I also conducted a statistical analysis to compare the means of the warmth score for each instructor against the means of the teaching presence score measured by the teaching presence subscale and the second teaching presence score measured by the mean of responses to items from the Widmeyer and Loy scale.

Table 30. Correlations between Teaching Presence 1 (TP1), Teaching Presence 2 (TP2), and Social Presence (SP) by Video.

	Video 1	Video 2	Video 3	Video 4	Video 5	Video 6	Video 7	Video 8
TP1 and TP2	r(33) = .30, p = .08	r(40) = .57, p<.001***	r(31) = .33, p = .06	r(29) = .27, p = .14	r(32) = .53, p=.0012**	r(33) = .53, p=.0011**	r(35) = .57, p<.001***	r(35) = -.03, p = .85
TP1 and SP	r(37)=.51, p<.001*	r(29) = .42, p = .02*	r(27) = .44, p = .02*	r(39) = .11, p = .49	r(22) = .62, p=.0012**	r(32) = .49, p=.003**	r(34) = .29, p = .09	r(35) = -.05, p = .78
TP2 and SP	r(25)=.71, p<.001***	r(25) = .65, p<.001***	r(24) = .77, p<.001***	r(25) = .69, p<.001***	r(20) = .65, p=.0012*	r(26) = .76, p<.001***	r(27) = .61, p<.001***	r(29) = .77, p<.001***

***Significant at the p<.001 level, **Significant at the p=.01 level, *Significant at the p=.05 level

The consistent correlation at p<.001 between the measure of Teaching Presence 2 (TP2) and Social Presence (SP) is expected, as these items were drawn from the same scale by Widmeyer and Loy. Thus, it does seem that teaching presence and social presence are correlated when using the TP2 measure, which confirms the authors' assertion.

Additional Correlation: "Interested in Taking Course with This Instructor," Video Type, and Teaching Presence and/or Social Presence Score

Introductory videos are often shown on one of the first pages within an online course site and are only displayed once a student has enrolled in the course. Students may make a decision based upon their initial impressions of the instructor's teaching and social presence as to whether they would like to stay in the course or drop it. Similar to the structure of the items comprising the social presence scale, I created a new seven-item Likert scale question asking, "How interested are you in taking a course taught by this instructor?" in order to investigate whether there might be an association between students' sense of interest in a course with this instructor and the introductory video type or, more generally, the teaching or social presence score. Comparing the means and conducting a Pearson's product-moment correlation enabled me to examine the relationship between these two. To reiterate, this "Interested in Taking a Course with the Instructor" score was not included in the calculations for Teaching Presence 1, Teaching Presence 2, or Social Presence variables. As shown in the table below, the results indicate a consistent thread of correlation between this measure and both measures of teaching presence and the measure of social presence. The effects are strongest in Videos 1, 2, 5, 7, and 8.

Table 31. "Interested in Taking a Course with This Instructor" Response Correlation with Overall Teaching and Social Presence Scores by Video.

	Video 1	**Video 2**	**Video 3**	**Video 4**	**Video 5**	**Video 6**	**Video 7**	**Video 8**
Mean	5.11	3.55	4.34	3.05	2.57	4.51	4.89	4.61
TP1 Score	r=0.38, p=.002**	r=0.45, p<.001***	r=0.31, p=.02*	r=0.006, p=.96	r=0.51, p<.001***	r=0.34, p=.006**	r=0.55, p<.001***	r=0.35, p=.005**
TP2 Score	r=0.39, p=.002**	r=0.53, p<.001***	r=0.15, p=0.24	r=0.39, p=0.001**	r=0.46, p<.001***	r=0.32, p=0.01*	r=0.37, p=0.002**	r=0.36, p=0.004**
SP Score	r=0.46, p<.001***	r=0.51, p<.001***	r=0.29, p=0.02*	r=0.31, p=0.01*	r=0.51, p<0.001***	r=0.31, p=0.01*	r=0.46, p<.001***	r=0.35, p=0.005**

***Significant at p<.001, **Significant at p<.01, *Significant at p<.05.

Additional Correlation: "Comfortable Asking Instructor a Question," Video Type, and Teaching Presence and/or Social Presence Score

As described in the literature review, the importance of online community is often found in students' decision to engage with their instructor and others. I chose to include a new 7-point

Likert scale question to serve as a soft proxy for students' feeling that they would engage with this instructor: "How comfortable would you be asking this instructor a question?" Comparing means and conducting a correlational analysis using the Pearson's Product-Moment Correlation Coefficient analysis, which measures the strength of association between continuous or ordinal variables. Analysis of the responses to this question across videos reveals the following comparison. To reiterate, this "Comfortable Asking Instructor a Question" score was not included in the calculations for Teaching Presence 1, Teaching Presence 2, or Social Presence variables. As shown in the table below, the results indicate a thread of correlation between this measure and the first measure of teaching presence (TP1) and the measure of social presence (SP). The effects are strongest in Videos 2, 5, 7, and 8.

Table 32. "Comfortable Asking This Instructor a Question" Response Correlation with Overall Teaching and Social Presence Scores by Video.

	Video 1	**Video 2**	**Video 3**	**Video 4**	**Video 5**	**Video 6**	**Video 7**	**Video 8**
Mean	6.12	4.62	5.97	4.12	3.73	5.67	6.04	5.92
TP1 Score	r=0.20, p=.12	r=0.48, p<.001***	r=0.38, p=.002**	r=0.15, p=.24	r=0.29, p=.02*	r=0.30, p=.01*	r=0.39, p=.001**	r=0.24, p=.06*
TP2 Score	r=0.20, p=.11	r=0.35, p=.004**	r=0.21, p=.10	r=0.11, p=.36	r=0.25, p=.048*	r=0.23, p=.07	r=0.22, p=.07	r=0.41, p<.001***
SP Score	r=0.33, p=.006**	r=0.31, p=.02*	r=0.16, p=.20	r=0.03, p=.51	r=0.37, p=.003**	r=0.24, p=.05	r=0.31, p=.01*	r=0.28, p=.02*

***Significant at p<.001, **Significant at p<.01, *Significant at p<.05.

Additional Correlation: "Cares About Your Learning," Video Type, and Teaching Presence and/or Social Presence Score

I was curious to examine whether empathy was conveyed to the student through the introductory video presentation, whether it was due to body language, facial expression, script, or other elements. To gauge whether students responded differently to the instructor's expression of caring about the students' learning, I created a new 7-point Likert scale called, "To what degree does this instructor care about your learning?" As with the previous two additional analyses, I compared the means as well as ran correlation to assess a potential association between this measure of sense of caring and video type. To reiterate, this "Cares About Your Learning" score was not included in the calculations for Teaching Presence 1, Teaching Presence 2, or Social Presence variables. As shown in the table below, the results indicate a consistent thread of correlation between this measure and both measures of teaching presence and the measure of social presence. The effects are strong in all videos except for Video 4, which had the distinguishing characteristic of being the "instructor-oriented" script.

Table 33. "Cares About Your Learning" Response Correlation with Overall Teaching and Social Presence Scores by Video.

	Video 1	**Video 2**	**Video 3**	**Video 4**	**Video 5**	**Video 6**	**Video 7**	**Video 8**
Mean	6.33	5.03	6.06	3.92	4	5.97	5.85	5.72
TP1 Score for Video	r=0.37, p=.002**	r=0.52, p<.001***	r=0.30, p=.02*	r=0.21, p=.15	r=0.62, p<.001***	r=0.59, p<.001***	r=0.47, p<.001***	r=0.46, p<.001***
TP2 Score for Video	r=0.37, p=.002**	r=0.45, p<.001***	r=0.32, p=.02*	r=0.36, p=.01*	r=0.56, p<.001***	r=0.52, p<.001***	r=0.39, p=.002**	r=0.56, p<.001***
SP Score for Video	r=0.36, p=.003**	r=0.38, p=.002**	r=0.37, p=.004**	r=0.35, p=.01*	r=0.62, p<.001***	r=0.39, p=.004*	r=0.28, p=.03*	r=0.53, p<.001***

***Significant at p<.001, **Significant at p<.01, *Significant at p<.05

Qualitative data

The survey contained opportunities for respondents to share qualitative responses. Using Qualtrics' text analysis tool, I reviewed the responses to these questions.

Q10 asked, "What other qualities do you expect of an online instructor?" Respondents could enter their own expected qualities beyond the previous question's list of 16 traits. After coding these responses, the majority of other qualities not yet listed included "Responsive," "Good communicator," "Understanding," "Available," "Tech Savvy," and "Aware." Responsive was interpreted to mean rapidly responding via email. Good communicator was often expressed as someone who outlines expectations clearly and explains topics well. Understanding seemed to be a desire that the instructor be empathetic to students' other responsibilities beyond the classroom and forgiving of errors or lateness. Available indicated the instructor had the time and means to meet with students in person or virtually for questions. Tech savvy was a quality I expected to see when asking about desired traits for an online instructor; students wished to see their instructor be competent in technologies used in the course. Aware was another frequent comment, asking that the instructor be in tune with the students' schedules, cultures, and social events relevant to the students.

Q11 asked if there were other formats of instructor introduction the respondent preferred beyond prerecorded video, audio, text, photo, synchronous video chat, or multimedia presentations. Though most responses were repeats of the suggested formats for instructor introduction, a few new formats emerged from the responses: pre-recorded videos to introduce a live video chat, email, a copy of the syllabus in advance of the course, an About Me webpage, or interactive games or modules. These responses were very few; the majority of the dataset were content to select from the previous options.

Q12 asked what the respondent expected an instructor to convey in an introduction, in terms of content rather than the previous question's focus on format. Common themes throughout the data included course expectations, including deadlines, communication guidelines, rules, class schedule, goals, and the instructor's story, including their personal interests, educational and career background, and expectations.

The final survey question asked students which of the videos they preferred most out of the videos they were shown and why. Respondents often went into great depth on this question, offering balanced perspectives, such as this one: "The instructor seemed easy to talk to, down to earth, and kind. However- the most important quality to me in an online course instructor is organizational skills, which was unclear from the video." Other notable quotes expressed students' desires for their instructor to express himself or herself personally: "I want to hear about them and feel like they are human." Most often the respondents justified their preferred video by using adjectives such as, "more natural," "personable," "down-to-earth," "informal," "sociable," "willing to help," "friendly," "inviting," and other words evocative of a more relaxed, casual, open attitude. Many respondents praised the instructor in the video for being "confident" and "energetic" and "pleasant yet professional." However, some respondents stated they preferred more formal, professionally-developed videos, and their comments focused more on the production quality of the video rather than the instructor's mannerisms or statements.

CHAPTER FIVE: DISCUSSION

"Not everything that can be counted counts, and not everything that counts can be counted." —

Albert Einstein

"Data! Data! Data!" he cried impatiently. "I can't make bricks without clay." —

Sir Arthur Conan Doyle, *The Adventure of the Cooper Beeches*

It is now time to reflect upon the findings as presented and the greater context of these results and their implications. The quote above credited to theoretical physicist Albert Einstein expresses the challenge of comprehensively conveying the meaning of these results, and the quote from fiction writer Sir Arthur Conan Doyle expresses the necessity of doing so. To apply Einstein's wisdom to these results is to acknowledge that some statistical results are more important than others, and some data relevant to these research questions exceeded the scope of this study. And yet, presenting the meaning of these data is imperative in order for us to develop academic theories for future research and offer practical implications, or "make bricks," as Sir Arthur Conan Doyle's character exclaims. Analyzing the data and developing implications from the findings require both science and creativity, as Einstein and Doyle imply.

In this chapter, I revisit the purpose statement posted in the beginning of this study and reframe the research questions and results now illumined by the findings. I intentionally connect findings to the studies included in the literature review, in order to place this study within the landscape of related studies in this area. I describe the limitations of the study in order that readers might correctly understand what this study is and is not, and to share the opportunities for further exploration uncovered by this study. Lastly, I offer implications for theoretical investigation and professional practice.

Discussion and interpretation of findings

I embarked on this study with the intent to examine the association between student characteristics and their expectations of online instructors and introductions, and the association between selected characteristics of an introductory video from the physical, verbal, and video production dimensions and students' perceptions of the instructor's teaching and social presence. More broadly, this study was imagined in order to add to the scholarly understanding of the teaching and social role of the instructor in the online classroom and focus upon students' perspective on the instructor's introduction and various introductory video approaches as a means of initiating that role. In other words, I was intrigued by what students with certain characteristics wanted to learn from their instructor in the introduction and whether various video types could predict students' perceptions of the dual roles of teaching presence and social presence of the online instructor.

To seek understanding in these areas, I posed the following research questions:

1. Which characteristics of students are related to their expectations of online instructors' qualities?
2. Which characteristics of students are related to their preferences regarding online course video introductions?
3. Which characteristics of online course video introductions are associated with students' perceptions of the teaching and social presence of the instructor?

Though other studies have touched on elements of these questions, this study addresses them collectively in a way that is specific to online courses and to introductory videos, which are a foundational element in initiating online class community and introducing the role of the instructor. Other studies have examined other types of video found in online courses, such as lecture videos, or weekly video announcements, and yet no studies to my knowledge have specifically focused on introductory videos' role in cultivating instructors' teaching and social presence. The survey instrument enabled me to gather responses from 200 undergraduate and graduate students enrolled at various institutions in the U.S. In this survey, these students responded to demographic questions and questions about their expectations for online instructions and introductions, and then students rated three of eight possible introductory video examples according to a series of items designed to measure elements of teaching and social presence. I have analyzed the data by running statistical analyses on the responses and coding qualitative data entries from the survey and presented results tied to each research question. Now, the interpretations and implications of those results are as follows.

Research Question 1: Which characteristics of students are related to their expectations of online instructors' qualities?

After comparing student characteristics of gender, age, university status as an undergraduate or graduate student, field of study, and number of online courses taken, the chi-square analyses reveal that there are certain statistically significant associations between those characteristics and students' expected qualities of online instructors.

The following pairings were significant:

1. Gender and the expectations an instructor will be humane,
2. University status and the expectation an instructor will be pleasant, sociable, have a strong personality, humane, considerate of the class, and interesting,
3. Age and the expectation an online instructor will be formal,
4. Primarily English-speakers and the expectation an online instructor will be organized and communicate well,
5. Field of study and the expectation an online instructor will be self-assured.

From these pairings, I conducted a post hoc test to examine the direction of the relationship and developed this summary statement:

Females were more likely than males to expect online instructors to be humane. Undergraduate students were more likely than graduate students to expect online instructors to be pleasant, sociable, and have a strong personality, and graduate students were more likely than undergrads to expect online instructors to be humane, considerate of the class, and interesting. Students aged 18-20 are more likely than students of other ages to expect online instructors to be formal and to have a strong personality. Students who speak English as a primary language are more likely to expect online instructors to be organized and to communicate well. Students who are studying health are more likely to expect their online instructor to be self-assured than students in other fields of study.

Qualitative responses from students added to the list of expected traits by expressing earnest desire for online instructors to be responsive, available, understanding, and aware.

Now knowing that certain types of students vary in their expectations of online instructor qualities, it underscores the importance of considering what types of students are in one’s online course. Student background and experience informs their expectations, level of engagement, and other aspects requisite for learning. This idea is not new; scholars in the area of multicultural education and culturally responsive teaching have been prolific in urging educators to elicit backgrounds from students in order to make connections, comprehend student perspectives, and adapt instructional styles to increase engagement, rapport, and the likelihood of student achievement (Gay, 2000; Nieto, 2000; Banks, 1994). Additionally, scholars in the field of andragogy exhort practitioners to learn about and engage with adult students’ existing experience, as it is the framework an adult has built over time and which he or she relies upon to accumulate and organize new knowledge and skills (Conaway & Zorn-Arnold, 2015; Knowles, 1978). By seeking out student expectations of their online instructor, an instructor learns what students value, what fears they may have, and how the instructor can be of utmost support to the student during the learning experience.

The students within online classes, like face-to-face classes, influence the culture of the class. One popular saying among instructors is "I teach students, not subjects," emphasizing that instructors adapt their teaching to each class of students, and the qualitative comments from students express the desire for that perspective from their instructors that quite clearly. Students repeatedly voiced the need for instructors to be "responsive" to their needs, "aware" of student activity and "understanding" of their other responsibilities and time constraints beyond the classroom. It may be that "understanding" is similar to "Humane" in the students' parlance, as the descriptions of understanding emphasized the instructor's sense of empathy, forgiveness, and mercy. These written comments corroborate the statistical findings which showed the expected qualities most often selected: Communicates Well was second most frequent and Considerate of the Class was fourth most frequent.

It is interesting to note which of the expected characteristics did not figure strongly in either the quantitative or qualitative findings. The expected online instructor qualities of "Proud" and "Dominant" had the fewest amount of responses. Thus, for this sample, the demand for these qualities seems to be minimal in comparison to the other qualities listed.

Research Question 2: Which characteristics of students are related to their preferences regarding online course video introductions?

After comparing student characteristics of gender, age, university status as an undergraduate or graduate student, field of study, and number of online courses taken, the chi-square analyses reveal that there are certain statistically significant associations between those characteristics and students' preferred formats for their online instructors' introductions:

The following pairings were significant:

- University status and preference for text and photo
- English as a primary language and preference for synchronous video chat
- Field of study and preference for multimedia presentations

From these pairings, I conducted a post hoc test to examine the direction of the relationship and developed this summary statement:

Undergraduate students were more likely to strongly prefer text and photo introductions than graduate students, though graduate students were more likely to prefer text than undergraduate students. Students who do not speak English as a primary language were more likely to strongly prefer or prefer synchronous video chat. Students studying humanities or business/management were more likely than students in other fields of study to strongly prefer or prefer multimedia presentation introductions from their online instructors. Students studying health were more likely than students in other fields of study to not prefer multimedia presentations introductions. Students studying social/behavioral sciences were more likely than other students in other fields of study to have no preference on multimedia presentation introductions.

In reflecting on the implications, the results are reminiscent of Mayer's multimedia studies. Mayer's cognitive theory of multimedia learning states that "people learn more deeply from words and pictures than from words alone," for the reason that the mind can only process a finite amount of information a time, and so it efficiently creates mental constructs from audiovisual information to integrate new information with prior knowledge (Mayer, 2009, p. 47). Building upon Mayer's theory, this study's findings indicate that students are forming mental constructs of their instructor during the introductory video, and that their mental constructs differ in response to various video approaches.

Research Question 3: Which characteristics of online course video introductions are associated with students' perceptions of the teaching and social presence of the instructor?

The three regression analyses revealed which characteristics in the model are associated significantly with students' perception of the instructor's teaching and social presence: the most important conclusion is that introductory video type does have a significant predictive influence upon social presence, especially with certain video types similar to Video 1, Video 3, Video 6, Video 7, and Video 8. The salient features of these videos responsible for student perception of social presence are most likely the student-oriented script, the active body language and welcoming facial expressions, the relaxed attitude of the professor, and the professional editing of the video.

Two regressions found introductory video approach for the most part did not have a predictive influence upon students' perceptions of teaching presence using either scale. All variables being equal, Video 1 does have a predictive influence on teaching presence score as measured by the Widmeyer and Loy warmth scale. However, the regression model did reveal that age bands 21-23, 24-26, and 27-29 have a significant relationship to predicting teaching presence score as measured by the CoI teaching presence subscale as compared with the 18-20 age band.

The discovery that certain types of video introductions can have a predictive influence on students' perceptions of social presence is particularly fruitful. As described in the literature review of Chapter II, previous scholars have identified social presence as a core component of a successful online learning experience. Hackman and Walker (1990) determined that social presence in a televised classroom can strongly affect student learning and satisfaction. Garrison, Anderson, & Archer (1999) developed a working definition of social presence as the ability of instructors to project their personal characteristics into the community; in an online course, the introductory video is one vehicle for initiating this social presence. As the authors state, "The primary importance of this element [social presence] is its function as a support for cognitive presence, indirectly facilitating the process of critical thinking carried on by the community of learners. However, when there are affective goals for the educational process, as well as purely cognitive ones, ... then social presence is a direct contributor to the success of the educational experience."

Additionally the teacher immediacy behaviors in the literature review did make a difference in student perceptions of social presence, namely the active body language and student-oriented script. The use of the student oriented script referring to students as "you" and the class as "we" supports Mehrabian's (1969) suggestion that the use of these pronouns connotes feelings of closeness as a teacher immediacy behavior. The video scripts which were course-oriented but included brief references to personal detail such as family are known as "phatics" in teacher immediacy literature; these statements serve to generate a sense of unity and establish a mood of sociability.

