The DISCOVER Model: A Prescriptive Method for Instructional Tool Selection and Use in Seeking to Boost Instructor Immediacy and Social Presence in Online Courses

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The DISCOVER Model: A Prescriptive Method for Instructional Tool Selection and Use in Seeking to Boost Instructor Immediacy and Social Presence in Online Courses

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Dissertation submitted to the College of Education and Human Services
At West Virginia University
in partial fulfillment of the requirements for the degree of
Doctor of Education (Ed.D.) in Instructional Design and Technology

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Abstract

The DISCOVER Model: A Prescriptive Method for Instructional Tool Selection and Use in Seeking to Boost Instructor Immediacy and Social Presence in Online Courses

Lee O. Silverman

Higher education faculty who teach online can face numerous challenges in providing optimal experiences for their students. Besides their potentially limited instructional design expertise and understanding of how to optimize technology to support learning, faculty may have difficulties in finding ways to make themselves be perceived as real people who are approachable, caring, and likeable due to online nature of the learning context. As a preliminary means to address these issues, the current study focused on the development of the DISCOVER Model, which was designed to provide higher education faculty with a framework to develop actionable plans in the creation of audio and video media assets while focusing on best practices to boost student perceptions of instructor immediacy and instructor social presence. This model, developed as an enhancement to the ADDIE model of instructional design, provides a sequence of eight steps across design and development, and implementation and evaluation phases, that guide instructors through making informed choices in creating media assets and revising them. This mixed-method study took place at a university in the Appalachian region of the United States and focused on two undergraduate courses and two graduate courses taught by three instructors. The instructors used The DISCOVER Model to create media assets for their courses and 136 students opted into completing an online survey about their experiences that sought to measure their perceptions of instructor immediacy and social presence. Instructors participated in regular meetings and a summative interview with the researcher and six students were interviewed. Instructors were also assigned model adherence scores by the researcher based on how closely they were perceived to follow the model in creating their media assets. The results indicated that instructors who showed high model adherence had students who indicated moderately high perceptions of instructor social presence and immediacy. Further, graduate students indicated higher perceptions of social presence perceptions than undergraduate students. Findings and implications were discussed.
Dedication

I dedicate my dissertation to my family, friends, and mentors. In memory of my father, Arnie Silverman, who is my role model and hero. For my mother, Susan Silverman, who encouraged me and achieved her dream of living to see the day her son became a doctor. For Beth Maruskin, who has been my partner, constant companion, cheerleader, and wonderful coparent to our pack of dogs.

There are so many people to thank who believed in me, encouraged me to go after my dreams, showed me wonderful examples of how caring and kind people can be, and helped me along the way. To name a few, Al Maruskin, Amy Kuhn, Bill DeTillo, Bob Haring-Smith, Bob Williams, Brad Forbes, Carol Atkins, Chad Mezera, Connie Erenrich, Dan Erenrich, David Hardesty, David Lalka, Ed Sabolsky, Eric Granroth, Erin Kelley, Frank Hiergeist, Gary Winn, Jeremy Gouzd, Jim Gleason, Lisa DeFrank-Cole, Mandy Tracey, Mike Silverman, Phillip Comer, Ravi Vedula, Rick Bebout, Susan Hardesty, Tracey Beckley, and Vince Dobilas. I would also like to remember Dick Walls, John Penn, and Perry Phillips who spent countless hours informally talking shop with me and piquing my interest in pursuing my doctorate. I also dedicate this in memory of my grandparents, Jacob and Belle Levin, and Lillian Silverman. To all of you, my deepest and most sincere thanks!
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Introduction

Background for Study

The proposed study employs design and development research to create a prescriptive model for instructors to use in selecting tools to create media assets for asynchronous online courses. It can be used to boost instructor immediacy and social presence while supporting course learning outcomes. As more programs seek to have 100% online courses, there is a need for instructors to make informed choices in their selection of instructional tools and media. In 2020, because of the COVID-19 pandemic, many institutions and courses were forced to quickly pivot to online modality to attempt continuity of schedule and revenue streams. During this time, instructional designers were said to be one of the most in-demand positions due to the need for sound guidance and decision-making assistance as subject matter experts (SMEs), who were experts in their field, but not in online teaching, needed assistance. Subsequently, the need for a model to help SMEs make sound and informed decisions in creating media assets for their online teaching has never been stronger. Traditional, face-to-face courses directly afford students the ability to: perceive their instructor as being a real person, form an impression of their credibility, potentially see them as being approachable for assistance, and potentially come to like and respect an instructor.

Gunawardena and Zittle (1997) define social presence as the degree to which a person is perceived as real in mediated communication. They also state that the perceived level of social presence may be a very strong predictor of course satisfaction among participants. Mehrabian (1972) defines immediacy behaviors as those which increase the mutual sensory stimulation between two persons. Instructor immediacy, which is also referred to as teacher immediacy,
consists of an instructor’s attempts to reduce the social distance between themselves and their students (Arbaugh, 2001). Some instructor immediacy behaviors fit into two categories, verbal and nonverbal. Examples of verbal immediacy behaviors include using personal examples when covering content, using humor, and inviting students to make contact if they wish to discuss anything. Nonverbal immediacy behaviors include things such using a variety of vocal expressions, smiling, and sounding happy. Instructor immediacy can also aid in the formation of a community of inquiry with the instructor as the facilitator and the students as active participants in their learning (Meyer, 2014). These aspects can contribute to student perception of instructor approachability, which is important for the purpose of welcoming questions and discussion, greater learner satisfaction, a deeper level of involvement in the course, and aids in achieving learning outcomes.

Instructor immediacy and instructor social presence are related. Instructors who are seen as having high immediacy can reduce social distance. As such, immediacy can impact social presence through a cause-and-effect relationship. In an empirical study to investigate the use of instructor immediacy behaviors through online course modality on student perceptions of immediacy and social presence, Schutt, Allen, & Laumakis (2009) found a strong correlation between perception of instructor immediacy and perception of instructor social presence.

Social presence and instructor immediacy may more readily be achieved in face-to-face interactions, although teachers displaying verbal and nonverbal immediacy behaviors may enhance social presence perceptions of learners in either online or face-to-face modalities (Mujgan, 2015). Many asynchronous online courses are primarily textual in content. While the words themselves can help in imparting the needed knowledge to achieve learning outcomes, text may be lacking in non-verbal characteristics that can add depth to the discourse, make for a
more engaging interaction, and due to its silent nature may not ideally appeal to all learning preferences. In short, it may be harder to form instructor/student relationships when the chief humanizing aspect is textual. While textual content may be appropriate for certain content types and learning preferences, it may not facilitate learners getting a sense of their instructor as a real person, his or her credibility in the field of study, and in establishing a level of approachability. Not having a sense of the person who holds the course grade book can also cause anxiety for students in ways such as not knowing how rigid or easy going they might be, how to potentially perceive tone with their words or comments, whether or not they feel comfortable asking for assistance. Without the ability to develop a good sense of who the instructor is, learners may be challenged to see their credibility in the field of study and find value in interactions with them. Additionally, text-based communications can make it difficult to differentiate constructive feedback from disappointment or empathy. The lack of non-verbal cues without reference of personality may leave things open to interpretation in a way that can diminish engagement and effort level.

Several tools are readily available that can be used to create media assets which can support course learning outcomes while also promoting the social presence and immediacy of the instructor when used effectively. The focus of this study is the consideration of the selection and use of appropriate tools and media for the creation of introductory videos, demonstrations, direct instruction lectures, podcasts, student feedback, and virtual field trips. The decision process as to which tools to select for what purposes were guided by a preliminary conceptual, prescriptive model, which the researcher will attempt to improve based on the study findings.

The researcher has a master’s degree in Instruction Design and Technology and works as an Instructional Designer at a major university in the United States. Additionally, the researcher
has taught both online and face-to-face courses at the university level, has over two decades of experience working with and supporting information technology, and has an extensive background in audio recording, video recording, and editing applications.

**Rationale for Study**

With the expansion of online course offerings, there is a need for instructors to make informed decisions efficiently on the use of instructional media tools for developing content. As previously stated, the COVID-19 pandemic forced many instructors to make quick and uninformed pedagogical decisions in rapid shifts to online learning for the sake of maintaining some level of continuity with courses. Though experts in their respective fields, knowledge of best practices in teaching online and creating effective media assets to address learner needs while providing a level of instructor social presence and instructor immediacy was often not within their background and skillset. For many, then and now, the luxury of access to instructional designers, media production staff, and facilities to assist with this process is not available. As such, the impetus is turned to the instructors themselves. Given constraints of time and available resources, instructors may benefit from having a prescriptive model available to guide them through the selection process.

As an initial step, the proposed study aimed to test and refine a prescriptive model, called DISCOVER, by subjecting it to use in a real online teaching environment. Through several iterations, it was refined to become useful for more general courses. Specifically, the DISCOVER model employs an acronym that depicts the sequential flow of a recursive process across two phases, being design and development and implementation and evaluation, while employing a memorable word as a pneumonic device. Discover stands for: Define, Identify, Select, Create, Offer, Verify, Evaluate, and Revise. It is an expansion of the ADDIE model.
which is commonly used in instructional design. ADDIE is an acronym for the words Analyze, Design, Develop, Implement, and Evaluate which describes the five phases of that model. While the ADDIE model is excellent for general purposes, the proposed model specifically targets online asynchronous teaching, the creation and use of digital media assets, and the use of best practices to boost student perceptions of instructor immediacy and instructor social presence in doing so. The phases and sections of the DISCOVER model process are described as follows.

**Figure 1**

*The DISCOVER Model*

![Diagram of DISCOVER Model]

The first phase, shown in Figure 1 with a black arrow labeled “1,” is a design and development phase in which the first four sections are this process are executed. The subject matter expert (SME) defines what is to be learned, identifies an appropriate medium for the
intervention, selects an appropriate available tool to author the media asset, and then creates it employing best practices for enhancing the perception of instructor immediacy and instructor social presence.

The second phase, shown in Figure 1 with a black arrow labeled “2,” is an implementation and evaluation phase in which the second four sections of the process are executed. The media asset is offered to the learners, the perceived efficacy of it is verified by soliciting learner feedback, evaluation of collected feedback and SME reflections are used to reveal opportunities for improvement, and ultimately the media asset is revised as needed.

**Research Focus and Research Questions**

The research focus is on how a prescriptive model can be created and used to meet the needs of instructors who wish to make informed choices in selecting tools for creating digital media assets to enhance the learning experience in their asynchronous online courses in support of learning outcomes, and in seeking to promote instructor immediacy and instructor social presence. In support of this focus, the following research questions are proposed:

1. How did instructors adapt the DISCOVER Model in their teaching?
2. How did students in asynchronous media/video-enhanced online courses perceive their instructor’s level of social presence?
3. How did instructor’s selection/use of asynchronous media influence perceived instructor social presence?
4. How did students in asynchronous media/video-enhanced online courses perceive their instructor’s level of immediacy?
5. How did instructor’s selection/use of asynchronous media influence perceived instructor immediacy?
6. How did instructor’s selection/use of asynchronous media influence students’ learning?