Through this study, I hope to have added to our understanding of social presence in online community, thus aiding in some small way to address the gap stated by Pollard, Minor, and Swanson (2014): "A need for an examination of instructor social presence still exists" (p. 2).

Other Analyses

Inspired by curiosity to examine additional patterns in the data, I conducted other analyses to examine the associations between the measures of teaching and social presence against softer measures I created. These three additional question items were not taken from the CoI teaching presence subscale nor the Widmeyer and Loy instructor warmth scale; rather, I created them.

To my surprise, the three variables of "Interested in Taking a Course with This Instructor," "Comfortable Asking This Instructor a Question," and "Cares About Your Learning" show consistent correlation according to the Pearson Product-Moment Correlation analyses run between their summative scores per video and TP1, TP2, and SP, with some variation. The responses to "Interested in Taking a Course with This Instructor" were correlated with each video except for Video 3 and 4. Video 3 was the voiceover-only approach, in which the instructor was not visible, and Video 4 was the instructor-oriented video. It seems that the visibility of the instructor may be the salient issue here; without seeing the instructor, the students' interest in taking a course with the instructor was less associated with this video. Video 4, in which the instructor is visible but devotes the time to describe his own accomplishments and background rather than describing the course or speaking directly to the students, also seems to have had less of a connection for students. For the correlation between the response to whether the instructor cares about your learning and social presence score, the effects are strong in all videos except for Video 4, which had the distinguishing characteristic of being the "instructor-oriented" script. I interpret this to indicate that although leveraging an instructor-oriented approach through video emphasizing one's credentials, experience, and other facts moreso than information about the course or students is certainly one approach to developing a social presence in an online course, it appears to result in less of an association with the social presence score according to the Widmeyer and Loy warmth scale. This may be because some students respond well to this instructor-oriented style, whereas others tend to reject this approach and score it more lowly on the social presence scale. This approach may be polarizing to students, resulting in more extreme scores and a higher measure of spread than other questions. This uncertainty reveals the need to research the effects of this instructor-oriented approach in introductory videos further, perhaps by conducting exploratory factor analysis on this question in particular, to examine it in the context of online social presence especially.

Limitations of the study

This study is limited by the nature of its design, the selection of video characteristics to only those examined, the sample, variations between videos, and the generalizability of results. This study's design involved an online survey featuring a series of brief introductory video examples embedded within.

The strengths of this study are its promising findings, which can lead to greater social presence if implemented in practice and many research avenues to explore, and a sample which may be generalized to other higher education online communities. The primary weaknesses of this study may be the social presence scale needs refinement and may be hard to identify which characteristics of videos are responsible for student perceptions, and though evidence of statistical association is present for first two research questions, hard to know to what degree the expectations and preferences vary by student characteristic.

An introductory video does not fully address students' many questions about their instructor and the course, as is evidenced by the first table in the other analyses section displaying the "Not able to determine from the video" responses. Students varied in what they were able to determine from the video in terms of the specific instructor qualities. For the most part they were uncertain if the instructor was intelligent, knew the material, was proud or modest, dominant or submissive, organized or not, or self-centered. In the qualitative comments students specifically referenced their uncertainty if the instructor was organized based only upon the video. Many respondents stated "Organized" was one of their top desired qualities for an online instructor, and that the video alone did not convey that. Thus, for practitioners, an effort to express these traits such as organization may ease students' concerns. Perhaps discussing the course plans, structure, and syllabus, or describing one's own planning process for the course, would assist in conveying a greater sense of an instructor's organization within the introductory video. The other analyses also revealed that teaching presence is correlated with social presence for the majority of the videos, especially when using the second measure of teaching presence.

The distribution of this survey influenced the pool of respondents. Sending out the survey through a national, professional organization aided in spreading out the distribution to other geographic areas, but the majority of respondents are likely concentrated in the southeastern United States, which may limit the generalizability of the results. However, to me this area is murky; though students are enrolled at a certain institution in the southeastern United States, this does not necessarily mean the student is from that same area, and may not be culturally represented by that area even if so. Also, online courses tend to attract students from many locations, due to the removal of the constraint of being physically located near the institution, and thus geographic location held less importance from my perspective when analyzing these research questions. Still, other factors may have limited the distribution and excluded other students who would have contributed useful responses and represented the general online higher education student population. For example, although I made every effort to ensure the survey and videos would be accessible to visually-impaired and hearing-impaired potential respondents through the use of live text and captions, this survey design may have excluded some students due to accessibility. Also, some students may have inadvertently excluded themselves; a few potential respondents contacted me to ask whether this survey was only for online students. Though I confirmed it was open to all students regardless of their past or current experience with online courses, other students may have assumed this survey was not for them if they were not enrolled in an online program.

The effects of this study may be limited to online courses. It is possible that students' perceptions of teaching and social presence of their instructors in a face-to-face classroom would be similarly affected by watching a prerecorded video introduction of their instructor, but it is not known and was not included as a comparison in this study.

I created eight common approaches to delivering online introductory videos; there are countless other creative ways that an online video introduction could be created. These represent common approaches, but hybrids of these approaches and entirely new approaches are certainly well within the realm of possibility for online course introduction videos.

The same instructor and fictitious script was included in this video for the purpose of keeping that variable as constant as possible. However, other research has shown that students perceive instructors differently based upon the instructor's appearance, such as gender, clothing, appearance, perceived level of attractiveness, dialect, body language, and by which field the instructor may be teaching in. As such, future research could compare between various instructors, other disciplines, and other variables.

This study is also limited by its design of showing three videos only to each participant, rather than all eight. If compensation could have been secured for participants or participants had more time, perhaps all eight could have been shown. However, given that participants were voluntarily participating without compensation and had other constraints on their time, I made the decision at the urging of the dissertation committee to limit the videos shown to each participant to three. Our rationale was that showing eight videos to each participant would result in survey fatigue, and so participants might quit the survey or even choose not to take it due to the expected amount of time it would require. As hoped, the sample size was larger than expected, and so it seems showing fewer videos was a worthwhile trade-off. However, as a result, when interpreting responses, I strived to remember that participants were only comparing between the videos shown to them. For example, when reviewing the responses to the qualitative question of which video participants liked the most, if they responded they liked “the first one” best, this was not necessarily Video 1. Additionally, because the order of videos shown was randomized by Qualtrics, it was also not necessarily in numerical order. To avoid incorrect misinterpretation of these responses, I have chosen not to report which videos were the most favorite videos but rather only to report the reasons for why they stated a video was their favorite.

Another limitation of the study for research questions one and two is our limited understanding of how students perceive their expected instructor qualities or what they may understood to be the types of formats. Knowing a student expects an online instructor to be organized does not give us the indicators of what students recognize as being “organized”; is it perhaps that the instructor has a well-developed syllabus? Or that the instructor provides feedback in a consistent, timely manner? These traits may be interpreted differently by different students. Additional follow-up studies could examine what students commonly interpret to indicate these qualities in an online course in order to develop a more prescriptive guide to online instructors for how to exhibit them.

Further exploration to isolate the characteristics of these videos can be undertaken to pinpoint which aspects of the videos are most responsible for students’ perception of social presence; this study has been carried out with the intention of at least focusing upon video elements such as the orientation of the script, the quality of editing, the length, and setting, but possibly other video features have influenced the social presence score students have given.

Other studies may have evaluated whether introductory videos influenced student performance or teaching presence, but the aspect of social presence is a special focus of this study that is not common in the extant literature. Future studies may seek to expand upon the phenomenon of social presence in online courses through other types of videos, especially now that the results have revealed certain types of introductory videos can have a predictive influence on social presence.

Conclusions

"Social presence marks a qualitative difference between a collaborative community of inquiry and a simple process of downloading information."

-Garrison, Anderson, & Archer (2000)

Thus, I set out to find what students expect of online instructors and their introductions and which characteristics of introductory videos optimize students' perceptions of teaching and social presence, and I found that there are significant associations between student characteristics and their expectations of online instructors and preferred intro formats, and that intro video approaches in comparison with the classic course-oriented green screen approach are predictive of students' perception of higher social presence.

Therefore, I believe this study offers original contributions to our understanding of student expectations, preferences, and perceptions of how the instructor presence is initiated in an online course as mediated through introductory videos.

To conclude, the findings of this research express that students do have certain expectations of online instructor qualities and introduction formats related to their age, gender, university status, online courses taken, and field of study, and employing certain introductory video types featuring student-oriented scripts, active body language and welcoming facial expressions, relaxed attitudes, and professional editing can predict higher student perceptions of the online instructor's social presence in an online course.

Implications

The implications of these findings hold significance for constituents such as educational researchers, online instructors, higher education students, instructional designers, multimedia specialists, and online course developers.

Recommendations for Theoretical Investigation. The warmth scale by Widmeyer and Loy (1988), which they refined based upon the previous scale published by Kelley (1950), was used as the basis for measuring the social presence and teaching presence 2 in this study. In their paper, the authors stated having the effect of an instructor exhibiting warm or cold behavior, which influences students' ratings of the instructor's teaching ability and social presence, is true regardless of formality. I was interested to see whether this effect would still hold true in an online environment, which was not addressed in their study, which only included face-to-face classroom environments such as a lecture and an in-person discussion. The findings support Widmeyer and Loy's assertion that the effect of the warm/cold manipulation does not vary according to formality. In this research study, all videos were conducted within the same medium, and yet some videos were more formal than others, as shown by the varying formality scores in the data. Formality and informality were expressed by variations within the scripts and instructor's body language. The only significant expectation of formality was associated with student age, and it was not listed as an expectation within the qualitative comments. It may be interested to dig deeper through qualitative research what students may perceive to be formal; for some it may be attire, while for others it may be primarily verbal or attitudinal. It would also be interesting to assess whether formality and approachability are necessarily mutually exclusive; the qualitative comments on the final question of the survey seem to indicate students favored the videos in which the instructor was more natural, casual, and relaxed, and yet these qualities may not be diametrically opposed to formality depending upon the students' perspective of what comprises both.

A plethora of research avenues exists in analyzing the responses from the student expectations of online instructor qualities in particular. Reviewing responses may address which qualities students expect, but it does not yet address what behaviors students associate with those qualities. What does it look like to be understanding versus humane? Which are the ways students perceive an online instructor to be available? How does an online instructor obtain information about his or her online students' activities outside the classroom in order to be "aware," as students requested? Students may be alluding to teaching practices such as culturally responsive teaching; analyzing this approach to connecting with students in an online classroom may be an important line of inquiry which would aid in understanding the meaning behind "aware" and result in meeting students' expectations. Customizing one's online approach to the existing student culture in one's online program may be an important step in preparing to teach an online class each semester. As the quote by Albert Einstein which opened up this chapter stated, not everything that counts can be counted; as such, there may be many other intangible elements of charisma, humor, passion, authenticity, or other forms of connections to students conveyed by an instructor through an online video which may be examined in future studies.

Though the discovery of a statistically significant relationship between certain introductory video types and the social presence predicted score is fascinating, practically speaking the effect sizes are minute; seeing a 0.44 expected higher score for social presence if selecting the Video 1 approach as opposed to Video 5 was the largest unit. However, future research studies could see if this result is true of other styles of videos used in the course as well, such as lecture videos. If this effect applies to those other types of videos as well, then the effect may be amplified across the course, resulting perhaps in even greater gains for students in terms of satisfaction and engagement.

For decision makers in online education such as those setting policy or developing faculty, the question of how to frame student expectations still exists. Even if students hold these expectations, are they warranted and reasonable? Can an instructor, for example, be too available and thus over-facilitate students' learning?

Future studies can also compare between various online introductory formats; this study focused on video, but to my knowledge there has not been a comparison between prerecorded video and the other types of introduction mentioned in this survey, including photo with text, multimedia presentation, audio only, synchronous live chat, etc. Possibly students would perceive their instructors' teaching and social presence differently through these media, regardless of their preference. As Short et al. (1967) stated, different characteristics of media affect the degree of social presence, and thus we see variation among the scores of the videos due to their varying characteristics.

What other types of media in online courses might be examined for correlation or even prediction of higher teaching, social, and cognitive presence scores? Ice, Curtis, Phillips, and Wells (2007) conducted a study to find extremely high student satisfaction with embedded asynchronous audio feedback versus asynchronous text only feedback, and thus the audio files such as podcasts in online courses may be an interesting avenue to examine further with regard to social presence scores. The researchers attribute these higher satisfaction scores to four main themes: Audio feedback was perceived to be more effective conveying nuance and was associated with feelings of increased involvement and enhanced community, increased retention of content, and the perception that the instructor cared more about the student (Ice, Curtis, Phillips, & Wells, 2007, p. 3). These findings are similar to the conclusions developed by

Atwater, Borup, and Baker (2017) in their own study of student perceptions of video communication in an online course versus text communication; students found video feedback from instructors to be “elaborate and friendly” and text feedback from instructors to be “convenient, efficient, and concise” (p. 3). Likewise, Borup, West, and Thomas (2015) found that students perceive asynchronous video feedback to be more supportive and conversational while text was more efficient and organized, to which they attribute to the richness of video feedback in comparison with text feedback. Thomas, West, and Borup (2017) found that students may have perceived a higher social presence of their instructors through video feedback due to the richness of the medium, which lends itself to instructors more easily including phatics and salutations as well as complimenting and expressing appreciation (p. 65). Students felt the feedback was thus more personal and approximated face-to-face interactions more, but this was also affected by the fact that video feedback had a higher word count than text feedback.

In a similar vein, other types of videos can be examined in addition to the eight observed in this study. For example, animated videos which portray the instructor as an illustrated cartoon are growing in popularity thanks to the convenience and high-quality of tools such as Animoto and Voki. How might students respond to their instructors through these video styles? If the other factors such as a student-oriented script were held constant, given that this study showed a predicted higher social presence score for videos such as Video 3, in which the instructor was not physically visible but contributed his voice, I would expect to see similarly higher social presence scores from an animated video in comparison with a video showing the instructor. However, a follow-up study examining animated video might result in different conclusions. It may possibly even result in a more dramatic predicted social presence score boost if students value the perception of the instructor as creative or playful, as these qualities might be conveyed by an animated, cartoon video even moreso than slide progressions as used in Video 3.

We must re-evaluate both how we are measuring the effectiveness of introductory videos and thus justifying their development and maintenance costs as well as how we are measuring social presence. There is much dispute over whether the CoI scale adequately measures social presence, and after this study I join the cry for a redeveloped CoI social presence subscale. The CoI survey subscale questions pertaining to social presence currently address only the students' perception of his or her own role and peers; it is the position of this dissertation that the subscale does not adequately address the role of the instructor. Other researchers have called for improved operationalization of the social presence construct through separation of student social presence from instructor social presence and identified this as a weakness within the CoI framework and its associated scales (Thomas, West, & Borup, 2017; Kreijns, Van Acker, & Vermeulen, 2014; Swan & Shih, 2005; Short et al., 1976).

Recommendations for Practice. Knowing students' expectations for online instructors behooves not only the instructors, who can then prepare and ensure they conduct themselves in a way that is beneficial to students' learning and engagement, but also to higher education administrators, as they seek to develop their staff and hire online instructors who exhibit and emphasize these characteristics.

Additionally, knowing students' expectations for the preferred format for their instructor's introduction to an online course can also assist not only the instructor but any support staff such as instructional designers. Creating an introduction is a process which can be done individually or with a team, and thus the conversations on which format to select and what content to include can be informed by the results of this study. This sample exhibited a strong preference for prerecorded video, as well as a preference for other formats such as text, photo, and multimedia presentation, and the sample also expressed a non-preference for other formats such as audio or synchronous, live video chat.

How might an online instructor or instructional designer make use of these findings? As the quote by Sir Arthur Conan Doyle which opened this chapter stated, one cannot make bricks without clay. The findings here may serve as the building blocks when creating online course introductions by assessing student characteristics and recognizing which of those were significantly associated with expected online instructor qualities and preferred introduction format, and then developing a prerecorded introductory video which is student-oriented in its script, employs active body language and friendly, inviting facial expressions such as smiling, is of brief duration, and is professionally edited.

Cynics may be quick to point out that not everyone has the budget to develop professionally-edited videos. Budget constraints are a reality, especially in organizations with funding models that do not place a high value on education or training. The findings from this study ought not to be a deterrent, however; this study underscores the importance of script development over professional editing, production style, and even of the instructor's physical visibility. In this study, Video 3 represented the style in which an instructor voices-over slides, a style which can be easily accomplished with popular software programs such as PowerPoint, Camtasia, Screencast-o-Matic, Jing, and other attainable programs. Video 7 represented the style in which the instructor filmed himself in a residential setting and had no access to professional audio or visual editing, and this style too was shown to be effective in predicting a higher social presence score than a professionally edited video. Many instructors can accomplish this style of video with the native player within a learning management system, a smartphone, a default video maker program on their computer, or a camcorder. Thus, instructors should not feel bereft without a budget; developing a student-oriented script seems to be the salient factor in affecting student social presence perception over dazzling production quality.

For those who are in support positions to instructors, such as instructional designers, it is important to recognize that instructors may need script development aid rather than only guidelines. Showing examples of successful introductory videos, writing and reviewing scripts together, practicing scripts aloud with instructors, and offering recommendations for tools to develop videos may be steps to enable instructors to develop one of the styles of videos discussed in this study. Rather than only offer guidelines to instructors, modeling and collaborating may result in more effective video development.

In regards to Research Question 1, the association between certain student characteristics and expected instructor qualities has been verified to be statistically significant. In general, one might seek to exhibit the qualities the respondents have expressed most frequently. These categories have implications for behavior; the category of responsive, available, and timely speaks to the students' expectation for the online instructor to respond to emails and questions quickly. The category of understanding, humane, aware, considerate of the class, pleasant, and sociable, speaks to the students' expectation that instructors will intentionally learn about the students and take into account the students' other responsibilities and show forgiveness when appropriate. For instructors who may have students who are older, students may expect the instructor to be more formal, based upon the significant relationship between those two variables. Communication is paramount for all online instructors, but it is especially expected among those who are not primarily English-speakers. The takeaway from this data in terms of practice is to consider one's class composition in terms of age, English as a primary language, and gender, and to strive to meet students' expectations in terms of being responsive, understanding, organized, and a clear communicator.

In regards to Research Question 2, the association between student characteristics and preferred introduction formats, a few student characteristics were significantly associated with preference for introduction formats. University status with text and photo was significantly associated. The significant association from the chi-square analysis between English as a primary language and preference for synchronous video chat is especially interesting. Those who identified as English speakers primarily did not prefer synchronous video chat, whereas those who identified as someone who does not speak English as a primary language indicated they preferred synchronous video chat about as much as they did not prefer it. Perhaps this speaks to the comfort these respondents have with hearing and speaking English; they may prefer it to written English that the other introduction formats would entail, or they may prefer the spoken language. The takeaway from this significant relationship is to reach out to students who may not speak English as a primary language to ensure they are able to interact with the introductory video easily, whether through live captioning, a text transcript accompanying the video, or the opportunity to clarify points following a synchronous live video chat.

The total number of responses show a clear, strong preference for prerecorded video. Given this information, educators may choose to first consider creating video introductions over other formats and perhaps be successful in engaging students from the beginning of the online course.

The implications from Research Question 3 are more extensive. Are we able to predict slightly higher scores in teaching presence and social presence based upon the introductory video approach? To some extent, taking into account the other relevant factors such as student age, the answer is partially yes. As described in the results, the video approaches which appear to have had the most favorable scores in terms of teaching presence and social presence are Video 1, which displayed the highest average social presence score and highest average teaching presence score according to the Widmeyer and Loy warmth scale due to its student-oriented script; Video 7, which displayed the highest teaching presence score according to the CoI teaching presence subscale and which was filmed in a residential setting rather than formal studio; and Video 8, which displayed the second-highest social presence score and which was mentioned overwhelmingly by the students as their favorite video due to the instructor's interaction with the other individual, slight professional editing, and more relaxed tone. However, the regression models revealed that the introductory video approach was not significantly predictive of the score along the CoI teaching presence score, though Video 1 was significantly predictive of the Widmeyer and Loy (1988) teaching presence score in the second regression. The regression model predicting social presence was the most indicative that the introductory video approach had a significant role in predicting social presence, as Video 1, 3, 6, 7, and 8 each resulted in significant coefficients. This indicates that choosing an introductory video approach involving a student-oriented script, as both Video 1 and 3 showed, including some personal notes as Videos 6 and 7 scripts included, and being more relaxed, as in Video 8, will likely predict a higher perception of social presence.

A few colleagues in the field of instructional design and online education have asked me about this study and inquired, "Well, which of the eight video types was the best?" This study cannot determine which video type is best, as that ultimately depends on the context of the students and intent of the video, as that affects their viewing behavior as referenced in Guo, Kim, & Rubin (2014). However, I can offer from the results that Video 5 may be the least preferred option in comparison with the other videos, as it deemphasizes the students or instructor in the course-oriented script. Video 1's approach seems to have gained the most traction across the analyses, as the instructor emphasized the students intentionally in the script and it was professionally edited. Also, in the qualitative feedback, many students who were shown Video 8 spoke of it highly, for the reasons they felt the instructor was relaxed in speaking with another person. Perhaps the change of focus off of the students and onto another individual removed some of the pressure they may feel in being addressed by their instructor in an online course, as potentially students can start a new course with feelings of trepidation which may be alleviated by the professor having more of a fireside chat with another than a direct address. At any rate, all things considered, the videos which were oriented around the students in the script and included a few personal anecdotes seem to have resonated most highly with students and were found to be statistically significant in the regression model for social presence. Those which were professionally edited including elements such as a green screen and text on the screen to reinforce key points were also more often mentioned by students in the qualitative feedback and scored higher on the social presence scale. As such, my recommendation for instructional designers and online educators creating online videos in the future will be to leverage these learnings to create student-oriented or course-oriented scripts with a brief personal note for brief introductory videos under three minutes that take advantage of professional editing resources, and that their presence on-camera ought to be more active and dynamic.

The other analyses may have import for practitioners as well. An introductory video does not fully address students' many questions about their instructor and the course, as is evidenced by the first table in the other analyses section displaying the "Not able to determine from the video" responses. Students varied in what they were able to determine from the video in terms of the specific instructor qualities. For the most part they were uncertain if the instructor was intelligent, knew the material, was proud or modest, dominant or submissive, organized or not, or self-centered. In the qualitative comments students specifically referenced their uncertainty if the instructor was organized based only upon the video. Many respondents stated "Organized" was one of their top desired qualities for an online instructor, and that the video alone did not convey that. Thus, for practitioners, an effort to express these traits such as organization may ease students' concerns. Perhaps discussing the course plans, structure, and syllabus, or describing one's own planning process for the course, would assist in conveying a greater sense of an instructor's organization within the introductory video. The other analyses also revealed that teaching presence is correlated with social presence for the majority of the videos, especially when using the second measure of teaching presence.

Future areas of research building upon this study might expand the sample to other populations. Another gap from the literature review remains: how can we evaluate the choice of video production style according to the purpose for which the video was intended? Now knowing that the introductory video approach can have a predictive effect on the social presence score, would other introductory formats be just as effective in affecting students' perceptions of social presence? Do the preferences students have expressed in this study for prerecorded video introductions also carry over to the preferences students may have for other in-course communications, such as lectures or announcements?

In conclusion, this study offers a practical opportunity to take the significant associations between students' expected qualities of online instructors and apply those to professional development and to take the significant associations between students' preferences for introduction format and apply those when planning to teach an online course. Readers can also take the knowledge that the choice of introductory video that is professionally edited with an instructor with active body language and a relaxed attitude delivering a student-oriented script and apply this to increase student perceptions of social presence, which has been shown in previous literature to increase student learning and satisfaction.

Closing Thoughts

The findings of this research have enlightened me to the cares and concerns students have about their online instructors and how they introduce themselves, as well as to the power which introductory videos can have in influencing students' perceptions of an instructor's social presence. It is my hope that the findings contained within this research may be useful in many capacities, with the fundamental goal of improving online learning experiences for students through the leadership of the instructor in his or her teaching and community-building, social role.

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APPENDICES

Appendix A: CoI Teaching Presence Survey Subscale

Retrieved on June 4, 2018 from https://coi.athabascau.ca/coi-model/coi-survey/.

Items in bold below were selected for us in this study; these items include questions 1-4.

Community of Inquiry Survey Instrument (draft v14) - 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.

Facilitation

5. The instructor was helpful in identifying areas of agreement and disagreement on course topics that helped me to learn.

6. The instructor was helpful in guiding the class towards understanding course topics in a way that helped me clarify my thinking.

7. The instructor helped to keep course participants engaged and participating in productive dialogue.

8. The instructor helped keep the course participants on task in a way that helped me to learn.

9. The instructor encouraged course participants to explore new concepts in this course.

10. Instructor actions reinforced the development of a sense of community among course participants.

Direct Instruction

11. The instructor helped to focus discussion on relevant issues in a way that helped me to learn.

12. The instructor provided feedback that helped me understand my strengths and weaknesses relative to the course's goals and objectives.

13. The instructor provided feedback in a timely fashion.

Appendix B: Survey and Consent Form

Live Link: https://ncsu.qualtrics.com/jfe/form/SV_eyX68opqu0awauF

Introductory Videos Survey

Survey Flow

Block: CONSENT FORM (1 Question)
Block: PRE-SURVEY (11 Questions)

BlockRandomizer: 3 - Evenly Present Elements

Block: VIDEO 1 (21 Questions)
Block: VIDEO 2 (22 Questions)
Block: VIDEO 3 (22 Questions)
Block: VIDEO 4 (22 Questions)
Block: VIDEO 5 (22 Questions)
Block: VIDEO 6 (22 Questions)
Block: VIDEO 7 (22 Questions)
Block: VIDEO 8 (22 Questions)

Standard: Block 10 (1 Question)

EndSurvey: Advanced

Page Break

Start of Block: CONSENT FORM

Q1 Please read the study description below, then either select "I Agree" or "I Do Not Agree" at the bottom. Thank you.

North Carolina State University
INFORMED CONSENT FORM FOR RESEARCH

Title: A Study on the Influence of Characteristics of Introductory Videos Upon Perceptions of Online Courses and Instructors

Principal Investigator: Susie Boles, NCSU Graduate Student

What are some general things you should know about research studies?
You are asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating at any time without penalty. The purpose of research studies is to gain a better understanding of a certain topic or issue. You are not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form, it is your right to ask the researcher for clarification or more information. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above.

What is the purpose of this study?
We are asking you to participate in a confidential study for the College of Education at North Carolina State University (NCSU). Note that the terms “the College” and “College of Education” will be used interchangeably.

The purpose of this study is to understand which characteristics of introductory videos for online courses inform students' perceptions of online instructors.

What will happen if you take part in the study?
If you agree to participate in this study, you will complete a pre-survey. Then you will watch a series of introductory videos created for this study to represent different approaches to creating introductory videos for a single course. After each video you will be asked the same set of questions. In total, you may spend up to 30 minutes participating in this study's tasks. Also, your signature of this consent form means that your responses might be shared in a publication, while keeping confidential any information that could potentially reveal your personal identity.

Risks
There are no major associated risks with participating in this study. At any point you may remove yourself from the study with no negative consequences.

Benefits
Benefits from this research may be the knowledge you are contributing to research on online

learning and ideally helping educators develop more effective online learning experiences.

Confidentiality
The information in the study's records will be kept confidential to the full extent allowed by law. Data will be stored securely in the principal investigators' password protected computers and password-protected files. No reference will be made in oral or written reports that could link you to the study. You will NOT be asked to write your name on any study materials so that no one can match your identity to the answers.

Compensation
There is no compensation for participation in this study.

What if you have questions about this study?
If you have questions at any time about the study or the procedures, you may contact the researcher, Susie Boles, email at sbboles@ncsu.edu, or call 803-351-7806.

What if you have questions about your rights as a research participant?
If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact the NCSU IRB office at irb-director@ncsu.edu or by phone (919/515-4514).

ELECTRONIC CONSENT: Please select your choice below.

Clicking on the "I agree" button below indicates that: you have read the above information you voluntarily agree to participate you are at least 18 years of age I consent to participate in this study.

○ I agree. (1)

○ I do not agree. (2)

Skip To: End of Survey If Q1 = I do not agree.

Page Break

End of Block: CONSENT FORM

Start of Block: PRE-SURVEY

Q2 Welcome to this research study on the influence of the characteristics of introductory videos on students' perceptions of online courses and instructors.

Please complete the questions below.

Your responses will be kept confidential.

As a reminder:
Confidentiality
The information in the study's records will be kept confidential to the full extent allowed by law. Data will be stored securely in the principal investigators' password protected computers and password-protected files. No reference will be made in oral or written reports that could link you to the study. You will NOT be asked to write your name on any study materials so that no one can match your identity to the answers.

What if you have questions about this study?
If you have questions at any time about the study or the procedures, you may contact the researcher, Susie Boles, email at sbboles@ncsu.edu, or call 803-351-7806.

Q3 Please enter your gender.

- ○ Female (1)
- ○ Male (2)
- ○ Non-binary/third gender (6)
- ○ Prefer to self-describe: (5) ____
- ○ Prefer not to say (4)

Q4 Please enter your age:

- 17 or younger (1)
- 18-20 (6)
- 21-23 (2)
- 24-26 (3)
- 27-29 (4)
- 30-32 (5)
- 33-35 (7)
- 36-38 (8)
- 39 or older (9)

Skip To: End of Survey If Q4 = 17 or younger

Q5 My status with the university is

- an undergraduate student (1)
- a non-degree seeking student (2)
- a graduate student (3)
- a faculty member (4)
- a staff member (5)
- none of the above (6)

Skip To: End of Survey If Q5 = none of the above
Skip To: End of Survey If Q5 = a faculty member
Skip To: End of Survey If Q5 = a staff member

Q6 Is English your primary language?

- ○ Yes (1)
- ○ No (2)

Q7 Indicate your major field of study.

- ○ Undecided (1)
- ○ Humanities (2)
- ○ Social/behavior sciences (6)
- ○ Life sciences (7)
- ○ Physical sciences (8)
- ○ Math (9)
- ○ Computer/information science (10)
- ○ Engineering (3)
- ○ Education (4)
- ○ Business/management (5)
- ○ Health (11)
- ○ Vocational/technical (12)
- ○ Other technical/professional (13)
- ○ Other (please describe): (14) ____________________

Q8 How many online courses have you taken?

▼ 0 (1) ... 20 (21)

Q9 Which qualities do you expect of an online instructor? Select all that apply.

- ☐ Pleasant (1)
- ☐ Sociable (2)
- ☐ Strong personality (3)
- ☐ Good natured (4)
- ☐ Humane (5)
- ☐ Formal (6)
- ☐ Proud (17)
- ☐ Self-assured (7)
- ☐ Humorous (8)
- ☐ Dominant (9)
- ☐ Knows the material (10)
- ☐ Considerate of the class (11)
- ☐ Organized (12)
- ☐ Intelligent (13)

☐ Communicates well (14)

☐ Interesting (15)

Q10 What other qualities do you expect of an online instructor?

____

Q11 In online courses, instructors often provide a brief introduction to themselves and the course. Which form(s) of instructor introduction to an online course do you prefer?

Prerecorded video (1)	▼ Strongly Prefer (1) ... No Preference Either Way (5)
Audio (2)	▼ Strongly Prefer (1) ... No Preference Either Way (5)
Text (4)	▼ Strongly Prefer (1) ... No Preference Either Way (5)
Photo (5)	▼ Strongly Prefer (1) ... No Preference Either Way (5)
Synchronous, real time video chat (10)	▼ Strongly Prefer (1) ... No Preference Either Way (5)
Multimedia presentation (9)	▼ Strongly Prefer (1) ... No Preference Either Way (5)
Other (please describe): (6)	▼ Strongly Prefer (1) ... No Preference Either Way (5)

Q12 What do you expect an instructor to convey in an introduction?

Page Break

End of Block: PRE-SURVEY

Start of Block: VIDEO 1

Q13 **INSTRUCTIONS: These videos represent different approaches to introductory videos to the same online course by the same instructor.**

Watch the video, then rank the instructor's characteristics according to ONLY this video.

Q14 To what degree was the instructor effective at:

	1 - Very Ineffective (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 - Very Effective (7)
Clearly communicating important course topics (1)	○	○	○	○	○	○	○
Clearly communicating important course goals (2)	○	○	○	○	○	○	○
Providing clear instructions on how to participate in course learning activities (3)	○	○	○	○	○	○	○
Clearly communicating important due dates/time frames for learning activities (4)	○	○	○	○	○	○	○
Encouraging course participants to explore new	○	○	○	○	○	○	○

concepts in this course. (5)							
Reinforcing the development of a sense of community among course participants. (6)	○	○	○	○	○	○	○

Q15 How pleasant is this instructor?

- ○ 1 - Unpleasant (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Pleasant (7)
- ○ Not able to determine from the video (8)

Q16 How sociable is this instructor?

- ○ 1 - Sociable (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Unsociable (7)
- ○ Not able to determine from the video (8)

Q17 How strong is this instructor's personality?

- ○ 1 - Strong personality (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Weak personality (7)
- ○ Not able to determine from the video (8)

Q18 How good-natured is this instructor?

- 1 - Irritable (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Good-natured (7)
- Not able to determine from the video (8)

Q19 How humane is this instructor?

- 1 - Ruthless (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Humane (7)
- Not able to determine from the video (8)

Q20 How formal is this instructor?

- ◯ 1 - Formal (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Informal (7)
- ◯ Not able to determine from the video (8)

Q21 How proud is this instructor?

- ◯ 1 - Proud (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Modest (7)
- ◯ Not able to determine from the video (8)

Q22 How self-assured is this instructor?

○ 1 - Self-assured (1)

○ 2 (2)

○ 3 (3)

○ 4 (4)

○ 5 (5)

○ 6 (6)

○ 7 - Uncertain of self (7)

○ Not able to determine from the video (8)

Q23 How humorous is this instructor?

○ 1 - Humorous (1)

○ 2 (2)

○ 3 (3)

○ 4 (4)

○ 5 (5)

○ 6 (6)

○ 7 - Humorless (7)

○ Not able to determine from the video (8)

Q24 How dominant is this instructor?

- 1 - Dominant (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Submissive (7)
- Not able to determine from the video (8)

Q25 To what degree does this instructor know the material?

- 1 - Knows his material (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Doesn't know his material (7)
- Not able to determine from the video (8)

Q26 How considerate of the class is this instructor?

- ○ 1 - Considerate of class (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (5)
- ○ 5 (6)
- ○ 6 (7)
- ○ 7 - Self-centered (8)
- ○ Not able to determine from the video (9)

Q27 How organized is this instructor?

- ○ 1 - Organized (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Not organized (7)
- ○ Not able to determine from the video (8)

Q28 How intelligent is this instructor?

- 1 - Intelligent (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Unintelligent (7)
- Not able to determine from the video (8)

Q29 How well does this instructor communicate?

- 1 - Expresses himself well (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Difficulty in communicating (7)
- Not able to determine from the video (8)

Q30 How interesting is this instructor?

- ○ 1 - Interesting (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Boring (7)
- ○ Not able to determine from the video (8)

Q31 How interested are you in taking a course taught by this instructor?

- ○ 1 - Not interested (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Interested (7)
- ○ Not able to determine from the video (9)

Q32 How comfortable would you be asking this instructor a question?

- ◯ 1 - Uncomfortable (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Comfortable (7)
- ◯ Not able to determine from the video (9)

Q33 To what degree does this instructor care about your learning?

- ◯ 1 - Does not care (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Cares (7)
- ◯ Not able to determine from the video (9)

Page Break

End of Block: VIDEO 1

Start of Block: VIDEO 2

Q34 **INSTRUCTIONS: These videos represent different approaches to introductory videos to the same online course by the same instructor.**

Watch the video, then rank the instructor's characteristics according to ONLY this video.

Q35

Q36 To what degree was the instructor effective at:

	1 - Ineffective (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 - Effective (7)
Clearly communicating important course topics (1)	○	○	○	○	○	○	○
Clearly communicating important course goals (8)	○	○	○	○	○	○	○
Providing clear instructions on how to participate in course learning activities	○	○	○	○	○	○	○

(9) Clearly communicating important due dates/time frames for learning activities	○	○	○	○	○	○	○
(10) Encouraging course participants to explore new concepts in this course.	○	○	○	○	○	○	○
(11) Reinforcing the development of a sense of community among course participants.	○	○	○	○	○	○	○
(12)							

Q37 How pleasant is this instructor?

- 1 - Unpleasant (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Pleasant (7)
- Not able to determine from the video (8)

Q38 How sociable is this instructor?

- 1 - Sociable (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Unsociable (7)
- Not able to determine from the video (8)

Q39 How strong is this instructor's personality?

- ◯ 1 - Strong personality (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Weak personality (7)
- ◯ Not able to determine from the video (8)

Q40 How good-natured is this instructor?

- ◯ 1 - Irritable (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Good-natured (7)
- ◯ Not able to determine from the video (8)

Q41 How humane is this instructor?

- 1 - Ruthless (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Humane (7)
- Not able to determine from the video (8)

Q42 How formal is this instructor?

- 1 - Formal (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Informal (7)
- Not able to determine from the video (8)

Q43 How proud is this instructor?

- 1 - Proud (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Modest (7)
- Not able to determine from the video (8)

Q44 How self-assured is this instructor?

- 1 - Self-assured (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Uncertain of self (7)
- Not able to determine from the video (8)

Q45 How humorous is this instructor?

- 1 - Humorous (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Humorless (7)
- Not able to determine from the video (8)

Q46 How dominant is this instructor?

- 1 - Dominant (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Submissive (7)
- Not able to determine from the video (8)

Q47 To what degree does this instructor know the material?

- ○ 1 - Knows his material (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Doesn't know his material (7)
- ○ Not able to determine from the video (8)

Q48 How considerate of the class is this instructor?

- ○ 1 - Considerate of class (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (5)
- ○ 5 (6)
- ○ 6 (7)
- ○ 7 - Self-centered (8)
- ○ Not able to determine from the video (9)

Q49 How organized is this instructor?

- 1 - Organized (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Not organized (7)
- Not able to determine from the video (8)

Q50 How intelligent is this instructor?

- 1 - Intelligent (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Unintelligent (7)
- Not able to determine from the video (8)

Q51 How well does this instructor communicate?

- ○ 1 - Expresses himself well (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Difficulty in communicating (7)
- ○ Not able to determine from the video (8)

Q52 How interesting is this instructor?

- ○ 1 - Interesting (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Boring (7)
- ○ Not able to determine from the video (8)

Q53 How interested are you in taking a course taught by this instructor?

- 1 - Not interested (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Interested (7)
- Not able to determine from the video (9)

Q54 How comfortable would you be asking this instructor a question?

- 1 - Uncomfortable (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Comfortable (7)
- Not able to determine from the video (8)

Q55 To what degree does this instructor care about your learning?

○ 1 - Does not care (1)

○ 2 (2)

○ 3 (3)

○ 4 (4)

○ 5 (5)

○ 6 (6)

○ 7 - Cares (7)

○ Not able to determine from the video (8)

Page Break

End of Block: VIDEO 2

Start of Block: VIDEO 3

Q56 **INSTRUCTIONS: These videos represent different approaches to introductory videos to the same online course by the same instructor.**

Watch the video, then rank the instructor's characteristics according to ONLY this video.

Q57

Q58 To what degree was the instructor effective at:

	1 - Ineffective (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 - Effective (8)
Clearly communicating important course topics (8)	○	○	○	○	○	○	○
Clearly communicating important course goals (9)	○	○	○	○	○	○	○
Providing clear instructions on how to participate in course learning activities (10)	○	○	○	○	○	○	○
Clearly communicating important due dates/time frames for learning activities (11)	○	○	○	○	○	○	○

Encouraging course participants to explore new concepts in this course. (12)	○	○	○	○	○	○	○
Reinforcing the development of a sense of community among course participants. (13)	○	○	○	○	○	○	○

Q59 How pleasant is this instructor?

- ○ 1 - Unpleasant (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Pleasant (7)
- ○ Not able to determine from the video (8)

Q60 How sociable is this instructor?

- 1 - Sociable (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Unsociable (7)
- Not able to determine from the video (8)

Q61 How strong is this instructor's personality?

- 1 - Strong personality (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Weak personality (7)
- Not able to determine from the video (8)

Q62 How good-natured is this instructor?

- 1 - Irritable (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Good-natured (7)
- Not able to determine from the video (8)

Q63 How humane is this instructor?

- 1 - Ruthless (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Humane (7)
- Not able to determine from the video (8)

Q64 How formal is this instructor?

○ 1 - Formal (1)

○ 2 (2)

○ 3 (3)

○ 4 (4)

○ 5 (5)

○ 6 (6)

○ 7 - Informal (7)

○ Not able to determine from the video (8)

Q65 How proud is this instructor?

○ 1 - Proud (1)

○ 2 (2)

○ 3 (3)

○ 4 (4)

○ 5 (5)

○ 6 (6)

○ 7 - Modest (7)

○ Not able to determine from the video (8)

Q66 How self-assured is this instructor?