7. What were instructors’ experiences with using the DISCOVER model for their teaching?
Literature Review

Social Presence

According to Garrison (2017), social presence is the ability of participants to identify with a group, communicate openly in a trusting environment, and develop personal and affective relationships progressively by way of projecting their individual personalities. Literature indicates positive effects in terms of student engagement and satisfaction in courses where instructor social presence is perceived as being high (Gunawardena & Zittle, 1997; Richardson & Swan, 2003). In an article pertaining to student engagement in online courses, Meyer (2014) references the Community of Inquiry model (Garrison, Anderson, & Archer, 2000) and posits that learning is the result of overlapping Teaching Presence, Social Presence, and Cognitive presence. Meyer also points out students must be actively engaged in learning rather than passively receiving information. This is important to keep in mind as media artifacts created for online learning need to be associated with tasks and other activities to promote active learning. York, Yang, and Dark (2007) stated that online courses that convey affective or emotional information to learners lead to a higher sense of social presence and interaction. They indicate there being several types of videos in which this can be used: introductions, instructional, and feedback. With respect to feedback on student work, West and Turner (2015) studied feedback given by way of asynchronous video and noted that one third of the respondents’ comments alluded to improved staff-student rapport and that many students perceived the video approach as being more personal. Sixty-one percent of students preferred video feedback to 21% who preferred written feedback. Participants stated video feedback provided greater quality and quantity, as well as helped establish a rapport with their instructor. Over 94% of respondents felt the video feedback would enhance their future work to the same or greater extent than written...
feedback. Further, the findings showed more than 40% of participants completely understood their tutor's feedback and more than 73% of the participants gave a positive response to it. West and Turner (2015) used MP3 audio files for feedback for undergraduate education students and found that while nearly three times as many students preferred video feedback over written feedback, just over 1% preferred audio feedback alone. The authors concluded that while the use of video for feedback enhanced the quality of learning experiences, students generally regard feedback on assessments as one of the least satisfying experiences.

Another asynchronous video study used an iPhone to record the instructor's face and shoulders while they spoke. In this study, Henderson and Phillips (2015) provided five-minute feedback videos to undergraduate and post-graduate students. Here they intentionally kept video resolution lower and did no editing for purposes of time efficiency in creation and uploading of the video. Their study examined both instructor and student perspectives on use of this “talking head” video approach and its perceived value over traditional, textual feedback on student work. From the instructor perspective, the results showed the process to be more time efficient than providing written feedback, and on average, it was found to take half the time. The majority of students indicated that they preferred the video feedback over textual, and cited it being more individualized and specific to them, personalized, supportive, caring, and motivating, clear, constructive, and reflection prompting. Ninety-eight percent of them were positive about this medium and the way it was used. They used words like personal, authentic, supportive, stronger, and clearer in their descriptions. Additionally, the video feedback was said to give more time establishing and building the relationship with the student, emphasizing student conceptual engagement, and time given to consider future growth and performance.
Immediacy

Witt and Kerssen-Griep (2011) defined immediacy as being reduced psychological or physical distance between people involved in an interaction. Within the online realm, physical distance can be virtually unlimited, but reduction in perceived psychological distance can transcend geographic distance and aid in forming human connections. As previously mentioned, instructor immediacy and instructor social presence are related. When instructor immediacy behaviors are present in distance learning environments, learner perceptions of instructor social presence and learner satisfaction are amplified (Bozkaya, 2007). Schutt, Allen, and Laumakis (2009) found that comparing groups of online learners where one group was given a high-immediacy behavior treatment and another group was given a treatment with low-immediacy behaviors, the high-immediacy group indicated significantly higher perceived social presence. Further, they stated a strong correlation between perceived immediacy and social presence in their findings. Baker (2010) found a linear combination of instructor immediacy and instructor social presence to be a statistically significant predictor of student affective learning, cognition, and motivation. These studies strongly suggest that the use immediacy behaviors can boost the perception of instructor social presence.

Witt and Kerssen-Griep (2011) used asynchronous video to provide students with feedback but focused more on the promotion of instructor immediacy in the videos. Specifically, they examined teacher nonverbal immediacy (TNI) using things such as eye gaze, open-body position, smiling, gestures, vocal inflection, tone, pace, and pitch, and face threat mitigation (FTM), which used sensitive verbal strategies and non-verbal immediacy queues. The use of video attempted to establish instructor credibility and enhance student perception of instructor caring. The research was analyzed using descriptive statistics, and their findings were that levels
of TNI and FTM (X) would influence students' perception of instructor credibility (Y). They observed a significant relationship between X and Y. They further stated that it is important for instructors to establish credibility in order to have the feedback they provide be seen as useful by the students. Students judged the instructor as more trustworthy, ethical, and honorable when the feedback contained high levels of both TNI and FTM.

**Tools to Boost Instructor Immediacy and Social Presence**

**Lecturing**

To reduce attrition rates and poor performance in a Math course, Hegeman (2015) created asynchronous video with audio voice-over for PowerPoint presentations. A document camera and digital annotation system were also employed at times in these videos. The videos were created to serve as direct instruction lecture content in place of off-the-shelf publisher textual materials. The length of the recorded lectures ranged in length from five to 40 minutes and totaled over 26 hours of video time. Included among the research questions for this study was "Can teaching presence in the form of instructor-generated video lectures serve as a predictor of student success in online college algebra?" Students who enrolled in the revised course, that had the instructor seen in the role of content provider, performed significantly better on assignments than those who enrolled in the course with publisher-generated content. Results for online quizzes, exams, midterms, and finals all showed statistically significant increases in the revised course by comparison to the original one. The replacement of the commercial materials with the instructor-generated videos were said to not only place greater emphasis on conceptual understanding, but also positioned the course instructor prominently in the role of content provider, enhancing the course instructor's teaching presence in the online environment. Student
attrition rates dropped significantly in the revised version of the course, and there were a significantly higher number of passing grades.

Carrell and Menzel (2001) studied perceptions of immediacy between live and distance education classrooms. They compared student perception across live lectures, video versions of lectures, and PowerPoint with voice-over versions of lectures. The students were in upper and lower-division courses and placed into groups where each was exposed to one of these formats. They wanted to learn if the lecture delivery types would result in varied perceptions of instructor immediacy. An important aspect to note is Carrel and Menzel stated that video content alone did not support active learning, and that students were better engaged when the reason they were watching the video was explained. The results showed that the live classroom had the highest instructor immediacy, followed by the video version with the second highest, and the PowerPoint slides with voice-over were rated the lowest. The live visual aspects were believed to provide non-verbal cues which humanized in a way that voice-over and static images could not.

Di Paolo, Wakefield, Mills, and Baker (2017) looked at three categories of instructor video production: desktop computers with webcams, mobile cameras, and professional studio equipment. They published a guide to assist instructors in creating videos to support their classes that stepped through a process like that of instructional design in that it had planning, development, delivery, and reflection components. The types of videos they described included those that introduce, model, explain, and provide feedback. In the introduction videos, they encouraged the ability for “allowing learners to hear the instructor’s voice” (p. 455). It was suggested that the instructor share some personal information and seek to build trust and credibility for the course. They suggested working from scripts to aid in the development of accessible materials, and that social presence aspects be incorporated into video design as they
state, “a strong teacher presence contributed to student’s positive attitude toward the course” (p. 455).

In 2007 (Silverman, 2008), I set out to find ways to improve attrition rates in an online version of an introduction to computer science course. Historically, the course had been “taught” using a series of lecture notes in Word documents. Poor performance had also been a factor among the students. The challenge had largely been in Microsoft Access, as students had mostly never used it before and quickly fell behind and became overwhelmed. I recreated many of my face-to-face lectures in video form by using Camtasia to record modeled use of the software package and voice-over, as well as some lecture from PowerPoint slides. The results were overwhelmingly positive in that attrition rates dropped, and grades improved. In humanizing this content, it was possible to show humor, draw personal examples, and attempt to present in more engaging ways than text alone could offer. There is a voice and actions taken in video form that show how to construct objects and the results of these actions. In line with social presence, it was possible to convey a real person being there and make a more engaging and understandable experience. As a result of the video interventions, students showed higher grades, indicated higher course satisfaction, and attrition rates reduced. The department is still providing similar video lectures for students more than a decade later.

West Virginia University’s Integrated Marketing Communications Master’s program began having me to create podcast lectures for numerous courses in the program. These are offered as an alternative to students reading purely text-based content. Having both textual and podcast versions of the lectures met accessibility requirements and provided the content in ways that catered to a wider variety of learning preferences. Through student evaluation of instruction reports, and other communications with the course coordinator, students reported the ability to
absorb the content more easily while on the go, and it being more personal to them in hearing a voice speaking to them. This approach offered heightened social presence in the courses.

Professor Edward Sabolsky worked with me to produce over 80 videos for a Mechanical and Aerospace Engineering course on Statics. The course is extremely math intensive and complex in nature. This caused concern in students being able to succeed in taking the course online and not having the benefit of in-class examples that are typically used on transparency projectors and worked through from start to finish. With the use of a document camera, microphone headset, pencils, paper, and TechSmith’s Camtasia software, the SME was able to print out example problem pages from the textbook publisher and work through them while recording. In post-production, I added annotations to help with clarity of the content, segmented longer videos into smaller chunks, and cleaned up mistakes that occurred. The resulting video content allows the student to effectively look over the instructor’s shoulder while watching him work through the problems. These are available on demand, and feedback received from students has been positive. Students have indicated not only being able to understand the complex content, but also feeling a personal connection to their instructor and being comfortable in approaching him through email with questions. This tool can be used to boost both instructor social presence and immediacy.

**Providing Feedback**

Jones, Georghiades, and Gunson (2012) studied the use of screen capture in providing students with feedback. Their findings indicated that students had the impression of being there while their work was being graded and the graders indicated having accomplished more work in the same amount of time it would have taken to provide textual feedback. The students enjoyed the richer nature of screen-captured feedback and were encouraged to explore it more deeply as a
result. An additional advantage was indicated by ESL students who were able to not only hear their instructor’s voice, but potentially listen to the recording multiple times to help in gaining a better understanding of the commentary. There was not only an efficiency gained in using this tool for providing feedback, but the feedback was humanized and personalized in an effective way that provided a richer experience and allowed having verbal cues to resonate with their grader on an emotional level. This approach enhances social presence and can boost immediacy for follow up questions. Similarly, Mahew (2017) studied the use of video as a solution for reducing marking time on student submissions while preserving the quality of feedback given. Video was determined to be far more efficient than textual commentary, and students reported having a stronger emotional experience and bond with the grader.