- 1 - Self-assured (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Uncertain of self (7)
- Not able to determine from the video (8)

Q67 How humorous is this instructor?

- 1 - Humorous (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Humorless (7)
- Not able to determine from the video (8)

Q68 How dominant is this instructor?

- 1 - Dominant (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Submissive (7)
- Not able to determine from the video (8)

Q69 To what degree does this instructor know the material?

- 1 - Knows his material (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Doesn't know his material (7)
- Not able to determine from the video (8)

Q70 How considerate of the class is this instructor?

- ○ 1 - Considerate of class (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (5)
- ○ 5 (6)
- ○ 6 (7)
- ○ 7 - Self-centered (8)
- ○ Not able to determine from the video (9)

Q71 How organized is this instructor?

- ○ 1 - Organized (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Not organized (7)
- ○ Not able to determine from the video (8)

Q72 How intelligent is this instructor?

- 1 - Intelligent (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Unintelligent (7)
- Not able to determine from the video (8)

Q73 How well does this instructor communicate?

- 1 - Expresses himself well (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Difficulty in communicating (7)
- Not able to determine from the video (8)

Q74 How interesting is this instructor?

- 1 - Interesting (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Boring (7)
- Not able to determine from the video (8)

Q75 How interested are you in taking a course taught by this instructor?

- 1 - Not interested (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Interested (7)
- Not able to determine from the video (8)

Q76 How comfortable would you be asking this instructor a question?

- 1 - Uncomfortable (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Comfortable (7)
- Not able to determine from the video (8)

Q77 To what degree does this instructor care about your learning?

- 1 - Does not care (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Cares (7)
- Not able to determine from the video (8)

Page Break

End of Block: VIDEO 3

Start of Block: VIDEO 4

Q78 **INSTRUCTIONS: These videos represent different approaches to introductory videos to the same online course by the same instructor.**

Watch the video, then rank the instructor's characteristics according to ONLY this video.

Q79

Q80

To what degree was the instructor effective at:

	1 - Ineffective (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 - Effective (7)
Clearly communicating important course topics (8)	○	○	○	○	○	○	○
Clearly communicating important course goals (9)	○	○	○	○	○	○	○
Providing clear instructions on how to participate in course learning activities (10)	○	○	○	○	○	○	○

Clearly communicating important due dates/time frames for learning activities (11)	○	○	○	○	○	○	○
Encouraging course participants to explore new concepts in this course. (12)	○	○	○	○	○	○	○
Reinforcing the development of a sense of community among course participants. (13)	○	○	○	○	○	○	○

Q81 How pleasant is this instructor?

- 1 - Unpleasant (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Pleasant (7)
- Not able to determine from the video (8)

Q82 How sociable is this instructor?

- 1 - Sociable (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Unsociable (7)
- Not able to determine from the video (8)

Q83 How strong is this instructor's personality?

- ○ 1 - Strong personality (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Weak personality (7)
- ○ Not able to determine from the video (8)

Q84 How good-natured is this instructor?

- ○ 1 - Irritable (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Good-natured (7)
- ○ Not able to determine from the video (8)

Q85 How humane is this instructor?

- 1 - Ruthless (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Humane (7)
- Not able to determine from the video (8)

Q86 How formal is this instructor?

- 1 - Formal (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Informal (7)
- Not able to determine from the video (8)

Q87 How proud is this instructor?

◯ 1 - Proud (1)

◯ 2 (2)

◯ 3 (3)

◯ 4 (4)

◯ 5 (5)

◯ 6 (6)

◯ 7 - Modest (7)

◯ Not able to determine from the video (8)

Q88 How self-assured is this instructor?

◯ 1 - Self-assured (1)

◯ 2 (2)

◯ 3 (3)

◯ 4 (4)

◯ 5 (5)

◯ 6 (6)

◯ 7 - Uncertain of self (7)

◯ Not able to determine from the video (8)

Q89 How humorous is this instructor?

- ○ 1 - Humorous (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Humorless (7)
- ○ Not able to determine from the video (8)

Q90 How dominant is this instructor?

- ○ 1 - Dominant (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Submissive (7)
- ○ Not able to determine from the video (8)

Q91 To what degree does this instructor know the material?

- 1 - Knows his material (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Doesn't know his material (7)
- Not able to determine from the video (8)

Q92 How considerate of the class is this instructor?

- 1 - Considerate of class (1)
- 2 (2)
- 3 (3)
- 4 (5)
- 5 (6)
- 6 (7)
- 7 - Self-centered (8)
- Not able to determine from the video (9)

Q93 How organized is this instructor?

- ◯ 1 - Organized (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Not organized (7)
- ◯ Not able to determine from the video (8)

Q94 How intelligent is this instructor?

- ◯ 1 - Intelligent (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Unintelligent (7)
- ◯ Not able to determine from the video (8)

Q95 How well does this instructor communicate?

- 1 - Expresses himself well (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Difficulty in communicating (7)
- Not able to determine from the video (8)

Q96 How interesting is this instructor?

- 1 - Interesting (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Boring (7)
- Not able to determine from the video (8)

Q97 How interested are you in taking a course taught by this instructor?

- ○ 1 - Not interested (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Interested (7)
- ○ Not able to determine from the video (8)

Q98 How comfortable would you be asking this instructor a question?

- ○ 1 - Uncomfortable (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Comfortable (7)
- ○ Not able to determine from the video (8)

Q99 To what degree does this instructor care about your learning?

- ◯ 1 - Does not care (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Cares (7)
- ◯ Not able to determine from the video (8)

Page Break

End of Block: VIDEO 4

Start of Block: VIDEO 5

Q100 **INSTRUCTIONS: These videos represent different approaches to introductory videos to the same online course by the same instructor.**

Watch the video, then rank the instructor's characteristics according to ONLY this video.

Q101
Q102 To what degree was the instructor effective at:

	1 - Ineffective (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 - Effective (7)
Clearly communicating important course topics (1)	○	○	○	○	○	○	○
Clearly communicating important course goals (8)	○	○	○	○	○	○	○
Providing clear instructions on how to participate in course learning activities (9)	○	○	○	○	○	○	○
Clearly communicating important due dates/time frames for learning activities (10)	○	○	○	○	○	○	○

Encouraging course participants to explore new concepts in this course. (11)	○	○	○	○	○	○	○
Reinforcing the development of a sense of community among course participants. (12)	○	○	○	○	○	○	○

Q103 How pleasant is this instructor?

○ 1 - Unpleasant (1)

○ 2 (2)

○ 3 (3)

○ 4 (4)

○ 5 (5)

○ 6 (6)

○ 7 - Pleasant (7)

○ Not able to determine from the video (8)

Q104 How sociable is this instructor?

- ○ 1 - Sociable (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Unsociable (7)
- ○ Not able to determine from the video (8)

Q105 How strong is this instructor's personality?

- ○ 1 - Strong personality (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Weak personality (7)
- ○ Not able to determine from the video (8)

Q106 How good-natured is this instructor?

- 1 - Irritable (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Good-natured (7)
- Not able to determine from the video (8)

Q107 How humane is this instructor?

- 1 - Ruthless (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Humane (7)
- Not able to determine from the video (8)

Q108 How formal is this instructor?

- 1 - Formal (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Informal (7)
- Not able to determine from the video (8)

Q109 How proud is this instructor?

- 1 - Proud (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Modest (7)
- Not able to determine from the video (8)

Q110 How self-assured is this instructor?

- 1 - Self-assured (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Uncertain of self (7)
- Not able to determine from the video (8)

Q111 How humorous is this instructor?

- 1 - Humorous (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Humorless (7)
- Not able to determine from the video (8)

Q112 How dominant is this instructor?

- ◯ 1 - Dominant (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Submissive (7)
- ◯ Not able to determine from the video (8)

Q113 To what degree does this instructor know the material?

- ◯ 1 - Knows his material (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Doesn't know his material (7)
- ◯ Not able to determine from the video (8)

Q114 How considerate of the class is this instructor?

- 1 - Considerate of class (1)
- 2 (2)
- 3 (3)
- 4 (5)
- 5 (6)
- 6 (7)
- 7 - Self-centered (8)
- Not able to determine from the video (9)

Q115 How organized is this instructor?

- 1 - Organized (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Not organized (7)
- Not able to determine from the video (8)

Q116 How intelligent is this instructor?

○ 1 - Intelligent (1)

○ 2 (2)

○ 3 (3)

○ 4 (4)

○ 5 (5)

○ 6 (6)

○ 7 - Unintelligent (7)

○ Not able to determine from the video (8)

Q117 How well does this instructor communicate?

○ 1 - Expresses himself well (1)

○ 2 (2)

○ 3 (3)

○ 4 (4)

○ 5 (5)

○ 6 (6)

○ 7 - Difficulty in communicating (7)

○ Not able to determine from the video (8)

Q118 How interesting is this instructor?

- ◯ 1 - Interesting (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Boring (7)
- ◯ Not able to determine from the video (8)

Q119 How interested are you in taking a course taught by this instructor?

- ◯ 1 - Not interested (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Interested (7)
- ◯ Not able to determine from the video (8)

Q120 How comfortable would you be asking this instructor a question?

○ 1 - Uncomfortable (1)

○ 2 (2)

○ 3 (3)

○ 4 (4)

○ 5 (5)

○ 6 (6)

○ 7 - Comfortable (7)

○ Not able to determine from the video (8)

Q121 To what degree does this instructor care about your learning?

○ 1 - Does not care (1)

○ 2 (2)

○ 3 (3)

○ 4 (4)

○ 5 (5)

○ 6 (6)

○ 7 - Cares (7)

○ Not able to determine from the video (8)

Page Break

End of Block: VIDEO 5

Start of Block: VIDEO 6

Q122 **INSTRUCTIONS: These videos represent different approaches to introductory videos to the same online course by the same instructor.**

Watch the video, then rank the instructor's characteristics according to ONLY this video.
Q123

Q124 To what degree was the instructor effective at:

	1 - Ineffective (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 - Effective (7)
Clearly communicating important course topics (1)	○	○	○	○	○	○	○
Clearly communicating important course goals (8)	○	○	○	○	○	○	○
Providing clear instructions on how to participate in course learning activities (9)	○	○	○	○	○	○	○
Clearly communicating important due	○	○	○	○	○	○	○

dates/time frames for learning activities (10)							
Encouraging course participants to explore new concepts in this course. (11)	○	○	○	○	○	○	○
Reinforcing the development of a sense of community among course participants. (12)	○	○	○	○	○	○	○

Q125 How pleasant is this instructor?

- 1 - Unpleasant (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Pleasant (7)
- Not able to determine from the video (8)

Q126 How sociable is this instructor?

- 1 - Sociable (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Unsociable (7)
- Not able to determine from the video (8)

Q127 How strong is this instructor's personality?

- ○ 1 - Strong personality (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Weak personality (7)
- ○ Not able to determine from the video (8)

Q128 How good-natured is this instructor?

- ○ 1 - Irritable (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Good-natured (7)
- ○ Not able to determine from the video (8)

Q129 How humane is this instructor?

○ 1 - Ruthless (1)

○ 2 (2)

○ 3 (3)

○ 4 (4)

○ 5 (5)

○ 6 (6)

○ 7 - Humane (7)

○ Not able to determine from the video (8)

Q130 How formal is this instructor?

○ 1 - Formal (1)

○ 2 (2)

○ 3 (3)

○ 4 (4)

○ 5 (5)

○ 6 (6)

○ 7 - Informal (7)

○ Not able to determine from the video (8)

Q131 How proud is this instructor?

- 1 - Proud (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Modest (7)
- Not able to determine from the video (8)

Q132 How self-assured is this instructor?

- 1 - Self-assured (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Uncertain of self (7)
- Not able to determine from the video (8)

Q133 How humorous is this instructor?

- ○ 1 - Humorous (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Humorless (7)
- ○ Not able to determine from the video (8)

Q134 How dominant is this instructor?

- ○ 1 - Dominant (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Submissive (7)
- ○ Not able to determine from the video (8)

Q135 To what degree does this instructor know the material?

○ 1 - Knows his material (1)

○ 2 (2)

○ 3 (3)

○ 4 (4)

○ 5 (5)

○ 6 (6)

○ 7 - Doesn't know his material (7)

○ Not able to determine from the video (8)

Q136 How considerate of the class is this instructor?

○ 1 - Considerate of class (1)

○ 2 (2)

○ 3 (3)

○ 4 (5)

○ 5 (6)

○ 6 (7)

○ 7 - Self-centered (8)

○ Not able to determine from the video (9)

Q137 How organized is this instructor?

- ○ 1 - Organized (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Not organized (7)
- ○ Not able to determine from the video (8)

Q138 How intelligent is this instructor?

- ○ 1 - Intelligent (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Unintelligent (7)
- ○ Not able to determine from the video (8)

Q139 How well does this instructor communicate?

- ◯ 1 - Expresses himself well (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Difficulty in communicating (7)
- ◯ Not able to determine from the video (8)

Q140 How interesting is this instructor?

- ◯ 1 - Interesting (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Boring (7)
- ◯ Not able to determine from the video (8)

Q141 How interested are you in taking a course taught by this instructor?

- 1 - Not interested (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Interested (7)
- Not able to determine from the video (8)

Q142 How comfortable would you be asking this instructor a question?

- 1 - Uncomfortable (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Comfortable (7)
- Not able to determine from the video (8)

Q143 To what degree does this instructor care about your learning?

- ○ 1 - Does not care (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Cares (7)
- ○ Not able to determine from the video (8)

Page Break

End of Block: VIDEO 6

Start of Block: VIDEO 7

Q144 **INSTRUCTIONS: These videos represent different approaches to introductory videos to the same online course by the same instructor.**

Watch the video, then rank the instructor's characteristics according to ONLY this video.

Q145

Q146 To what degree was the instructor effective at:

	1 - Ineffective (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 - Effective (7)
Clearly communicating important course topics (1)	○	○	○	○	○	○	○
Clearly communicating important course goals (8)	○	○	○	○	○	○	○
Providing clear instructions on how to participate in course learning activities (9)	○	○	○	○	○	○	○
Clearly communicating important due dates/time frames for learning activities (10)	○	○	○	○	○	○	○

Encouraging course participants to explore new concepts in this course. (11)	○	○	○	○	○	○	○
Reinforcing the development of a sense of community among course participants. (12)	○	○	○	○	○	○	○

Q147 How pleasant is this instructor?

- ○ 1 - Unpleasant (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Pleasant (7)
- ○ Not able to determine from the video (8)

Q148 How sociable is this instructor?

- 1 - Sociable (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Unsociable (7)
- Not able to determine from the video (8)

Q149 How strong is this instructor's personality?

- 1 - Strong personality (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Weak personality (7)
- Not able to determine from the video (8)

Q150 How good-natured is this instructor?

- 1 - Irritable (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Good-natured (7)
- Not able to determine from the video (8)

Q151 How humane is this instructor?

- 1 - Ruthless (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Humane (7)
- Not able to determine from the video (8)

Q152 How formal is this instructor?

- ◯ 1 - Formal (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Informal (7)
- ◯ Not able to determine from the video (8)

Q153 How proud is this instructor?

- ◯ 1 - Proud (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Modest (7)
- ◯ Not able to determine from the video (8)

Q154 How self-assured is this instructor?

- 1 - Self-assured (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Uncertain of self (7)
- Not able to determine from the video (8)

Q155 How humorous is this instructor?

- 1 - Humorous (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Humorless (7)
- Not able to determine from the video (8)

Q156 How dominant is this instructor?

- 1 - Dominant (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Submissive (7)
- Not able to determine from the video (8)

Q157 To what degree does this instructor know the material?

- 1 - Knows his material (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Doesn't know his material (7)
- Not able to determine from the video (8)

Q158 How considerate of the class is this instructor?

- ○ 1 - Considerate of class (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (5)
- ○ 5 (6)
- ○ 6 (7)
- ○ 7 - Self-centered (8)
- ○ Not able to determine from the video (9)

Q159 How organized is this instructor?

- ○ 1 - Organized (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Not organized (7)
- ○ Not able to determine from the video (8)

Q160 How intelligent is this instructor?

- 1 - Intelligent (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Unintelligent (7)
- Not able to determine from the video (8)

Q161 How well does this instructor communicate?

- 1 - Expresses himself well (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Difficulty in communicating (7)
- Not able to determine from the video (8)

Q162 How interesting is this instructor?

- 1 - Interesting (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Boring (7)
- Not able to determine from the video (8)

Q163 How interested are you in taking a course taught by this instructor?

- 1 - Not interested (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Interested (7)
- Not able to determine from the video (8)

Q164 How comfortable would you be asking this instructor a question?

◯ 1 - Uncomfortable (1)

◯ 2 (2)

◯ 3 (3)

◯ 4 (4)

◯ 5 (5)

◯ 6 (6)

◯ 7 - Comfortable (7)

◯ Not able to determine from the video (8)

Q165 To what degree does this instructor care about your learning?

◯ 1 - Does not care (1)

◯ 2 (2)

◯ 3 (3)

◯ 4 (4)

◯ 5 (5)

◯ 6 (6)

◯ 7 - Cares (7)

◯ Not able to determine from the video (8)

Page Break

End of Block: VIDEO 7

Start of Block: VIDEO 8

Q166 **INSTRUCTIONS: These videos represent different approaches to introductory videos to the same online course by the same instructor.**

Watch the video, then rank the instructor's characteristics according to ONLY this video.

Q167

Q168 To what degree was the instructor effective at:

	1 - Ineffective (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 - Effective (7)
Clearly communicating important course topics (1)	o	o	o	o	o	o	o
Clearly communicating important course goals (8)	o	o	o	o	o	o	o
Providing clear instructions on how to participate in course learning activities (9)	o	o	o	o	o	o	o

Clearly communicating important due dates/time frames for learning activities (10)	○	○	○	○	○	○	○
Encouraging course participants to explore new concepts in this course. (11)	○	○	○	○	○	○	○
Reinforcing the development of a sense of community among course participants. (12)	○	○	○	○	○	○	○

Q169 How pleasant is this instructor?

- 1 - Unpleasant (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Pleasant (7)
- Not able to determine from the video (8)

Q170 How sociable is this instructor?

- 1 - Sociable (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Unsociable (7)
- Not able to determine from the video (8)

Q171 How strong is this instructor's personality?

- ◯ 1 - Strong personality (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Weak personality (7)
- ◯ Not able to determine from the video (8)

Q172 How good-natured is this instructor?

- ◯ 1 - Irritable (1)
- ◯ 2 (2)
- ◯ 3 (3)
- ◯ 4 (4)
- ◯ 5 (5)
- ◯ 6 (6)
- ◯ 7 - Good-natured (7)
- ◯ Not able to determine from the video (8)

Q173 How humane is this instructor?

- 1 - Ruthless (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Humane (7)
- Not able to determine from the video (8)

Q174 How formal is this instructor?

- 1 - Formal (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Informal (7)
- Not able to determine from the video (8)

Q175 How proud is this instructor?

- 1 - Proud (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Modest (7)
- Not able to determine from the video (8)

Q176 How self-assured is this instructor?

- 1 - Self-assured (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Uncertain of self (7)
- Not able to determine from the video (8)

Q177 How humorous is this instructor?

- 1 - Humorous (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Humorless (7)
- Not able to determine from the video (8)

Q178 How dominant is this instructor?

- 1 - Dominant (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Submissive (7)
- Not able to determine from the video (8)

Q179 To what degree does this instructor know the material?

- 1 - Knows his material (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Doesn't know his material (7)
- Not able to determine from the video (8)

Q180 How considerate of the class is this instructor?

- 1 - Considerate of class (1)
- 2 (2)
- 3 (3)
- 4 (5)
- 5 (6)
- 6 (7)
- 7 - Self-centered (8)
- Not able to determine from the video (9)

Q181 How organized is this instructor?

- 1 - Organized (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Not organized (7)
- Not able to determine from the video (8)

Q182 How intelligent is this instructor?

- 1 - Intelligent (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Unintelligent (7)
- Not able to determine from the video (8)

Q183 How well does this instructor communicate?

- 1 - Expresses himself well (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Difficulty in communicating (7)
- Not able to determine from the video (8)

Q184 How interesting is this instructor?

- 1 - Interesting (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 - Boring (7)
- Not able to determine from the video (8)

Q185 How interested are you in taking a course taught by this instructor?

- ○ 1 - Not interested (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Interested (7)
- ○ Not able to determine from the video (8)

Q186 How comfortable would you be asking this instructor a question?

- ○ 1 - Uncomfortable (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Comfortable (7)
- ○ Not able to determine from the video (8)

Q187 To what degree does this instructor care about your learning?

- ○ 1 - Does not care (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 - Cares (7)
- ○ Not able to determine from the video (8)

End of Block: VIDEO 8

Start of Block: Block 10

Q188 Of the videos you were shown, which did you prefer and why?

____

____

End of Block: Block 10

Appendix C: Mehrabian's (1969) Criteria for Scoring Nonverbal Behaviors

Table 1
Criteria for Scoring the Positions and Postures of Standing or Seated Communicators

I. IMMEDIACY CUES–Criteria listed in order of importance.

A. Touching: there is bodily contact between the communicator and the addressee, as would be the case in holding hands, or shoulders touching. In the case of this and the eye contact measure noted below, the duration of touching (or of eye contact), expressed as a fraction of the total time when the communicator and addressee are in each other's presence, is the appropriate measure. For all of the remaining measures average values over time are used (e.g., average distance during a 5-min conversation between the communicator and addressee).

B. Distance (0.95): physical distance separating the communicator from the addressee. In two studies involving seated communicators (Mehrabian, 1968b; Mehrabian & Friar, in press) distance was specifically scored as follows.

1. Straight-ahead distance: the distance from the front of the addressee's chair to the center spoke of the communicator's chair. This is measured by the 9 x 9 in. tiles on the floor, with the tile immediately below the front of the addressee's chair being zero–the distance is measured to the nearest one-half tile.
2. Lateral distance: the distance the communicator is to the right or left of an imaginary plane that would cut the addressee's chair bilaterally in half. This distance is measured by the tiles on the floor from the imaginary plane to the center spoke of the communicator's chair–the distance is measured to the nearest one-half tile.

In one study involving standing communicators (Mehrabian, 1968a), the following criteria were used for distance.

1. Straight-ahead distance: measured from front line of addressee in terms of number of tiles to nearest half, up to a line that is perpendicular to the straight ahead and that passes near the center portion of the foot on which the communicator is resting. If he is resting on both feet, then a point in between the two feet is used.
2. Lateral distance: measured similarly to the straight-ahead distance.

Total distance is, of course, the relevant measure and is based on the preceding straight-ahead and lateral distance scores.

C. Forward Lean (0.87): the number of degrees that a plane defined by a line from the communicator's shoulders to his hips is away from the vertical plane. Angles are measured in units of 10 deg and whereas reclining angles are scored as negative, forward-leaning angles are scored as positive.

D. Eye Contact (0.55): fraction of the duration of interaction (i.e., when the communicator and the addressee are in each other's presence) when the communicants look into each other's eyes.

E. Orientation (0.90): the number of degrees a plane perpendicular to the plane of the communicator's shoulders is turned away from the median plane of the addressee. This angle is estimated to the nearest 10 deg and cannot exceed 180 deg.

NOTE: Increasing degrees of touching, forward lean, and eye contact, whereas decreasing degrees of distance and orientation are more immediate. With the exception of the forward-lean angle, which is not scored for standing positions, all the criteria above are scored for both seated and standing positions.

II. RELAXATION CUES–Criteria listed in approximate order of importance.

A. Arm Position Asymmetry (0.87).

0: Symmetrical position of the arms: for example, hands clasped at the midsection, arms folded symmetrically, or both hanging straight down or akimbo while standing.

1: Slight asymmetry in the position of the arms: for example, both hands resting on the lap of the communicator, but one is from 2 to 5 in. more forward than the other, or one hand clasps the other at the wrist.

2: Moderate asymmetry in the position of the arms: for example, one hand holds an elbow or the upper arm whereas the other hand is free, one arm hanging loosely and the other hanging by a finger which is stuck in a pocket.

3: Extreme asymmetry in the position of the arms: for example, one arm in lap and the other hooked over the back of the chair, one hand stuck in a pocket and the other resting on knee or hanging loosely, or only one arm akimbo.

B. Sideways Lean (0.63): the number of degrees that a plane cutting the communicator's torso bilaterally in half is away from a plane cutting his chair bilaterally in half. This angle is estimated to the nearest 10 deg and cannot exceed 90 deg.

C. Leg Position Asymmetry (0.96)

0: Symmetrical position of the legs with both feet flat on the floor and the insteps touching.

1: Symmetrical position of the legs with both feet flat on the floor and the insteps *not* touching.

2: Asymmetrical stance of the legs with both feet resting flat on the floor, such as when one foot is moved to a more forward position.

3: Asymmetrical stance of the legs with one or both feet partially lifted off the floor, as when there is a bend at the ankle and only an edge of the foot is resting on the floor, or when the legs are crossed while seated.

D. Hand Relaxation (0.66)

0: Very tense; hands or fists are tightly clenched, or hands are clasping anything tightly, or hands are in motion, such as drumming fingers.

1: Moderately tense; loosely clasped or in loose fists or clasping any object or part of the body loosely.

2: Relaxed; fingers are extended but not stiffly.

E. Neck Relaxation (0.70)

0: The head is not supported and the line of vision is pointing 10 deg or more above the horizontal.

1: The head is not supported and the line of vision is within 10 deg of the horizontal.

2: The head is supported as when resting on the back of a couch or is hanging so that the line of vision forms 10 or more degrees below the horizontal.

F. Reclining Angle (0.87): the number of degrees that a plane defined by a line from the communicator's shoulders to his hips is away from the vertical plane. Angles are measured in units of 10 deg and whereas reclining angles are scored as positive, forward learning angles are scored as negative.

NOTE: Increasing degrees of each of the preceding criteria indicate more relaxation. With the exception of the sideways lean and reclining angles which are not scored for standing positions, all the criteria above are scored for both seated and standing positions.

Table 2
Criteria for Scoring Movements, Facial Expressions, and Verbalizations

MOVEMENTS

1. Trunk Swivel Movements (0.89): number of times S swivels his body on a swivel chair. Score all movements which involve a rotation greater than 10 deg. If motions are cyclical rather than unidirectional, one complete cycle is scored as "1."

2. Rocking Movements (0.91): number of times S changes his angle of forward-back lean of torso by 10 deg or more. Again cyclical movements (e.g., a forward-back rock) are scored as "1."

3. Head-Nodding Movements (0.80): number of cyclical up and down movements of the head each of which is scored as "1."

4. Gesticulation (0.98): number of movements of hands or of fingers, excluding the self-manipulatory movements scored below. This includes side-to-side, forward-back, and up-and-down movements. Cyclical movements (e.g., raising and lowering a finger) are scored as "1."

5. Self-manipulation (0.93): "Motion of a part of the body in contact with another–either directly or mediated by an instrument. Examples are scratching, rubbing, or tapping an arm or leg with finger or pen" (Rosenfeld, 1966b, p. 67), which are scored as in (4) above. In other words, single brief movements in one direction are scored once, and cyclical movements are scored once each. A brief (i.e., less than 5 sec) scratching movement is scored once only. Continuous movements are scored once every 5 sec.

6. Leg Movement (0.97): number of movements of the leg at the knee joint (e.g., placing one foot onto the other, crossing legs, or, if S is short, letting feet hang and swing back and forth). Again any cyclical movements are scored as "1." Do not include in this measure any movements that are incidental to trunk swivel or rocking movements.

7. Foot Movement (0.87): number of movements of feet or number of times ankle is twisted (rotated). Again cyclical movements (e.g., turning the foot from side to side) are scored as "1." Do not score movements incidental to leg movements.

FACIAL EXPRESSIONS

1. Facial Pleasantness (0.79): number of such positive expressions as smiles minus number of such negative expressions as frowns or sneers. Continuous expressions of either a positive or negative quality are scored once every 5 sec.

2. Facial Activity (0.49): total number of facial expressions including positive and negative ones. Thus, any movements of the facial muscles to a non-neutral expression such as raising of eyebrows in surprise are scored. Continuous expressions are scored once every 5 sec.

VERBALIZATION

1. Communication Length (0.91): measured in terms of number of words, or slightly less satisfactorily in terms of duration which is considerably easier to score.

2. Speech Rate (0.77): measured in terms of words per unit time (e.g., minutes).

3. Halting Quality of Speech (0.70): This is the variability of speech rate and can be computed on the basis of speech rate figures obtained for 15-sec intervals of speech. Alternately, it can be estimated on a 5-point scale by listening to an audio-recording of a communication. Such judgments can be anchored by assigning a score of 0 to "radio announcer" quality speech and a score of 4 to stammering speech. Judges can initially be provided with such examples. The inter-O reliability given is for the latter case.

4. Speech Error Rate (0.78): based on number of speech disruptions per unit time. Mahl's (1959, Table 1) criteria for "sentence change," "repetition," "stutter," "sentence incompletion," "tongue slips," and "intruding incoherent sounds" provide a reliable basis for scoring speech disruptions.

5. Speech Volume (0.88): obtained, for instance, from the calibrated scale of an audio-recorder or, alternately, simply estimated on a 5-point scale. The inter-O reliability given is for the latter case where anchor stimuli can again be initially provided to the judges.

6. Intonation (0.44): measured in terms of variations in pitch using a spectrum analyzer such as that described by Starkweather (1964). Alternately, it may be estimated on a 5-point scale with the reported reliability. The latter judgments can be anchored by assigning a score of 0 to "flat or affectless" intonation associated with reading, and a score of 4 to "radio announcer" intonation or that associated with angry speech. These could be initially provided to judges as examples.

Appendix D: Scripts

All scripts are delivered by the same instructor, and all scripts describe the same fictitious online course.

Video Script 1 (Used for Videos 1, 2, 3, and 4)

Welcome to EL101, an online course called Introduction to Educational Leadership. I'm an Assistant Professor in the Department of Educational Leadership. Generally, we have two kinds of students: those who say, "I always wanted to be a principal," and those who say, "I never dreamed I would want to be a principal." Which are you? Whether you identify most with the former or the latter or somewhere in between, EL101 is a vital course for you. It provides you with initial exposure to the complex web of human resource laws, policies, and cultural norms that you will navigate as an administrator. It covers best practices in teacher hiring and support. Being a principal is a tremendously difficult job, but it is such an important one. I want to get to know you each individually. I care deeply about your learning and your success. I am committed to working with you in this course to help you start becoming an effective human resource manager and school leader. In this course I expect to see you not only pass but excel, so you can transition successfully into principalship and an educational leader. Begin the course by introducing yourself on the discussion board.

WORDS = 200

Video Script 2 (Used for Video 5)

Welcome to EL101, an online course called Introduction to Educational Leadership. I'm an Assistant Professor in the Department of Educational Leadership. First: here's a little background about me. This is my 10th year at this university. My research focuses on school principals and education reform. I teach educational leadership courses and supervise doctoral students during their internships in school-based leadership. I have won several awards for research and contributions to the scholarly community after publishing twenty articles and two books.

I moved here after serving for 4 years as principal of a Manhattan public high school. I started working at the school in 2001 and had to evacuate students and staff from the school on September 11. It was the hardest test of leadership I've ever had to face. I also encountered human resource issues and teacher-related legal, political, and cultural issues similar to those any principal, anywhere, will encounter. Just to tell you a little about myself- I have a 7-month-old daughter and a playful chihuahua rescue. My wife and I enjoy movies, travel, and board games. My experiences and research will form the backbone of this course. Begin the course by introducing yourself on the discussion board.

WORDS = 201

Video Script 3 (Used for Video 6)

Welcome to EL101, an online course called Introduction to Educational Leadership. I'm an Assistant Professor in the Department of Educational Leadership. EL101 is a vital course in this program. It provides students with initial exposure to the complex web of human resource laws, policies, and cultural norms that administrators will navigate. It also covers best practices in teacher hiring and support. Being a principal is a tremendously difficult job, but it is such an important one. This course prepares students to start becoming an effective human resource manager and school leader. In this course students learn to transition successfully into principalship and educational leaders. Material is presented on human resource issues and teacher-related legal, political, and cultural issues similar to those any principal, anywhere, will encounter. This course is entirely online and consists of seven units, which contain readings, assessments, multimedia presentations, videos of interviews with guest speakers, and various resources to aid learning. The content is heavily steeped in research and best practices to provide the best instruction possible. Expectations, resources, grading policies, assignment descriptions, and more are listed in the course syllabus. Students are now asked to begin the course by posting an introduction on the discussion board.

WORDS = 200

Video Script 4 (Used for Videos 7 and 6)

Welcome to EL101, an online course called Introduction to Educational Leadership. I'm an Assistant Professor in the Department of Educational Leadership. EL101 is a vital course in this program. It provides students with initial exposure to the complex web of human resource laws, policies, and cultural norms that you will navigate as an administrator. It also covers best practices in teacher hiring and support. Being a principal is a tremendously difficult job, but it is such an important one. This course prepares students to start becoming an effective human resource manager and school leader. In this course students learn to transition successfully into principalship and educational leaders. Material is presented on human resource issues and teacher-related legal, political, and cultural issues similar to those any principal, anywhere, will encounter. This course is entirely online and consists of seven units, which contain readings, assessments, presentations, interviews with guest speakers, and resources to aid learning.

Just to tell you a little about myself- I have a 7-month-old daughter and a playful chihuahua rescue. My wife and I enjoy movies, travel, and board games.

I'm looking forward to getting to know you. Begin the course by introducing yourself on the discussion board. WORDS = 201

Video Script 5 (Used for Video 9)

INSTRUCTOR: Welcome to EL101, an online course called Introduction to Educational Leadership. I'm an Assistant Professor in the Department of Educational Leadership. I'm joined here today with our graduate assistant.

GRADUATE ASSISTANT: Hello. Please tell us why EL101 is important.

INSTRUCTOR: EL101 is a vital course in this program. It provides students with initial exposure to the complex web of human resource laws, policies, and cultural norms that you will navigate as an administrator. It also covers best practices in teacher hiring and support.

GRADUATE ASSISTANT: How does this course prepare students to become a principal?

INSTRUCTOR: Being a principal is a tremendously difficult job, but it is such an important one. This course prepares students to start becoming an effective human resource manager and school leader. In this course students learn to transition successfully into principalship and educational leaders.

GRADUATE ASSISTANT: Can you tell us a little about yourself?

INSTRUCTOR: I have a 7-month-old daughter and a playful chihuahua rescue. My wife and I enjoy movies, travel, and board games. I'm looking forward to getting to know each of my students.

GRADUATE ASSISTANT: What should students do next after this?

INSTRUCTOR: Please begin the course by introducing yourself on the discussion board.

WORDS = 201

Appendix E: YouTube Video Playlist

The following link displays the eight videos developed and used in this study:
https://www.youtube.com/playlist?list=PL6D1ziOHMGyMhHgEeuTDd9x8IGNALfB0k

Appendix F: Descriptive Statistics

Table 34. Sample in Detail by Gender and University Status

Intersection of Gender and University Status: Percentages and Count	**Female**		**Male**		**Prefer not to say**		**Prefer to self-describe:**		**Non-binary/ third gender**		**Total**
an undergraduate student	84.76%	89	15.24%	16	0.00%	0	0.00%	0	0.00%	0	105
a non-degree seeking student	100.00 %	1	0.00%	0	0.00%	0	0.00%	0	0.00%	0	1
a graduate student	74.47%	70	22.34%	21	2.13%	2	0.00%	0	1.06%	1	94
a faculty member	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0
a staff member	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0
Total		160		37		2				1	200

Table Note: Due to the low response rate for gender other than female or male and for university status other than undergraduate student or graduate student, four responses were removed prior to conducting the statistical analyses. A fifth response was removed, as it was only a partial response.

Appendix G: Research Question 1 Related Results Tables

Table 35. Chi-Squared Statistics Between Student Expectations of Online Instructor Qualities and Student Characteristics.

Student Expectations of Online Instructor Qualities	Student Characteristics	Chi-Square Value	Null Hypothesis Result (Failed to Reject, Rejected, Less than 80% expected count >5 and thus ran Fisher's Exact)
Pleasant	Gender	$\chi2(1)=0.03$, $p=.85$	Failed to Reject
Sociable	Gender	$\chi2(1)=0.58$, $p=.45$	Failed to Reject
Strong Personality	Gender	$\chi2(1)=0.26$, $p=.61$	Failed to Reject
Good natured	Gender	$\chi2(1)=0.13$, $p=.72$	Failed to Reject
Humane	Gender	$\chi2(1)=0.41$, $p=.03$*	Rejected
Formal	Gender	$\chi2(1)=1.91$, $p=.16$	Failed to Reject
Self-assured	Gender	$\chi2(1)=0.009$, $p=.92$	Failed to Reject
Humorous	Gender	$\chi2(1)=0.49$, $p=.49$	Failed to Reject
Dominant	Gender	$\chi2(1)=0.10$, $p=.75$	Failed to Reject
Knows the material	Gender	$\chi2(1)=0.04$, $p=.83$	Failed to Reject
Considerate of the class	Gender	$\chi2(1)=0.29$, $p=.58$	Failed to Reject
Organized	Gender	$\chi2(1)=0.83$, $p=.36$	Failed to Reject
Intelligent	Gender	$\chi2(1)=1.84$, $p=.17$	Failed to Reject
Communicates Well	Gender	$\chi2(1)=1.71$, $p=.19$	Failed to Reject
Interesting	Gender	$\chi2(1)=.41$, $p=.52$	Failed to Reject
Proud	Gender	$\chi2(1)=.20$, $p=.65$	Failed to Reject
Pleasant	University Status	$\chi2(1)=8.38$, $p=.003$**	Rejected
Sociable	University Status	$\chi2(1)=8.03$, $p=.004$**	Rejected
Strong Personality	University Status	$\chi2(1)=11.64$, $p<.001$***	Rejected
Good natured	University Status	$\chi2(1)=0.67$, $p=.41$	Failed to Reject

Table 35. Chi-Squared Statistics Between Student Expectations of Online Instructor Qualities and Student Characteristics (continued).

Student Expectations of Online Instructor Qualities	Student Characteristics	Chi-Square Value	Null Hypothesis Result (Failed to Reject, Rejected, Less than 80% expected count >5 and thus ran Fisher's Exact)
Humane	University Status	χ2(1)=19.58, p<.001***	Rejected
Formal	University Status	χ2(1)=1.91, p=.16	Failed to Reject
Self-assured	University Status	χ2(1)=.2.71, p=.10	Failed to Reject
Humorous	University Status	χ2(1)=0.67, p=.41	Failed to Reject
Dominant	University Status	χ2(1)=2.97, p=.08	Failed to Reject
Knows the material	University Status	χ2(1)=1.36, p=.24	Failed to Reject
Considerate of the class	University Status	χ2(1)=4.59, p=.03*	Rejected
Organized	University Status	χ2(1)=1.11, p=.29	Failed to Reject
Intelligent	University Status	χ2(1)=0.22, p=.64	Failed to Reject
Communicates Well	University Status	χ2(1)=3.14, p=.08	Failed to Reject
Interesting	University Status	χ2(1)=5.31, p=.02*	Rejected
Proud	University Status	χ2(1)=7.15, p=.02	Failed to Reject
Pleasant	Age	χ2(7)=13.02, p=.07	Failed to Reject
Sociable	Age	χ2(7)=9.58, p=.21	Failed to Reject
Strong Personality	Age	χ2(7)=21.08 p=.003**	Rejected
Good natured	Age	χ2(7)=6.32, p=.50	Failed to Reject
Humane	Age	χ2(7)=7.19, p=.41	Failed to Reject
Formal	Age	χ2(7)=25.32, p<.001***	Rejected
Self-assured	Age	χ2(7)=13.34, p=.06	Failed to Reject
Humorous	Age	χ2(7)=6.04, p=.54	Failed to Reject

Table 35. Chi-Squared Statistics Between Student Expectations of Online Instructor Qualities and Student Characteristics (continued).