**Foundations**

This model is proposed by an instructional designer working in a higher-education setting. Models such as the ADDIE model are excellent for general purpose use across a variety of educational settings, but a need exists for a model to specifically guide higher-education instructors lacking formal instructional design experience through the steps to create media assets for asynchronous learning that are designed to boost student perceptions of instructor immediacy and instructor social presence while supporting learning outcomes. In expanding the ADDIE model to address this specific need, it is the researcher’s hope that a learning curve may be greatly reduced and the benefit of instructional design best practices for creating effective media assets may be more quickly applied.
Summary of Literature Review

The literature reviewed revealed research supporting the significance of student perception of instructor immediacy and instructor social presence in online courses. When these are present, student engagement can be elevated, and a deeper connection can be made with the instructor and the course itself. This can lead to higher learner satisfaction, and more meaningful learning experience.

The literature showed a case for using video in creation of feedback for submitted work. It also highlighted introduction videos as being desirable, and the useful nature of smartphone videos. Other types of videos included virtual fieldtrips, demonstrations, and direct instruction. For areas that are not visual in nature, podcasts may be appropriate.

With respect to tools, studies used hardware aspects such as document cameras, webcams, and smartphone cameras. Additionally, software was used for recording audio, screencasting, and presentations and editing. All these aspects create the pallet of available offerings from which instructors can make their choices. What is needed is a comprehensive model to not only list what is available, but also guide individuals through this process by giving them the advantage of expertise in these areas that could otherwise potentially take years to amass.
Method

Research Focus and Research Questions

My overall direction in this research was to create a prescriptive model for instructors to make informed choices when seeking to infuse asynchronous media into their courses to support learning outcomes while boosting perceived instructor immediacy and instructor social presence. My research questions that support this overall focus are listed below:

RQ1. How did instructors adapt the DISCOVER Model in their teaching?

RQ2. How did students in asynchronous media/video-enhanced online courses perceive their instructor’s level of social presence?

RQ3. How did instructor’s selection/use of asynchronous media influence perceived instructor social presence?

RQ4. How did students in asynchronous media/video-enhanced online courses perceive their instructor’s level of immediacy?

RQ5. How did instructor’s selection/use of asynchronous media influence perceived instructor immediacy?

RQ6. How did instructor’s selection/use of asynchronous media influence students’ learning?

RQ7. What were instructors’ experiences with using the DISCOVER Model for their teaching?

Description of Setting

The setting for this study was a university in the Appalachian region of the Southern United States. The courses involved were from both undergraduate and graduate levels. The programs involved sought to explore use of new technologies to enhance their courses and make
them optimal for students. Further, what was tried and proven to be effective is to be potentially rolled out to other online courses in these programs.

Participants

Description of Participants

Two groups of participants were involved in this study. The first were instructors teaching in online programs, and the second were students who took their courses. In total, three instructors participated, and 136 of their students across four unique courses. Two courses were undergraduate and two were graduate. All instructors had taught online previously, and only one had developed numerous digital media assets in the past.

The population of the student survey reported being 45% female, 54% male, 1% preferring not to answer, and a mean age of 25 and a range of 37. In terms of ethnicity, survey participants identified as being 4.26% African American, 4.26% Asian, 87.23% Caucasian, and 4.26% Other. The respondents were 55% underclassman and 45% graduate students.

How Participants were Selected

First, instructors were identified based on being in the role of content developer for a course that might have had multiple sections. They were approached for their willingness to participate. The students who took their classes were selected by their self-enrolling in the courses and they had the option to opt into participating.
Description of Intervention

The DISCOVER model employed by this study is based on five commonly used technological tools, the associated medium each uses, and the choice of application for given tools. Table 1 lists the tools, medium, possible applications, perceived quality, suggested length of recording, advantages and disadvantages of the given approach, requirements and other considerations, accessibility concerns, and how instructor immediacy and instructor social presence can be integrated.

During the years the researcher spent technical writing, studying instructional design, and designing instructional interventions for a wide variety of applications, a common process cycle emerged. This covered assessing needs, designing interventions to address needs, implementing designs, acquiring feedback on the efficacy of the designs, and revising to improve the designs. Coupling this with the highly technical background of the researcher from the fields of computer science, electronics, and recording technology, the idea emerged as to how this experience could be packaged into a form that could substantially reduce the learning curve of an instructor seeking to create interventions in areas they are expert and helping them use the best practices in this acquired knowledgebase in a comparatively short period of time over having to try to acquire some of this background independently.

In attempting to answer this need, the researcher set out to create an expanded version of the ADDIE model in a structure that could be based on a memorable acronym that depicts an easy-to-navigate process taking one from formalizing the initial need, being the Define stage, to selecting an appropriate medium in the Identify stage, to choosing an appropriate tool in the Select stage, to the making of the asset using a variety of best practices in the Create stage. The best practices employed in this stage address everything from planning for recording to using
beaviors to bolster perceived instructor immediacy (Gorham, 1988) and instructor social presence (Kim, 2011; Pollard et. al., 2014; Swan et. al., 2008). These best practices help ensure a smooth, distraction free experience for students while allowing the instructor to be perceived optimally in terms of immediacy and social presence. These aspects constitute the DISC, which is first phase of the DISCOVER model. The second phase of the DISCOVER model takes instructors through making the asset available to learners in the Offer stage, soliciting feedback to check efficacy in the Verify stage, reflecting upon opportunities to improve the asset in the Evaluate stage, and finally, the Revise stage where what has been learned culminates into a plan to cycle through the model again to generate an improved media asset.
Table 1