Student Expectations of Online Instructor Qualities	Student Characteristics	Chi-Square Value	Null Hypothesis Result (Failed to Reject, Rejected, Less than 80% expected count >5 and thus ran Fisher's Exact)
Dominant	Age	$\chi2(7)=6.97$, $p=.43$	Failed to Reject
Knows the material	Age	$\chi2(7)=3.55$, $p=.83$	Failed to Reject
Considerate of the class	Age	$\chi2(7)=5.58$, $p=.59$	Failed to Reject
Organized	Age	$\chi2(7)=6.25$, $p=.51$	Failed to Reject
Intelligent	Age	$\chi2(7)=2.08$, $p=.96$	Failed to Reject
Communicates Well	Age	$\chi2(7)=6.44$, $p=.49$	Failed to Reject
Interesting	Age	$\chi2(7)=9.97$, $p=.19$	Failed to Reject
Proud	Age	$\chi2(7)=7.64$, $p=.37$	Failed to Reject
Pleasant	English as Primary	$\chi2(1)=2.76$, $p=.09$	Failed to Reject
Sociable	English as Primary	$\chi2(1)=0.06$, $p=.80$	Failed to Reject
Strong Personality	English as Primary	$\chi2(1)=0.72p=.40$	Failed to Reject
Good natured	English as Primary	$\chi2(1)=0.50$, $p=.48$	Failed to Reject
Humane	English as Primary	$\chi2(1)=0.76$, $p=.38$	Failed to Reject
Formal	English as Primary	$\chi2(1)=0.43$, $p=.51$	Failed to Reject
Self-assured	English as Primary	$\chi2(1)=0.003$, $p=.96$	Failed to Reject
Humorous	English as Primary	$\chi2(1)=0.002$, $p=.96$	Failed to Reject
Dominant	English as Primary	$\chi2(1)=0.44$, $p=.50$	Failed to Reject
Knows the material	English as Primary	$\chi2(1)=0.04$, $p=.85$	Failed to Reject
Considerate of the class	English as Primary	$\chi2(1)=0.31$, $p=.57$	Failed to Reject
Organized	English as Primary	$\chi2(1)=7.39$ $p=.006$**	Rejected
Intelligent	English as Primary	$\chi2(1)=0.44$, $p=.50$	Failed to Reject
Communicates Well	English as Primary	$\chi2(1)=7.35$, $p=.006$**	Rejected
Interesting	English as Primary	$\chi2(1)=0$, $p=1$	Failed to Reject

Table 35. Chi-Squared Statistics Between Student Expectations of Online Instructor Qualities and Student Characteristics (continued).

Student Expectations of Online Instructor Qualities	Student Characteristics	Chi-Square Value	Null Hypothesis Result (Failed to Reject, Rejected, Less than 80% expected count >5 and thus ran Fisher's Exact)
Proud	English as Primary	$\chi2(1)=3.52$, $p=.06$	Failed to Reject
Pleasant	Online Courses Taken	$\chi2(12)=17.14$, $p=.51$	Failed to Reject
Sociable	Online Courses Taken	$\chi2(12)=16.77$, $p=.54$	Failed to Reject
Strong Personality	Online Courses Taken	$\chi2(12)=16.36$, $p=.57$	Failed to Reject
Good natured	Online Courses Taken	$\chi2(12)=18.70$, $p=.41$	Failed to Reject
Humane	Online Courses Taken	$\chi2(12)=14.01$, $p=.73$	Failed to Reject
Formal	Online Courses Taken	$\chi2(12)=15.26$, $p=.64$	Failed to Reject
Self-assured	Online Courses Taken	$\chi2(12)=14.55$, $p=.69$	Failed to Reject
Humorous	Online Courses Taken	$\chi2(12)=16.40$, $p=.56$	Failed to Reject
Dominant	Online Courses Taken	$\chi2(12)=7.47$, $p=.99$	Failed to Reject
Knows the material	Online Courses Taken	$\chi2(12)=28.39$, $p=.05$	Failed to Reject
Considerate of the class	Online Courses Taken	$\chi2(12)=9.75$, $p=.63$	Failed to Reject
Organized	Online Courses Taken	$\chi2(12)=9.07$, $p=.70$	Failed to Reject
Intelligent	Online Courses Taken	$\chi2(12)=12.52$, $p=.41$	Failed to Reject
Communicates Well	Online Courses Taken	$\chi2(12)=9.72$, $p=.64$	Failed to Reject

Table 35. Chi-Squared Statistics Between Student Expectations of Online Instructor Qualities and Student Characteristics (continued).

Student Expectations of Online Instructor Qualities	Student Characteristics	Chi-Square Value	Null Hypothesis Result (Failed to Reject, Rejected, Less than 80% expected count >5 and thus ran Fisher's Exact)
Interesting	Online Courses Taken	$\chi2(12)=18.89$, $p=.09$	Failed to Reject
Proud	Online Courses Taken	$\chi2(12)=9.06$, $p=.70$	Failed to Reject
Pleasant	Field of Study	$\chi2(12)=6.41$, $p=.89$	Failed to Reject
Sociable	Field of Study	$\chi2(12)=9.88$, $p=.63$	Failed to Reject
Strong Personality	Field of Study	$\chi2(12)=15.26$, $p=.22$	Failed to Reject
Good natured	Field of Study	$\chi2(12)=6.41$, $p=.89$	Failed to Reject
Humane	Field of Study	$\chi2(12)=9.32$, $p=.67$	Failed to Reject
Formal	Field of Study	$\chi2(12)=20.48$, $p=.06$	Failed to Reject
Self-assured	Field of Study	$\chi2(12)=14.73$, $p=.03$*	Rejected
Humorous	Field of Study	$\chi2(12)=16.01$, $p=.19$	Failed to Reject
Dominant	Field of Study	$\chi2(12)=6.26$, $p=.90$	Failed to Reject
Knows the material	Field of Study	$\chi2(12)=9.75$, $p=.64$	Failed to Reject
Considerate of the class	Field of Study	$\chi2(12)=6.57$, $p=.89$	Failed to Reject
Organized	Field of Study	$\chi2(12)=9.07$, $p=.70$	Failed to Reject
Intelligent	Field of Study	$\chi2(12)=12.52$, $p=.41$	Failed to Reject

Table 35. Chi-Squared Statistics Between Student Expectations of Online Instructor Qualities and Student Characteristics (continued).

Student Expectations of Online Instructor Qualities	Student Characteristics	Chi-Square Value	Null Hypothesis Result (Failed to Reject, Rejected, Less than 80% expected count >5 and thus ran Fisher's Exact)
Communicates Well	Field of Study	$\chi 2(12)=9.72$, $p=.64$	Failed to Reject
Interesting	Field of Study	$\chi 2(12)=19.89$, $p=.09$	Failed to Reject
Proud	Field of Study	$\chi 2(12)=9.06$, $p=.70$	Failed to Reject

***Significant at p<.001, **Significant at p<.01, *Significant at p<.05.

Table 36. Expected Online Instructor Qualities Breakout by Gender.

Question	Female		Male		Prefer not to say		Prefer to self-describe:		Non-binary/third gender	
Strong personality	2.91%	36	2.42%	7	0.00%	0	0.00%	0	0.00%	0
Sociable	5.65%	70	6.57%	19	0.00%	0	0.00%	0	0.00%	0
Self-assured	2.75%	34	2.42%	7	0.00%	0	0.00%	0	0.00%	0
Proud	0.57%	7	0.69%	2	0.00%	0	0.00%	0	0.00%	0
Pleasant	9.05%	112	9.00%	26	7.69%	1	0.00%	0	0.00%	0
Organized	12.92%	160	12.46%	36	15.38%	2	0.00%	0	16.67%	1
Knows the material	11.95%	148	12.11%	35	15.38%	2	0.00%	0	16.67%	1
Interesting	6.38%	79	6.92%	20	0.00%	0	0.00%	0	16.67%	1
Intelligent	7.03%	87	8.65%	25	7.69%	1	0.00%	0	16.67%	1
Humorous	3.63%	45	3.11%	9	0.00%	0	0.00%	0	0.00%	0
Humane	3.63%	45	1.73%	5	7.69%	1	0.00%	0	0.00%	0
Good natured	6.54%	81	6.92%	20	15.38%	2	0.00%	0	0.00%	0
Formal	3.07%	38	4.50%	13	7.69%	1	0.00%	0	0.00%	0

Table 36. Expected Online Instructor Qualities Breakout by Gender (continued).

Question	Female		Male		Prefer not to say		Prefer to self-describe		Non-binary/third gender	
Dominant	0.48%	6	0.35%	1	0.00%	0	0.00%	0	0.00%	0
Considerate of the class	10.90%	135	10.38%	30	7.69%	1	0.00%	0	16.67%	1
Communicates well	12.52%	155	11.76%	34	15.38%	2	0.00%	0	16.67%	1
Total	Total	1238	Total	289	Total	13	Total	0	Total	6

Table 37. Expected Online Instructor Qualities Breakout by Age.

Question	21-23		24-26		27-29		30-32	
Strong personality	2.19%	5	2.63%	4	0.00%	0	0.00%	0
Sociable	5.70%	13	3.95%	6	5.97%	8	3.92%	2
Self-assured	1.32%	3	1.97%	3	1.49%	2	1.96%	1
Proud	0.88%	2	0.00%	0	0.00%	0	0.00%	0
Pleasant	9.65%	22	9.21%	14	6.72%	9	5.88%	3
Organized	13.16%	30	13.82%	21	14.93%	20	13.73%	7
Knows the material	13.16%	30	11.84%	18	14.18%	19	13.73%	7
Interesting	6.58%	15	8.55%	13	8.21%	11	5.88%	3
Intelligent	7.46%	17	7.89%	12	8.96%	12	9.80%	5
Humorous	3.07%	7	3.29%	5	4.48%	6	5.88%	3
Humane	4.39%	10	3.29%	5	3.73%	5	1.96%	1
Good natured	7.02%	16	7.24%	11	3.73%	5	9.80%	5
Formal	2.63%	6	1.32%	2	2.24%	3	1.96%	1
Dominant	0.00%	0	0.00%	0	0.75%	1	0.00%	0
Considerate of the class	10.53%	24	11.18%	17	10.45%	14	11.76%	6
Communicates well	12.28%	28	13.82%	21	14.18%	19	13.73%	7
Total	Total	228	Total	152	Total	134	Total	51

Table 37. Expected Online Instructor Qualities Breakout by Age (continued).

Question	18-20		33-35		36-38		39 or older	
Strong personality	4.57%	30	1.52%	1	0.00%	0	1.76%	3
Sociable	6.40%	42	3.03%	2	4.49%	4	7.06%	12
Self-assured	3.35%	22	1.52%	1	1.12%	1	4.71%	8
Proud	1.07%	7	0.00%	0	0.00%	0	0.00%	0
Pleasant	9.45%	62	9.09%	6	10.11%	9	8.24%	14
Organized	11.59%	76	16.67%	11	13.48%	12	12.94%	22
Knows the material	10.82%	71	13.64%	9	12.36%	11	12.35%	21
Interesting	4.73%	31	6.06%	4	10.11%	9	8.24%	14
Intelligent	6.55%	43	7.58%	5	6.74%	6	8.24%	14
Humorous	3.96%	26	1.52%	1	3.37%	3	1.76%	3
Humane	2.74%	18	0.00%	0	5.62%	5	4.12%	7
Good natured	6.55%	43	9.09%	6	7.87%	7	5.88%	10
Formal	5.49%	36	1.52%	1	0.00%	0	1.76%	3
Dominant	0.91%	6	0.00%	0	0.00%	0	0.00%	0
Considerate of the class	10.67%	70	12.12%	8	12.36%	11	10.00%	17
Communicates well	11.13%	73	16.67%	11	12.36%	11	12.94%	22
Total	Total	656	Total	66	Total	89	Total	170

Table 38. Expected Online Instructor Qualities Breakout by University Status.

Question	an undergraduate student		a non-degree seeking student		a graduate student	
Strong personality	3.98%	33	0.00%	0	1.41%	10
Sociable	6.75%	56	0.00%	0	4.64%	33
Self-assured	3.01%	25	0.00%	0	2.25%	16
Proud	0.96%	8	0.00%	0	0.14%	1
Pleasant	9.52%	79	20.00%	1	8.30%	59

Table 38. Expected Online Instructor Qualities Breakout by University Status (continued).

Question	an undergraduate student		a non-degree seeking student		a graduate student	
Organized	11.93%	99	20.00%	1	13.92%	99
Knows the material	10.96%	91	20.00%	1	13.22%	94
Interesting	5.06%	42	20.00%	1	8.02%	57
Intelligent	6.75%	56	0.00%	0	8.16%	58
Humorous	3.61%	30	0.00%	0	3.38%	24
Humane	3.01%	25	0.00%	0	3.66%	26
Good natured	6.63%	55	0.00%	0	6.75%	48
Formal	4.94%	41	0.00%	0	1.55%	11
Dominant	0.72%	6	0.00%	0	0.14%	1
Considerate of the class	10.84%	90	20.00%	1	10.69%	76
Communicates well	11.33%	94	0.00%	0	13.78%	98
Total	Total	830	Total	5	Total	711

Table 39. Expected Online Instructor Qualities Breakout by English as a Primary Language.

Question	Yes		No	
Strong personality	2.86%	41	1.77%	2
Sociable	5.72%	82	6.19%	7
Self-assured	2.58%	37	3.54%	4
Proud	0.49%	7	1.77%	2
Pleasant	9.14%	131	7.08%	8
Organized	12.98%	186	11.50%	13
Knows the material	12.00%	172	12.39%	14
Interesting	6.42%	92	7.08%	8
Intelligent	7.40%	106	7.08%	8
Humorous	3.42%	49	4.42%	5
Humane	3.21%	46	4.42%	5
Good natured	6.70%	96	6.19%	7
Formal	3.28%	47	4.42%	5

Table 39. Expected Online Instructor Qualities Breakout by English as a Primary Language (continued).

Question	Yes		No	
Dominant	0.42%	6	0.88%	1
Considerate of the class	10.82%	155	10.62%	12
Communicates well	12.56%	180	10.62%	12
Total	Total	1433	Total	113

Table 40. Expected Online Instructor Qualities Breakout by Field of Study.

Question	Computer/information science		Health		Vocational/technical		Other technical/professional		Other		Humanities	
Pleasant	8.33%	2	9.05%	40	7.69%	1	7.69%	2	8.60%	24	6.49%	5
Knows the material	12.50%	3	11.31%	50	7.69%	1	11.54%	3	11.47%	32	11.69%	9
Considerate of the class	12.50%	3	9.73%	43	7.69%	1	7.69%	2	10.75%	30	10.39%	8
Organized	12.50%	3	11.76%	52	7.69%	1	11.54%	3	12.19%	34	11.69%	9
Intelligent	8.33%	2	6.33%	28	7.69%	1	7.69%	2	8.60%	24	9.09%	7
Communicates well	12.50%	3	11.31%	50	7.69%	1	11.54%	3	11.47%	32	10.39%	8
Interesting	4.17%	1	5.66%	25	7.69%	1	7.69%	2	5.38%	15	7.79%	6
Proud	0.00%	0	1.13%	5	0.00%	0	0.00%	0	1.08%	3	0.00%	0
Sociable	4.17%	1	6.79%	30	7.69%	1	3.85%	1	5.73%	16	5.19%	4
Strong personality	4.17%	1	4.30%	19	0.00%	0	3.85%	1	2.87%	8	2.60%	2

Table 40. Expected Online Instructor Qualities Breakout by Field of Study (continued).

Question	Computer/information science		Health		Vocational/technical		Other technical/professional		Other		Humanities	
Good natured	8.33%	2	6.56%	29	7.69%	1	7.69%	2	7.17%	20	5.19%	4
Humane	0.00%	0	3.39%	15	7.69%	1	7.69%	2	2.51%	7	3.90%	3
Formal	4.17%	1	4.52%	20	7.69%	1	3.85%	1	3.58%	10	5.19%	4
Self-assured	4.17%	1	2.94%	13	7.69%	1	3.85%	1	4.30%	12	2.60%	2
Humorous	4.17%	1	4.52%	20	7.69%	1	3.85%	1	3.94%	11	6.49%	5
Dominant	0.00%	0	0.68%	3	0.00%	0	0.00%	0	0.36%	1	1.30%	1
Total	Total	24	Total	442	Total	13	Total	26	Total	279	Total	77

Question	Engineering		Education		Business/management		Social/behavior sciences		Life sciences		Physical sciences		Math	
Pleasant	20.00%	1	9.92%	24	9.88%	17	8.02%	13	9.30%	4	8.33%	4	15.38%	2
Knows the material	0.00%	0	12.81%	31	13.37%	23	12.35%	20	11.63%	5	14.58%	7	15.38%	2
Considerate of the class	0.00%	0	11.98%	29	11.05%	19	11.11%	18	11.63%	5	14.58%	7	15.38%	2
Organized	20.00%	1	14.46%	35	13.95%	24	13.58%	22	13.95%	6	14.58%	7	15.38%	2
Intelligent	0.00%	0	7.44%	18	8.14%	14	6.79%	11	11.63%	5	4.17%	2	0.00%	0
Communicates well	20.00%	1	14.46%	35	13.37%	23	13.58%	22	13.95%	6	12.50%	6	15.38%	2
Interesting	20.00%	1	7.02%	17	6.98%	12	7.41%	12	13.95%	6	4.17%	2	0.00%	0

Table 40. Expected Online Instructor Qualities Breakout by Field of Study (continued).

Question	Engineering		Education		Business/management		Social/behavior sciences		Life sciences		Physical sciences		Math	
Proud	0.00%	0	0.00%	0	0.58%	1	0.00%	0	0.00%	0	0.00%	0	0.00%	0
Sociable	0.00%	0	5.37%	13	5.23%	9	4.32%	7	4.65%	2	8.33%	4	7.69%	1
Strong personality	0.00%	0	0.83%	2	1.74%	3	3.09%	5	0.00%	0	2.08%	1	7.69%	1
Good natured	20.00%	1	6.61%	16	6.40%	11	6.17%	10	4.65%	2	8.33%	4	7.69%	1
Humane	0.00%	0	3.72%	9	3.49%	6	3.09%	5	2.33%	1	4.17%	2	0.00%	0
Formal	0.00%	0	0.83%	2	2.91%	5	3.70%	6	2.33%	1	2.08%	1	0.00%	0
Self-assured	0.00%	0	2.48%	6	1.16%	2	1.85%	3	0.00%	0	0.00%	0	0.00%	0
Humorous	0.00%	0	2.07%	5	1.74%	3	3.70%	6	0.00%	0	2.08%	1	0.00%	0
Dominant	0.00%	0	0.00%	0	0.00%	0	1.23%	2	0.00%	0	0.00%	0	0.00%	0
Total	Total	5	Total	242	Total	172	Total	162	Total	43	Total	48	Total	13

Table 41. Expected Online Instructor Qualities Breakout by Online Courses Taken.

Question	Pleasant		Knows the material		Considerate of the class		Organized		Intelligent	
0	8.26%	36	11.70%	51	10.78%	47	11.93%	52	6.88%	30
9	14.29%	1	14.29%	1	14.29%	1	14.29%	1	14.29%	1
10	9.23%	6	13.85%	9	13.85%	9	13.85%	9	10.77%	7
11	6.67%	1	13.33%	2	13.33%	2	13.33%	2	13.33%	2
12	8.82%	3	8.82%	3	8.82%	3	11.76%	4	2.94%	1
13	8.33%	1	16.67%	2	16.67%	2	16.67%	2	8.33%	1

Table 41. Expected Online Instructor Qualities Breakout by Online Courses Taken (continued).

Question	Pleasant		Knows the material		Considerate of the class		Organized		Intelligent	
14	0.00%	0	50.00%	1	0.00%	0	50.00%	1	0.00%	0
15	4.00%	1	16.00%	4	8.00%	2	16.00%	4	4.00%	1
16	0.00%	0	0.00%	0	0.00%	0	33.33%	1	33.33%	1
17	14.29%	1	0.00%	0	14.29%	1	14.29%	1	14.29%	1
18	9.52%	4	11.90%	5	9.52%	4	11.90%	5	7.14%	3
1	10.05%	20	11.56%	23	11.56%	23	13.07%	26	6.03%	12
19	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
20	7.55%	4	13.21%	7	9.43%	5	13.21%	7	9.43%	5
2	10.27%	19	11.35%	21	9.73%	18	12.97%	24	8.11%	15
3	9.76%	16	11.59%	19	10.37%	17	14.02%	23	7.32%	12
4	10.81%	12	11.71%	13	10.81%	12	11.71%	13	9.01%	10
5	6.06%	4	15.15%	10	12.12%	8	15.15%	10	6.06%	4
6	9.23%	6	12.31%	8	9.23%	6	12.31%	8	6.15%	4
7	10.00%	2	10.00%	2	10.00%	2	10.00%	2	10.00%	2
8	5.71%	2	14.29%	5	14.29%	5	11.43%	4	5.71%	2

Question	Communicates well		Interesting		Proud		Sociable		Strong personality	
0	11.47%	50	6.88%	30	0.69%	3	5.96%	26	3.90%	17
9	14.29%	1	0.00%	0	0.00%	0	14.29%	1	0.00%	0
10	10.77%	7	9.23%	6	0.00%	0	4.62%	3	0.00%	0
11	13.33%	2	0.00%	0	0.00%	0	6.67%	1	0.00%	0
12	11.76%	4	5.88%	2	0.00%	0	11.76%	4	2.94%	1
13	16.67%	2	8.33%	1	0.00%	0	0.00%	0	0.00%	0
14	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
15	16.00%	4	8.00%	2	0.00%	0	12.00%	3	0.00%	0
16	33.33%	1	0.00%	0	0.00%	0	0.00%	0	0.00%	0
17	14.29%	1	0.00%	0	0.00%	0	0.00%	0	0.00%	0
18	9.52%	4	4.76%	2	0.00%	0	7.14%	3	2.38%	1

Table 41. Expected Online Instructor Qualities Breakout by Online Courses Taken (continued).

Question	Communicates well		Interesting		Proud		Sociable		Strong personality	
1	12.06%	24	4.52%	9	1.01%	2	6.53%	13	3.02%	6
19	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
20	13.21%	7	9.43%	5	0.00%	0	5.66%	3	0.00%	0
2	12.43%	23	4.86%	9	1.62%	3	6.49%	12	2.70%	5
3	14.02%	23	6.71%	11	0.61%	1	3.66%	6	1.83%	3
4	12.61%	14	7.21%	8	0.00%	0	4.50%	5	1.80%	2
5	15.15%	10	6.06%	4	0.00%	0	4.55%	3	3.03%	2
6	12.31%	8	7.69%	5	0.00%	0	6.15%	4	6.15%	4
7	10.00%	2	10.00%	2	0.00%	0	5.00%	1	5.00%	1
8	14.29%	5	11.43%	4	0.00%	0	2.86%	1	2.86%	1

Question	Humane		Formal		Self-assured		Humorous		Dominant	
9	2.98%	13	4.59%	20	3.90%	17	4.13%	18	0.23%	1
10	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
11	3.08%	2	3.08%	2	0.00%	0	3.08%	2	0.00%	0
12	6.67%	1	0.00%	0	0.00%	0	0.00%	0	0.00%	0
13	2.94%	1	2.94%	1	2.94%	1	8.82%	3	0.00%	0
14	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
15	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
16	4.00%	1	0.00%	0	8.00%	2	0.00%	0	0.00%	0
17	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
18	0.00%	0	14.29%	1	0.00%	0	0.00%	0	0.00%	0
1	4.76%	2	2.38%	1	2.38%	1	7.14%	3	0.00%	0
19	2.01%	4	4.02%	8	2.01%	4	3.02%	6	1.01%	2
20	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0
2	1.89%	1	3.77%	2	1.89%	1	1.89%	1	1.89%	1
3	3.24%	6	3.24%	6	2.16%	4	3.78%	7	1.08%	2
4	4.27%	7	3.66%	6	2.44%	4	2.44%	4	0.61%	1
5	3.60%	4	2.70%	3	2.70%	3	2.70%	3	0.00%	0

Table 41. Expected Online Instructor Qualities Breakout by Online Courses Taken (continued).

Question	Humane		Formal		Self-assured		Humorous		Dominant	
6	3.03%	2	1.52%	1	3.03%	2	1.52%	1	0.00%	0
7	7.69%	5	1.54%	1	1.54%	1	4.62%	3	0.00%	0
8	5.00%	1	0.00%	0	0.00%	0	5.00%	1	0.00%	0
	2.86%	1	0.00%	0	2.86%	1	5.71%	2	0.00%	0

Appendix H: Research Question 2 Related Results Tables

Table 42. Chi-Squared Statistics for Preferred Introduction Format and Student Characteristics.

Preferred Formats	Student Characteristics	Chi-Square Value	Null Hypothesis Result (Failed to Reject, Rejected, Less than 80% expected count >5 and thus ran Fisher's Exact)
Prerecorded Video	Gender	$\chi2(3)=2.73$, $p=.44$	Failed to Reject
Audio	Gender	$\chi2(3)=4.46$, $p=.22$	Failed to Reject
Text	Gender	$\chi2(3)=4.28$, $p=.23$	Failed to Reject
Photo	Gender	$\chi2(3)=3.07$, $p=.38$	Failed to Reject
Synchronous Video Chat	Gender	$\chi2(3)=1.21$, $p=.75$	Failed to Reject
Multimedia Presentations	Gender	$\chi2(3)=3.83$, $p=.28$	Failed to Reject
Prerecorded Video	University Status	$\chi2(3)=2.12$, $p=.55$	Failed to Reject
Audio	University Status	$\chi2(3)=5.44$, $p=.14$	Failed to Reject
Text	University Status	$\chi2(3)=8.05$, $p=.05$*	Rejected
Photo	University Status	$\chi2(3)=7.89$, $p=.05$*	Rejected
Synchronous Video Chat	University Status	$\chi2(3)=1.92$, $p=.59$	Failed to Reject
Multimedia Presentations	University Status	$\chi2(3)=11.66$, $p=.008$**	Rejected
Prerecorded Video	Age	$\chi2(21)=24.01$, $p=.29$	Failed to Reject
Audio	Age	$\chi2(21)=9.58$, $p=.21$	Failed to Reject
Text	Age	$\chi2(21)=24.02$, $p=.29$	Failed to Reject
Photo	Age	$\chi2(21)=22.18$, $p=.39$	Failed to Reject
Synchronous Video Chat	Age	$\chi2(21)=28.83$, $p=.12$	Failed to Reject

Table 42. Chi-Squared Statistics for Preferred Introduction Format and Student Characteristics (continued).

Preferred Formats	Student Characteristics	Chi-Square Value	Null Hypothesis Result (Failed to Reject, Rejected, Less than 80% expected count >5 and thus ran Fisher's Exact)
Multimedia Presentations	Age	$\chi2(21)=31.60$, $p=.06$	Failed to Reject
Prerecorded Video	English as Primary	$\chi2(3)=0.65$, $p=.88$	Failed to Reject
Audio	English as Primary	$\chi2(3)=2.00$, $p=.57$	Failed to Reject
Text	English as Primary	$\chi2(3)=2.60$, $p=.46$	Failed to Reject
Photo	English as Primary	$\chi2(3)=1.64$, $p=.65$	Failed to Reject
Synchronous Video Chat	English as Primary	$\chi2(3)=8.28$, $p=.04$*	Rejected
Multimedia Presentations	English as Primary	$\chi2(3)=5.62$, $p=.13$	Failed to Reject
Prerecorded Video	Online Courses Taken	$\chi2(54)=69.65$, $p=.07$	Failed to Reject
Audio	Online Courses Taken	$\chi2(54)=43.50$, $p=.85$	Failed to Reject
Text	Online Courses Taken	$\chi2(54)=69.82$, $p=.07$	Failed to Reject
Photo	Online Courses Taken	$\chi2(54)=42.82$, $p=.86$	Failed to Reject
Synchronous Video Chat	Online Courses Taken	$\chi2(54)=42.41$ $p=.88$	Failed to Reject
Multimedia Presentations	Online Courses Taken	$\chi2(54)=65.39$, $p=.14$	Failed to Reject
Prerecorded Video	Field of Study	$\chi2(36)=31.32$, $p=.69$	Failed to Reject
Audio	Field of Study	$\chi2(36)=42.05$, $p=.22$	Failed to Reject
Text	Field of Study	$\chi2(36)=39.01$, $p=.33$	Failed to Reject
Photo	Field of Study	$\chi2(36)=34.85$, $p=.52$	Failed to Reject

Table 42. Chi-Squared Statistics for Preferred Introduction Format and Student Characteristics (continued).

Preferred Formats	Student Characteristics	Chi-Square Value	Null Hypothesis Result (Failed to Reject, Rejected, Less than 80% expected count >5 and thus ran Fisher's Exact)
Synchronous Video Chat	Field of Study	$\chi2(36)=24.46$, $p=.93$	Failed to Reject
Multimedia Presentations	Field of Study	$\chi2(36)=52.31$, $p=.04$*	Rejected

***Significant at p<.001, **Significant at p<.01, *Significant at p<.05.

Table 43. Overall Responses to Preferred Formats.

Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
Prerecorded video	38.94%	81	29.33%	61	12.02%	25	19.71%	41	208
Audio	7.69%	16	22.60%	47	43.27%	90	26.44%	55	208
Text	25.96%	54	45.19%	94	15.87%	33	12.98%	27	208
Photo	21.15%	44	45.19%	94	8.65%	18	25.00%	52	208
Synchronous, real time video chat	16.35%	34	14.90%	31	42.31%	88	26.44%	55	208
Multimedia presentation	16.35%	34	36.54%	76	13.46%	28	33.65%	70	208
Other (please describe):	9.13%	19	10.10%	21	8.17%	17	72.60%	151	208

Table 44. Preferred Formats Breakout by University Status.

an undergraduate student

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	33.96%	36	32.08%	34	13.21%	14	20.75%	22	106
2	Audio	11.32%	12	26.42%	28	36.79%	39	25.47%	27	106
4	Text	32.08%	34	44.34%	47	15.09%	16	8.49%	9	106
5	Photo	28.30%	30	42.45%	45	7.55%	8	21.70%	23	106
10	Synchronous, real time video chat	12.26%	13	15.09%	16	42.45%	45	30.19%	32	106
9	Multimedia presentation	22.64%	24	38.68%	41	12.26%	13	26.42%	28	106
6	Other (please describe):	14.15%	15	15.09%	16	6.60%	7	64.15%	68	106

a non-degree seeking student

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	100.00 %	1	0.00%	0	0.00%	0	0.00%	0	1

Table 44. Preferred Formats Breakout by University Status (continued).

a non-degree seeking student

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
4	Text	100.00%	1	0.00%	0	0.00%	0	0.00%	0	1
5	Photo	0.00%	0	100.00%	1	0.00%	0	0.00%	0	1
10	Synchronous, real time video chat	0.00%	0	0.00%	0	100.00%	1	0.00%	0	1
9	Multimedia presentation	0.00%	0	0.00%	0	0.00%	0	100.00%	1	1
6	Other (please describe):	0.00%	0	0.00%	0	0.00%	0	100.00%	1	1

a graduate student

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	43.14%	44	26.47%	27	10.78%	11	19.61%	20	102
2	Audio	3.92%	4	18.63%	19	49.02%	50	28.43%	29	102

Table 44. Preferred Formats Breakout by University Status (continued).

a graduate student

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
5	Photo	13.73%	14	47.06%	48	9.80%	10	29.41%	30	102
10	Synchronous, real time video chat	20.59%	21	14.71%	15	41.18%	42	23.53%	24	102
9	Multimedia presentation	9.80%	10	34.31%	35	14.71%	15	41.18%	42	102
6	Other (please describe):	3.92%	4	4.90%	5	9.80%	10	81.37%	83	102

Table 45. Preferred Formats Breakout by Online Classes Taken.

0 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	1	5	4.15	1.33	1.76	55
6	Multimedia presentation	1	5	2.8	1.51	2.27	55
5	Synchronous, real time video chat	1	5	2.89	1.49	2.21	55

Table 45. Preferred Formats Breakout by Online Classes Taken (continued).

0 Online Classes Taken

4	Photo	1	5	2.51	1.43	2.03	55
3	Text	1	5	2.33	1.24	1.53	55
2	Audio	1	5	2.89	1.27	1.62	55
1	Prerecorded video	1	5	2.4	1.36	1.84	55

9 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	2	2	2	0	0	1
6	Multimedia presentation	5	5	5	0	0	1
5	Synchronous, real time video chat	5	5	5	0	0	1
4	Photo	2	2	2	0	0	1
3	Text	2	2	2	0	0	1
2	Audio	3	3	3	0	0	1
1	Prerecorded video	5	5	5	0	0	1

Table 45. Preferred Formats Breakout by Online Classes Taken (continued).

10 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	1	5	4.22	1.47	2.17	9
6	Multimedia presentation	1	5	2.78	1.69	2.84	9
5	Synchronous, real time video chat	1	5	3	0.94	0.89	9
4	Photo	1	5	2	1.15	1.33	9
3	Text	1	2	1.44	0.5	0.25	9
2	Audio	1	5	3.56	1.42	2.02	9
1	Prerecorded video	1	5	2.44	1.83	3.36	9

11 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	5	5	5	0	0	2
6	Multimedia presentation	5	5	5	0	0	2
5	Synchronous, real time video chat	1	5	3	2	4	2

Table 45. Preferred Formats Breakout by Online Classes Taken (continued).

11 Online Classes Taken							
4	Photo	2	5	3.5	1.5	2.25	2
3	Text	2	5	3.5	1.5	2.25	2
2	Audio	2	5	3.5	1.5	2.25	2
1	Prerecorded video	1	5	3	2	4	2

12 Online Classes Taken							
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	3	5	4.5	0.87	0.75	4
6	Multimedia presentation	2	5	3.5	1.5	2.25	4
5	Synchronous, real time video chat	2	5	3	1.22	1.5	4
4	Photo	2	3	2.25	0.43	0.19	4
3	Text	2	3	2.5	0.5	0.25	4
2	Audio	2	3	2.75	0.43	0.19	4
1	Prerecorded video	1	2	1.25	0.43	0.19	4

Table 45. Preferred Formats Breakout by Online Classes Taken (continued).

13 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	5	5	5	0	0	2
6	Multimedia presentation	2	3	2.5	0.5	0.25	2
5	Synchronous, real time video chat	3	3	3	0	0	2
4	Photo	1	2	1.5	0.5	0.25	2
3	Text	1	2	1.5	0.5	0.25	2
2	Audio	3	5	4	1	1	2
1	Prerecorded video	2	5	3.5	1.5	2.25	2

14 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	5	5	5	0	0	1
6	Multimedia presentation	5	5	5	0	0	1
5	Synchronous, real time video chat	3	3	3	0	0	1

Table 45. Preferred Formats Breakout by Online Classes Taken (continued).

14 Online Classes Taken

4	Photo	5	5	5	0	0	1
3	Text	3	3	3	0	0	1
2	Audio	2	2	2	0	0	1
1	Prerecorded video	1	1	1	0	0	1

15 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	3	5	4.5	0.87	0.75	4
6	Multimedia presentation	2	5	3	1.22	1.5	4
5	Synchronous, real time video chat	1	5	3	1.41	2	4
4	Photo	2	5	2.75	1.3	1.69	4
3	Text	2	3	2.5	0.5	0.25	4
2	Audio	3	5	3.5	0.87	0.75	4
1	Prerecorded video	1	1	1	0	0	4

Table 45. Preferred Formats Breakout by Online Classes Taken (continued).

16 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	5	5	5	0	0	1
6	Multimedia presentation	3	3	3	0	0	1
5	Synchronous, real time video chat	3	3	3	0	0	1
4	Photo	2	2	2	0	0	1
3	Text	2	2	2	0	0	1
2	Audio	2	2	2	0	0	1
1	Prerecorded video	2	2	2	0	0	1

17 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	1	1	1	0	0	1
6	Multimedia presentation	1	1	1	0	0	1
5	Synchronous, real time video chat	5	5	5	0	0	1

Table 45. Preferred Formats Breakout by Online Classes Taken (continued).

17 Online Classes Taken

4	Photo	5	5	5	0	0	1
3	Text	5	5	5	0	0	1
2	Audio	3	3	3	0	0	1
1	Prerecorded video	1	1	1	0	0	1

18 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	1	5	3.8	1.6	2.56	5
6	Multimedia presentation	1	3	2	0.89	0.8	5
5	Synchronous, real time video chat	1	5	2.8	1.33	1.76	5
4	Photo	1	5	2.4	1.5	2.24	5
3	Text	2	5	2.8	1.17	1.36	5
2	Audio	1	5	3.4	1.5	2.24	5
1	Prerecorded video	1	3	1.8	0.75	0.56	5

Table 45. Preferred Formats Breakout by Online Classes Taken (continued).

1 Online Class Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	1	5	4.14	1.48	2.19	29
6	Multimedia presentation	1	5	2.55	1.38	1.9	29
5	Synchronous, real time video chat	1	5	3.03	1.27	1.62	29
4	Photo	1	5	2.86	1.55	2.39	29
3	Text	1	5	1.83	0.87	0.76	29
2	Audio	1	5	3.34	1.21	1.47	29
1	Prerecorded video	1	5	2.69	1.53	2.35	29

19 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	0	0	0	0	0	0
6	Multimedia presentation	0	0	0	0	0	0
5	Synchronous, real time video chat	0	0	0	0	0	0

Table 45. Preferred Formats Breakout by Online Classes Taken (continued).

19 Online Classes Taken

4	Photo	0	0	0	0	0	0
3	Text	0	0	0	0	0	0
2	Audio	0	0	0	0	0	0
1	Prerecorded video	0	0	0	0	0	0

20 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	1	5	3.71	1.58	2.49	7
6	Multimedia presentation	2	5	3.29	1.16	1.35	7
5	Synchronous, real time video chat	1	5	2.86	1.12	1.27	7
4	Photo	2	5	2.57	1.05	1.1	7
3	Text	1	3	2.14	0.64	0.41	7
2	Audio	3	5	3.57	0.9	0.82	7
1	Prerecorded video	1	1	1	0	0	7

Table 45. Preferred Formats Breakout by Online Classes Taken (continued).

2 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	1	5	3.92	1.54	2.38	26
6	Multimedia presentation	1	5	3.23	1.48	2.18	26
5	Synchronous, real time video chat	1	5	3.5	1.42	2.02	26
4	Photo	1	5	2.73	1.58	2.5	26
3	Text	1	5	2.62	1.3	1.7	26
2	Audio	1	5	2.92	1.3	1.69	26
1	Prerecorded video	1	5	2.38	1.42	2.01	26

3 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	2	5	4.43	1.1	1.2	23
6	Multimedia presentation	1	5	3.35	1.52	2.31	23
5	Synchronous, real time video chat	1	5	2.91	1.06	1.12	23

Table 45. Preferred Formats Breakout by Online Classes Taken (continued).

3 Online Classes Taken							
4	Photo	1	5	2.65	1.49	2.23	23
3	Text	1	5	2.35	1.55	2.4	23
2	Audio	2	5	3.26	0.99	0.98	23
1	Prerecorded video	1	5	2.78	1.47	2.17	23

4 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	1	5	4.21	1.52	2.31	14
6	Multimedia presentation	1	5	3.5	1.55	2.39	14
5	Synchronous, real time video chat	1	5	3.43	1.29	1.67	14
4	Photo	1	5	2.36	1.44	2.09	14
3	Text	1	5	2.21	1.26	1.6	14
2	Audio	2	5	3.79	1.08	1.17	14
1	Prerecorded video	1	5	2.36	1.72	2.94	14

Table 45. Preferred Formats Breakout by Online Classes Taken (continued).

5 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	1	5	4.6	1.2	1.44	10
6	Multimedia presentation	1	5	2.3	1.42	2.01	10
5	Synchronous, real time video chat	1	5	2.7	1.42	2.01	10
4	Photo	1	5	2.9	1.45	2.09	10
3	Text	2	5	3	1.1	1.2	10
2	Audio	1	5	3.2	1.33	1.76	10
1	Prerecorded video	1	2	1.1	0.3	0.09	10

6 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	1	5	3.5	1.94	3.75	8
6	Multimedia presentation	1	5	3.13	1.9	3.61	8
5	Synchronous, real time video chat	1	5	3.75	1.39	1.94	8

Table 45. Preferred Formats Breakout by Online Classes Taken (continued).

6 Online Classes Taken

4	Photo	1	5	2.38	1.58	2.48	8
3	Text	1	3	1.63	0.7	0.48	8
2	Audio	1	5	2.88	1.36	1.86	8
1	Prerecorded video	1	5	2.75	1.39	1.94	8

7 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	5	5	5	0	0	2
6	Multimedia presentation	5	5	5	0	0	2
5	Synchronous, real time video chat	3	5	4	1	1	2
4	Photo	3	5	4	1	1	2
3	Text	1	3	2	1	1	2
2	Audio	3	5	4	1	1	2
1	Prerecorded video	1	1	1	0	0	2

Table 45. Preferred Formats Breakout by Online Classes Taken (continued).

8 Online Classes Taken

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
7	Other (please describe):	5	5	5	0	0	5
6	Multimedia presentation	1	5	3.2	1.6	2.56	5
5	Synchronous, real time video chat	1	3	1.8	0.75	0.56	5
4	Photo	2	5	3.4	1.36	1.84	5
3	Text	1	5	2.6	1.36	1.84	5
2	Audio	1	5	2.6	1.5	2.24	5
1	Prerecorded video	1	5	3	1.67	2.8	5

Table 46. Preferred Format Breakout by Gender.

Female

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	35.93%	60	29.34%	49	13.17%	22	21.56%	36	167
2	Audio	5.99%	10	23.35%	39	43.11%	72	27.54%	46	167

Table 46. Preferred Format Breakout by Gender (continued).