Common Tools, Uses, and Media Asset Types

<table>
<thead>
<tr>
<th>Tool</th>
<th>Medium</th>
<th>Application</th>
<th>Quality</th>
<th>Length Range</th>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Requires</th>
<th>Considerations</th>
<th>Accessibility</th>
<th>Immediacy</th>
<th>Social Presence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smartphone Camera</td>
<td>Video</td>
<td>Just-in-time messages, informal introduction, student feedback</td>
<td>Lower</td>
<td>Suggested shorter length. Possibly one to five minutes.</td>
<td>Readily available in most cases</td>
<td>Not professional quality</td>
<td>Free space on device and location to upload video.</td>
<td>Environmental factors such as audio background noise</td>
<td>Closed captions or transcript</td>
<td>Can be used to convey personality and make oneself approachable.</td>
<td>Can be used to show human aspects and convey credibility</td>
</tr>
<tr>
<td></td>
<td>with</td>
<td></td>
<td></td>
<td></td>
<td>Highly portable</td>
<td>Relatively simple to learn and use</td>
<td>Steadiness of camera</td>
<td>Distance of person from camera</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Audio</td>
<td></td>
<td></td>
<td></td>
<td>Relatively portable</td>
<td>Can boost instructor immediacy and social presence due to viewer familiarity with video chatting and it having a similar feel</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Potentially less time spent for editing aspects as it is more of a “live” medium.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Podcast</td>
<td>Audio</td>
<td>Direct instruction lecture, student feedback</td>
<td>Varies</td>
<td>From high to low based on equipment, recording software, skill level, and editing time</td>
<td>Can be longer if appropriate for subject matter. Perhaps as long as 60 minutes.</td>
<td>Listeners can do so while going about daily tasks such as exercising and commuting, which makes good use of time for busy individuals.</td>
<td>Does not work well for visual content. Understandability of the speaker could have similar challenges to a face-to-face classroom if non-native speaker, and visual, non-verbal cues will not be present to</td>
<td>Requires quiet location to record, software, such as Audacity, a microphone, and some level of editing skills.</td>
<td>Speaker must become familiar with equipment to learn microphone positioning</td>
<td>Can be used to invite students to contact instructor with questions.</td>
<td>Can be used to establish credibility and give listeners a sense of personalit y.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Can allow listeners to pick up on non-verbal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Video Camera or Webcam</td>
<td>Video with Audio</td>
<td>Introduction video, Direct instruction and demonstration aspects, Virtual fieldtrips, Interviews with experts.</td>
<td>Varies based on equipment and recording quality settings.</td>
<td>Can vary with the objective of the content, but shorter and to the point is usually best.</td>
<td>Can be very personal and humanizing.</td>
<td>Appearance of person is visually significant. Environment in which it is recorded can be distracting if noisy, cluttered, or there are interruptions.</td>
<td>Camera, either built in or external, ability to edit if needed, ability to upload to YouTube or another service to house the video.</td>
<td>Location that is quiet and uninterrupted.</td>
<td>Closed captions</td>
<td>Can be used to invite students to contact instructor with questions.</td>
<td>Can be used to establish credibility and give listeners a sense of personalit y.</td>
</tr>
</tbody>
</table>

<p>| Screencast | Video with Audio | Direct instruction and demonstration aspects. | Varies from high to low based on equipment, recording software, skill level, and editing time | Can vary with the objective of the content, but shorter and to the point is usually best. | Can give the effect of allowing someone to look over your shoulder. Students can rewind and watch parts again if needed. | Requires software such as TechSmith’s Camtasia or Mediasite. May be necessary to purchase a license. | Screen resolution should be optimized for viewers. Presentation should be organized and make effective use of time to help keep viewer attention. | Closed captions | Use of voice can help in making instructor seem approachable. | Can be used for providing feedback on work in a way that is personal and can seem to the student like the instructor. |</p>
<table>
<thead>
<tr>
<th>Document Camera</th>
<th>Video with Audio</th>
<th>Demonstration of process in constructivist way</th>
<th>Student feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varies from high to low based on equipment, recording software, skill level, and editing time</td>
<td>Can vary with the objective of the content, but shorter and to the point is usually best.</td>
<td>Allows viewer to see things as if looking over the shoulder of the speaker. Can feel more like a one-on-one consultation. Can show speaker’s hands which adds personal touch and may boost social presence. Can also give the effect of allowing student to look over your shoulder as in a one-to-one interaction.</td>
<td>Equipment is required and may be necessary to purchase. A quite location with good lighting is needed. Use of a headset microphone may provide better quality audio.</td>
</tr>
</tbody>
</table>

Use of voice and potentially hands can add to humanizing aspects. This can be used for giving feedback on student work which can help establish a more meaningful relationship.
Table 2 contains best practices for those who are creating media assets to keep in mind in seeking to create the best possible recording quality and attempt to boost student perceptions of instructor social presence and instructor immediacy.

### Table 2

*Best Practices for Media Asset Creation*

<table>
<thead>
<tr>
<th>#</th>
<th>Best Practice</th>
<th>Media Asset Types</th>
<th>Description</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Planning Considerations in Advance of Production Recording</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Scripting</td>
<td>Video &amp; Audio</td>
<td>Some people are natural lecturers and can do so easily while being recorded without a live audience. Others become more self-conscious when being recorded and an audience is not present to provide continuous non-verbal and verbal feedback. This can lead to gaps in thinking and a less smooth presentation. Writing out either a full script or some bullet points can help keep you on track, alleviate some filler sounds, and make your presentation seem more smooth and potentially less anxious. A script can also serve as the basis for a transcript, and this may help with accessibility concerns, provide a quick resource for learners to review, or give another format for those with various learning preferences (Silverman, 2010).</td>
<td>Technique</td>
</tr>
<tr>
<td>2</td>
<td>Location</td>
<td>Video &amp; Audio</td>
<td>Attempt to find a place to record that will be quiet, comfortable, free from distractions, and has the things that you will need. Sometimes the time of day may also help some locations be more ideal. Also, if shooting video, consider what all can be seen in your surroundings and if it is appropriate (Borup, 2021). In some cases, using a virtual background might be a good idea.</td>
<td>Environment</td>
</tr>
<tr>
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<tr>
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<td></td>
</tr>
<tr>
<td>3</td>
<td>Lighting</td>
<td>Video</td>
<td>Information: Lighting can make a big difference how you appear. Poor lighting can come in a variety of forms including “The Haunting,” where one looks like they are at a séance due to a glowing face in dark surroundings, “The Silhouette,” where one is badly backlit and their face details cannot be seen (Borup, 2021). If the time of day or location in which you record does not offer enough natural light, or the electric lighting you have does not help provide a well-lit environment, consider buying an inexpensive video light ring from an online retailer. Cameras love light and having an adequate amount can really help (M. Duff, personal communication, May 3, 2008).</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Camera placement and angle</td>
<td>Video</td>
<td>Information: Distance from the camera and its angle are important. If it is too far away, the viewer may be seeing too much of the room and not enough of you. If it is too close, the viewer may feel as if you are invading their personal space as a “close talker” (Borup, 2021). If the camera is too low, it may lead the viewer to feel you are talking down to them, or if it is too high, they may be looking at the top of your head. Be creative with what you have. Consider using some books to prop up a laptop computer to being more eye level and experiment with different distances from it.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Microphone placement</td>
<td>Video &amp; Audio</td>
<td>Information: The closer a microphone is to you, the more it will pick up of you and less of your surroundings. A good audio level is important to help your message resonate and not be distracting or hard to hear. If using a headset microphone, try placing it slightly below the side of your mouth to avoid “plosive” sounds that come from pronouncing letters that can produce a burst of air and cause the microphone to distort (Silverman, 2010). Some letters that can make these sounds are “B,” “P,” “T,” and “S.” If using a more professional video camera, consider using a lavalier microphone</td>
<td></td>
</tr>
</tbody>
</table>
with it. This allows the camera to be whatever distance away from you is needed and keeps the mic closer to your mouth. The levels and room noise can be improved this way.

| 6 | Alleviate distracting sounds | Video & Audio | Room noise, electronic alert notifications, and the sound of others talking can be distracting to your audience. Consider temporarily turning off things like cell phones, programs that make alerts sounds, HVAC systems, refrigerators, or anything that might make noise. Leave a note reminding yourself to turn these back on when done. Let anyone who might be around while you are recording to be as quiet as possible. Something like a dog barking might be unavoidable. If this happens while recording, consider editing it out, or using humor bring attention to it by saying something like “and my dog agrees!” (P. Phillips, personal communication, March 6, 2007)” |

| 7 | Test recordings | Video & Audio | Consider doing a dry run of what you plan to record and then watch or listen to it (Silverman, 2010). If you notice things you do not like that can be improved, seek to keep them in mind as you try again. You may also want to ask someone else to review your recording and see if they have any observations or suggestions. |

| 8 | Length | Video & Audio | When it comes to videos, usually the shorter the better for the sake of attention span. Six minutes or less is preferable (Borup, 2021). If what needs to be covered is long, consider breaking it up into shorter videos that can be watched in succession. In terms of audio, sometimes longer recordings can be OK if treated as a podcast that students can listen to while on the go (Silverman, 2010). |

| 9 | Accessibility | Video & Audio | In creating any kind of media assets, it is important to consider accessibility for those who might have visual or auditory limitations. For an audio recording a transcript may suffice. For |
video, closed captioning may be necessary. While there are automated systems that can do some of this kind of work, it is important to check the text they generate for errors and to correct them. If your institution has an accessibility services group, you may wish to content them to see what the standards are and what services are available.