Female										
4	Text	27.54%	46	45.51%	76	13.77%	23	13.17%	22	167
5	Photo	21.56%	36	45.51%	76	7.78%	13	25.15%	42	167
10	Synchronous, real time video chat	15.57%	26	15.57%	26	41.32%	69	27.54%	46	167
9	Multimedia presentation	15.57%	26	36.53%	61	11.98%	20	35.93%	60	167
6	Other (please describe):	6.59%	11	10.18%	17	6.59%	11	76.65%	128	167

Male										
#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	48.72%	19	28.21%	11	7.69%	3	15.38%	6	39
2	Audio	15.38%	6	20.51%	8	41.03%	16	23.08%	9	39
4	Text	20.51%	8	43.59%	17	25.64%	10	10.26%	4	39
5	Photo	17.95%	7	43.59%	17	12.82%	5	25.64%	10	39

Table 46. Preferred Format Breakout by Gender (continued).

Male

10	Synchronous, real time video chat	17.95%	7	12.82%	5	46.15%	18	23.08%	9	39
9	Multimedia presentation	17.95%	7	35.90%	14	20.51%	8	25.64%	10	39
6	Other (please describe):	20.51%	8	10.26%	4	15.38%	6	53.85%	21	39

Prefer not to say

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	100.00%	2	0.00%	0	0.00%	0	0.00%	0	2
2	Audio	0.00%	0	0.00%	0	50.00%	1	50.00%	1	2
4	Text	0.00%	0	50.00%	1	0.00%	0	50.00%	1	2
5	Photo	50.00%	1	0.00%	0	0.00%	0	50.00%	1	2
10	Synchronous, real time video chat	50.00%	1	0.00%	0	0.00%	0	50.00%	1	2

Table 46. Preferred Format Breakout by Gender (continued).

Prefer not to say

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
9	Multimedia presentation	50.00%	1	0.00%	0	0.00%	0	50.00%	1	2
6	Other (please describe):	0.00%	0	0.00%	0	0.00%	0	100.00%	2	2

Non-binary/third gender

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	0.00%	0	100.00%	1	0.00%	0	0.00%	0	1
2	Audio	0.00%	0	0.00%	0	100.00%	1	0.00%	0	1
4	Text	0.00%	0	100.00%	1	0.00%	0	0.00%	0	1
5	Photo	0.00%	0	100.00%	1	0.00%	0	0.00%	0	1
10	Synchronous, real time video chat	0.00%	0	0.00%	0	100.00%	1	0.00%	0	1

Table 46. Preferred Format Breakout by Gender (continued).

Non-binary/third gender

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
9	Multimedia presentation	0.00%	0	100.00%	1	0.00%	0	0.00%	0	1
6	Other (please describe):	0.00%	0	0.00%	0	0.00%	0	100.00%	1	1

Table 47. Preferred Format Responses Breakout by English as a Primary Language.

Yes

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	38.34%	74	29.53 %	57	12.44 %	24	19.69 %	38	193
2	Audio	8.29%	16	21.76 %	42	43.01 %	83	26.94 %	52	193
4	Text	25.39%	49	46.11 %	89	15.03 %	29	13.47 %	26	193

Table 47. Preferred Format Responses Breakout by English as a Primary Language (continued).

Yes

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
5	Photo	21.76%	42	44.56%	86	8.29%	16	25.39%	49	193
10	Synchronous, real time video chat	15.54%	30	12.95%	25	43.52%	84	27.98%	54	193
9	Multimedia presentation	16.06%	31	34.20%	66	13.99%	27	35.75%	69	193
6	Other (please describe):	8.29%	16	9.33%	18	7.77%	15	74.61%	144	193

No

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	43.75%	7	25.00%	4	6.25%	1	25.00%	4	16
2	Audio	0.00%	0	31.25%	5	43.75%	7	25.00%	4	16
4	Text	31.25%	5	37.50%	6	25.00%	4	6.25%	1	16
5	Photo	12.50%	2	50.00%	8	12.50%	2	25.00%	4	16

Table 47. Preferred Format Responses Breakout by English as a Primary Language (continued).

No

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
10	Synchronous, real time video chat	25.00%	4	37.50%	6	25.00%	4	12.50%	2	16
9	Multimedia presentation	18.75%	3	62.50%	10	6.25%	1	12.50%	2	16
6	Other (please describe):	18.75%	3	18.75%	3	12.50%	2	50.00%	8	16

Table 48. Preferred Format Breakout by Age.

21-23

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	41.94%	13	25.81 %	8	12.90 %	4	19.35 %	6	31
2	Audio	16.13%	5	12.90 %	4	38.71 %	12	32.26 %	10	31

Table 48. Preferred Format Breakout by Age (continued).

21-23

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
4	Text	19.35%	6	41.94%	13	22.58%	7	16.13%	5	31
5	Photo	22.58%	7	29.03%	9	19.35%	6	29.03%	9	31
10	Synchronous, real time video chat	12.90%	4	16.13%	5	58.06%	18	12.90%	4	31
9	Multimedia presentation	29.03%	9	32.26%	10	6.45%	2	32.26%	10	31
6	Other (please describe):	19.35%	6	9.68%	3	6.45%	2	64.52%	20	31

24-26

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	28.57%	6	33.33%	7	14.29%	3	23.81%	5	21
2	Audio	4.76%	1	23.81%	5	47.62%	10	23.81%	5	21

Table 48. Preferred Format Breakout by Age (continued).

24-26

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
4	Text	19.05%	4	52.38%	11	9.52%	2	19.05%	4	21
5	Photo	9.52%	2	47.62%	10	9.52%	2	33.33%	7	21
10	Synchronous, real time video chat	23.81%	5	9.52%	2	33.33%	7	33.33%	7	21
9	Multimedia presentation	4.76%	1	28.57%	6	4.76%	1	61.90%	13	21
6	Other (please describe):	0.00%	0	4.76%	1	9.52%	2	85.71%	18	21

27-29

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	40.00%	8	15.00%	3	15.00%	3	30.00%	6	20
2	Audio	5.00%	1	20.00%	4	40.00%	8	35.00%	7	20

Table 48. Preferred Format Breakout by Age (continued).

27-29

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
4	Text	30.00%	6	45.00%	9	15.00%	3	10.00%	2	20
5	Photo	15.00%	3	50.00%	10	10.00%	2	25.00%	5	20
10	Synchronous, real time video chat	40.00%	8	5.00%	1	30.00%	6	25.00%	5	20
9	Multimedia presentation	0.00%	0	55.00%	11	15.00%	3	30.00%	6	20
6	Other (please describe):	5.00%	1	10.00%	2	10.00%	2	75.00%	15	20

30-32

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	37.50%	3	62.50%	5	0.00%	0	0.00%	0	8
2	Audio	12.50%	1	12.50%	1	37.50%	3	37.50%	3	8

Table 48. Preferred Format Breakout by Age (continued).

30-32

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
4	Text	12.50%	1	62.50%	5	12.50%	1	12.50%	1	8
5	Photo	12.50%	1	37.50%	3	12.50%	1	37.50%	3	8
10	Synchronous, real time video chat	12.50%	1	12.50%	1	37.50%	3	37.50%	3	8
9	Multimedia presentation	50.00%	4	0.00%	0	25.00%	2	25.00%	2	8
6	Other (please describe):	12.50%	1	0.00%	0	12.50%	1	75.00%	6	8

18-20

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	30.12%	25	31.33%	26	15.66%	13	22.89%	19	83
2	Audio	9.64%	8	28.92%	24	37.35%	31	24.10%	20	83

Table 48. Preferred Format Breakout by Age (continued).

18-20

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
4	Text	36.14%	30	44.58%	37	9.64%	8	9.64%	8	83
5	Photo	27.71%	23	44.58%	37	6.02%	5	21.69%	18	83
10	Synchronous, real time video chat	13.25%	11	18.07%	15	38.55%	32	30.12%	25	83
9	Multimedia presentation	20.48%	17	40.96%	34	14.46%	12	24.10%	20	83
6	Other (please describe):	10.84%	9	15.66%	13	7.23%	6	66.27%	55	83

33-35

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	54.55%	6	36.36%	4	0.00%	0	9.09%	1	11
2	Audio	0.00%	0	18.18%	2	45.45%	5	36.36%	4	11

Table 48. Preferred Format Breakout by Age (continued).

33-35

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
4	Text	18.18%	2	54.55%	6	9.09%	1	18.18%	2	11
5	Photo	9.09%	1	72.73%	8	0.00%	0	18.18%	2	11
10	Synchronous, real time video chat	0.00%	0	9.09%	1	63.64%	7	27.27%	3	11
9	Multimedia presentation	0.00%	0	36.36%	4	27.27%	3	36.36%	4	11
6	Other (please describe):	0.00%	0	9.09%	1	9.09%	1	81.82%	9	11

36-38

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	66.67%	8	25.00%	3	8.33%	1	0.00%	0	12
2	Audio	0.00%	0	25.00%	3	58.33%	7	16.67%	2	12

Table 48. Preferred Format Breakout by Age (continued).

36-38

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
4	Text	16.67%	2	41.67%	5	25.00%	3	16.67%	2	12
5	Photo	41.67%	5	41.67%	5	8.33%	1	8.33%	1	12
10	Synchronous, real time video chat	0.00%	0	33.33%	4	50.00%	6	16.67%	2	12
9	Multimedia presentation	8.33%	1	33.33%	4	16.67%	2	41.67%	5	12
6	Other (please describe):	0.00%	0	0.00%	0	8.33%	1	91.67%	11	12

39 or older

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	52.17%	12	21.74%	5	4.35%	1	21.74%	5	23

Table 48. Preferred Format Breakout by Age (continued).

39 or older

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
2	Audio	0.00%	0	17.39%	4	60.87%	14	21.74%	5	23
4	Text	13.04%	3	39.13%	9	34.78%	8	13.04%	3	23
5	Photo	8.70%	2	52.17%	12	4.35%	1	34.78%	8	23
10	Synchronous, real time video chat	21.74%	5	8.70%	2	39.13%	9	30.43%	7	23
9	Multimedia presentation	8.70%	2	30.43%	7	13.04%	3	47.83%	11	23
6	Other (please describe):	8.70%	2	4.35%	1	8.70%	2	78.26%	18	23

Table 49. Preferred Format by Field of Study.

Undecided

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
2	Audio	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0
9	Multimedia presentation	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0
6	Other (please describe):	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0
5	Photo	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0

Table 49. Preferred Format by Field of Study (continued).

Undecided										
#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
1	Prerecorded video	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0
10	Synchronous, real time video chat	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0
4	Text	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0

Computer/information science										
#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
2	Audio	0.00%	0	33.33%	1	33.33%	1	33.33%	1	3
9	Multimedia presentation	33.33%	1	33.33%	1	0.00%	0	33.33%	1	3
6	Other (please describe):	0.00%	0	33.33%	1	0.00%	0	66.67%	2	3
5	Photo	33.33%	1	33.33%	1	0.00%	0	33.33%	1	3
1	Prerecorded video	33.33%	1	0.00%	0	0.00%	0	66.67%	2	3
10	Synchronous, real time video chat	33.33%	1	0.00%	0	66.67%	2	0.00%	0	3
4	Text	33.33%	1	66.67%	2	0.00%	0	0.00%	0	3

Health										
#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
2	Audio	8.93%	5	32.14%	18	33.93%	19	25.00%	14	56
9	Multimedia presentation	17.86%	10	37.50%	21	16.07%	9	28.57%	16	56

Table 49. Preferred Format by Field of Study (continued).

Health										
#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
6	Other (please describe):	8.93%	5	16.07%	9	7.14%	4	67.86%	38	56
5	Photo	19.64%	11	44.64%	25	12.50%	7	23.21%	13	56
1	Prerecorded video	32.14%	18	30.36%	17	16.07%	9	21.43%	12	56
10	Synchronous, real time video chat	25.00%	14	19.64%	11	28.57%	16	26.79%	15	56
4	Text	26.79%	15	42.86%	24	14.29%	8	16.07%	9	56

Vocational/technical										
#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
2	Audio	0.00%	0	100.00%	1	0.00%	0	0.00%	0	1
9	Multimedia presentation	0.00%	0	0.00%	0	0.00%	0	100.00%	1	1
6	Other (please describe):	0.00%	0	0.00%	0	0.00%	0	100.00%	1	1
5	Photo	100.00%	1	0.00%	0	0.00%	0	0.00%	0	1
1	Prerecorded video	0.00%	0	100.00%	1	0.00%	0	0.00%	0	1
10	Synchronous, real time video chat	0.00%	0	0.00%	0	0.00%	0	100.00%	1	1
4	Text	100.00%	1	0.00%	0	0.00%	0	0.00%	0	1

Table 49. Preferred Format by Field of Study (continued).

Other technical/professional

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
2	Audio	0.00%	0	33.33%	1	33.33%	1	33.33%	1	3
9	Multimedia presentation	0.00%	0	100.00 %	3	0.00%	0	0.00%	0	3
6	Other (please describe):	0.00%	0	0.00%	0	0.00%	0	100.00%	3	3
5	Photo	33.33%	1	33.33%	1	0.00%	0	33.33%	1	3
1	Prerecorded video	33.33%	1	0.00%	0	33.33%	1	33.33%	1	3
10	Synchronous, real time video chat	66.67%	2	0.00%	0	33.33%	1	0.00%	0	3
4	Text	33.33%	1	33.33%	1	33.33%	1	0.00%	0	3

Other (please describe):

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
2	Audio	11.11%	4	16.67%	6	38.89%	14	33.33%	12	36
9	Multimedia presentation	16.67%	6	33.33%	12	11.11%	4	38.89%	14	36
6	Other (please describe):	8.33%	3	8.33%	3	8.33%	3	75.00%	27	36
5	Photo	30.56%	11	38.89%	14	5.56%	2	25.00%	9	36
1	Prerecorded video	38.89%	14	19.44%	7	11.11%	4	30.56%	11	36
10	Synchronous, real time video chat	5.56%	2	11.11%	4	50.00%	18	33.33%	12	36
4	Text	36.11%	13	44.44%	16	8.33%	3	11.11%	4	36

Table 49. Preferred Format by Field of Study (continued).

Humanities

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
2	Audio	0.00%	0	20.00%	2	80.00%	8	0.00%	0	10
9	Multimedia presentation	10.00%	1	70.00%	7	10.00%	1	10.00%	1	10
6	Other (please describe):	0.00%	0	10.00%	1	20.00%	2	70.00%	7	10
5	Photo	20.00%	2	30.00%	3	20.00%	2	30.00%	3	10
1	Prerecorded video	30.00%	3	30.00%	3	20.00%	2	20.00%	2	10
10	Synchronous, real time video chat	30.00%	3	20.00%	2	40.00%	4	10.00%	1	10
4	Text	20.00%	2	60.00%	6	20.00%	2	0.00%	0	10

Engineering

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
2	Audio	0.00%	0	0.00%	0	100.00%	1	0.00%	0	1
9	Multimedia presentation	0.00%	0	100.00%	1	0.00%	0	0.00%	0	1
6	Other (please describe):	100.00%	1	0.00%	0	0.00%	0	0.00%	0	1
5	Photo	0.00%	0	0.00%	0	0.00%	0	100.00%	1	1
1	Prerecorded video	0.00%	0	100.00%	1	0.00%	0	0.00%	0	1
10	Synchronous, real time video chat	0.00%	0	0.00%	0	100.00%	1	0.00%	0	1
4	Text	100.00%	1	0.00%	0	0.00%	0	0.00%	0	1

Table 49. Preferred Format by Field of Study (continued).

Education

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
2	Audio	0.00%	0	14.29%	5	62.86%	22	22.86%	8	35
9	Multimedia presentation	11.43%	4	28.57%	10	14.29%	5	45.71%	16	35
6	Other (please describe):	5.71%	2	5.71%	2	5.71%	2	82.86%	29	35
5	Photo	11.43%	4	57.14%	20	5.71%	2	25.71%	9	35
1	Prerecorded video	42.86%	15	34.29%	12	8.57%	3	14.29%	5	35
10	Synchronous, real time video chat	17.14%	6	20.00%	7	40.00%	14	22.86%	8	35
4	Text	14.29%	5	62.86%	22	17.14%	6	5.71%	2	35

Business/management

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
2	Audio	24.00%	6	16.00%	4	36.00%	9	24.00%	6	25
9	Multimedia presentation	8.00%	2	52.00%	13	12.00%	3	28.00%	7	25
6	Other (please describe):	12.00%	3	16.00%	4	12.00%	3	60.00%	15	25
5	Photo	16.00%	4	64.00%	16	8.00%	2	12.00%	3	25
1	Prerecorded video	32.00%	8	32.00%	8	16.00%	4	20.00%	5	25
10	Synchronous, real time video chat	8.00%	2	12.00%	3	52.00%	13	28.00%	7	25
4	Text	16.00%	4	48.00%	12	24.00%	6	12.00%	3	25

Table 49. Preferred Format by Field of Study (continued).

Social/behavior sciences

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
2	Audio	4.35%	1	26.09%	6	30.43%	7	39.13%	9	23
9	Multimedia presentation	17.39%	4	21.74%	5	17.39%	4	43.48%	10	23
6	Other (please describe):	13.04%	3	4.35%	1	4.35%	1	78.26%	18	23
5	Photo	17.39%	4	47.83%	11	13.04%	3	21.74%	5	23
1	Prerecorded video	39.13%	9	39.13%	9	8.70%	2	13.04%	3	23
10	Synchronous, real time video chat	8.70%	2	8.70%	2	52.17%	12	30.43%	7	23
4	Text	26.09%	6	39.13%	9	13.04%	3	21.74%	5	23

Life sciences

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
2	Audio	0.00%	0	16.67%	1	33.33%	2	50.00%	3	6
9	Multimedia presentation	33.33%	2	16.67%	1	16.67%	1	33.33%	2	6
6	Other (please describe):	16.67%	1	0.00%	0	16.67%	1	66.67%	4	6
5	Photo	33.33%	2	0.00%	0	0.00%	0	66.67%	4	6
1	Prerecorded video	83.33%	5	16.67%	1	0.00%	0	0.00%	0	6
10	Synchronous, real time video chat	16.67%	1	16.67%	1	33.33%	2	33.33%	2	6
4	Text	33.33%	2	0.00%	0	50.00%	3	16.67%	1	6

Table 49. Preferred Format by Field of Study (continued).

Physical sciences

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
2	Audio	0.00%	0	12.50%	1	62.50%	5	25.00%	2	8
9	Multimedia presentation	37.50%	3	12.50%	1	12.50%	1	37.50%	3	8
6	Other (please describe):	12.50%	1	0.00%	0	12.50%	1	75.00%	6	8
5	Photo	37.50%	3	25.00%	2	0.00%	0	37.50%	3	8
1	Prerecorded video	75.00%	6	25.00%	2	0.00%	0	0.00%	0	8
10	Synchronous, real time video chat	12.50%	1	12.50%	1	50.00%	4	25.00%	2	8
4	Text	25.00%	2	25.00%	2	12.50%	1	37.50%	3	8

Math

#	Question	Strongly Prefer		Prefer		Do Not Prefer		No Preference Either Way		Total
2	Audio	0.00%	0	50.00%	1	50.00%	1	0.00%	0	2
9	Multimedia presentation	50.00%	1	50.00%	1	0.00%	0	0.00%	0	2
6	Other (please describe):	0.00%	0	0.00%	0	0.00%	0	100.00%	2	2
5	Photo	0.00%	0	50.00%	1	0.00%	0	50.00%	1	2
1	Prerecorded video	50.00%	1	0.00%	0	0.00%	0	50.00%	1	2
10	Synchronous, real time video chat	0.00%	0	0.00%	0	50.00%	1	50.00%	1	2
4	Text	50.00%	1	50.00%	1	0.00%	0	0.00%	0	2

Appendix I: Research Question 3 Related Results Tables

Table 50. Correlation Statistics Indicating No Collinearity between Independent Variables.

Independent Variable Pairing	Correlation	p-value
Age, Gender	-0.0876455	0.2231
Age, University Status	-0.7385949	2.20E-16
Age, Online Classes Taken	0.5250661	7.43E-15
Age, Field of Study	0.029306	0.6842
Age, English	-0.0358905	0.6184
Gender, University Status	0.1029239	0.1522
Gender, Online Classes Taken	-0.0620863	0.3948
Gender, Field of Study	-0.052491	0.4661
Gender, English	0.05663322	0.4316
University Status, Online Classes Taken	-0.3268399	4.18E-06
Field of Study, University Status	0.01122063	0.8763
University Status, English	0.04157397	0.5639
Online Classes Taken, Field of Study	0.07834914	0.2826
Online Classes Taken, English	0.1009751	0.1657