### Considerations While Recording

<table>
<thead>
<tr>
<th>Step</th>
<th>Activity</th>
<th>Medium</th>
<th>Description</th>
<th>Technique</th>
<th>Social Presence</th>
<th>Instructor Immediacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Talk <strong>to</strong> them</td>
<td>Video &amp; Audio</td>
<td>Always keep in mind that you are trying to make your message resonate with the members of your audience. When we lecture live, we look at the members of the audience, speak to them, and look for signs of understanding or questions that let us know it is safe to move on with things. When recording, a number of those things are removed, and we must keep in mind that we want our message to resonate with people who are not in front of us at the time. A good practice is to imagine a specific person when you are recording and speak to that person. Those watching or listening to your media asset will feel more like you are speaking to them and think less about the technology and more about your message (Borup, 2021). This can also help in boosting perceived instructor social presence and instructor immediacy.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Maintain eye contact</td>
<td>Video</td>
<td>The old saying of “look at the birdie” in terms of camera applies here (E. Granroth, personal communication, June 6, 2020). It can seem unnatural when there is not an audience in front of you but doing so greatly enhances the viewer perception of being spoken to and psychological distance being reduced. In some cases, it can help to keep a picture of a friend or pet above the camera, and you can then act as though you are talking to them. The person watching the video will not see it, and you may better engage</td>
<td>Technique</td>
<td>Social Presence</td>
<td>Instructor Immediacy</td>
</tr>
<tr>
<td>12</td>
<td>Avoid recurring filler sounds</td>
<td>Video &amp; Audio</td>
<td>We sometimes habitually make sounds or say things that do not add value to our message and can potentially become distracting or annoying. Watch out for “ums,” “ahhs,” and tick sounds that some make prior to beginning a sentence. If you find you are prone to making these, try to keep it in mind when recording.</td>
<td>Technique</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Use Humor</td>
<td>Video &amp; Audio</td>
<td>Use of humor can boost verbal immediacy perception (Gorham, 1988). It can make for a more enjoyable experience in which time seems to pass more quickly and the content may be more memorable.</td>
<td>Immediacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Smile and sound happy</td>
<td>Video &amp; Audio</td>
<td>This is a simple technique that can help your learners perceive a higher level of immediacy with you (Gorham, 1988).</td>
<td>Immediacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Use personal examples</td>
<td>Video &amp; Audio</td>
<td>This technique can help frame real-life examples of things that lend to your credibility and level of experience. Learners can perceive a higher level of immediacy with you in doing so. (Gorham, 1988).</td>
<td>Immediacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Vary your vocal expressions</td>
<td>Video &amp; Audio</td>
<td>Using a variety of vocal expressions when talking can post verbal immediacy perception (Gorham, 1988). Anyone who has seen Ben Stein in the movie Ferris Bueller’s Day Off will note an example of how difficult it is to pay attention to a monotone speaker.</td>
<td>Immediacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Be a real person</td>
<td>Video &amp; Audio</td>
<td>Be a real person with your students (Pollard, Minor, and Swanson, 2014). Let them have a sense of this in how you present yourself. Be human. You can provide some of that person your students know to be real from face-to-face settings through your presentation in media assets.</td>
<td>Social Presence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Don’t be too self-conscious</td>
<td>Video &amp; Audio</td>
<td>Being comfortable being recorded may take time and practice. Students want to experience someone who is upbeat, dynamic, and knowledgeable. Don’t dwell too much on how you think you look and sound in a recording. You may well have lectured for quite</td>
<td>Technique</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
some time, and it is likely that no one ever screamed and ran out of the room due to the way you looked or sounded. We can be our own worst critics and it is important to not let that get in the way of enjoying what we do and conveying necessary information to our learners in a way that will both be effective and enjoyable. They want to enjoy the experience and the perception of you being enthusiastic about it and enjoying it as well will help them do so (Silverman, 2010).

| 19 | Keep rolling, edit later, or redo. | Video & Audio | Based on the type of recording and length, it will be necessary to make decisions when mistakes happen. If you notice the mistake at the time you make it, you can choose to leave it in and keep going, keep recording and redo the bad part with plan to edit it out later, or you can stop and rerecord the bad part (Silverman, 2010). If you notice the mistake after the fact, you need to decide whether to live with it or redo it. If the error is significant, but the ability to rerecord in the available time is not there, you can also let audience know that a mistake occurred at a specific point in the recording and what should have been said. Most audio and video software has at least basic editing capabilities to allow cutting pieces out and stitching together the parts before and after the part that was removed. If you are not familiar with editing, look for tutorials or ask questions of someone who is more skilled in the area. | Technique |
In the first phase of the DISCOVER Model, subject matter experts will go through the sequence of the first four steps supporting design and development as shown in *Figure 2*.

**Figure 2**

*Phase 1 of the DISCOVER Model*

In the Define step, the subject matter expert (SME) defines what is to be learned. This can be the result of a needs assessment. Essentially, there is a need for an instructional intervention, and it is stated explicitly at this point.

In the Identify step, an appropriate medium for the intervention is identified. This is done by deciding which medium is believed to be the most appropriate for the given subject matter. For example, if something like equations, charts, or artwork is to be shared, a visual medium may be warranted where narrative content can be applied to aspects that may be best seen. The visual medium can also be useful for students to see and hear their instructor and this can help
them form a sense of them being a real person and what they are like through the perception of nonverbal and verbal queues.

The Select step is where an inventory of available tools is created and compared with the chosen medium and defined need to identify what is believed to be an optimal fit for creation of a media asset. The inventory may include services and software that an institution or individual has licensed, or are freely available, and physical hardware assets. Table 1 of this document lists common tools and their media type, types of applications, advantages and disadvantages, requirements, considerations for effective use, accessibility considerations, and how these can be used to bolster perceived instructor immediacy and instructor social presence. One consideration at this point is determining where the media asset will be stored to make it available to learners. The identified medium will help inform this. For example, if an instructor chooses to give learners assignment feedback by way of a recorded audio file, the file may be small enough to submit within a learning management system (LMS) or anywhere files can be shared such as Google Drive. If an instructor were to choose to record a video of student work while looking at it on their screen and providing feedback, a larger file size would be anticipated and a system capable of sharing video files would be needed. It is important to consider file permissions and who has access to media assets especially when providing personalized feedback. It is suggested that instructors consult their IT staff pertaining to recommendations on information security.

In the Create step, the media asset is created. Careful planning can help reduce the amount of time it takes to create something to fit the identified need and practicing of immediacy and social presence boosting behaviors can help in enhancing perception of these. Best practices can be employed to help made connections with learners. Table 2 covers a list of best practices for media asset creation that is multifaceted. It addresses aspects pertaining to techniques that
can be employed to maximize efficiency, environmental considerations for recording, and specific behaviors that can be modeled to bolster perceived instructor immediacy and instructor social presence. It is useful in planning and keeping things in mind while recording. An example of a best practice is looking at the camera while recording video of oneself. If you have ever participated in a video conference where the person speaking is looking way, you may not have felt as connected to that person as when they appeared to be looking at you. When recording, consider pretending that you are talking to a person who is right there with you. Using warmth, a variety of vocal inflections, and being personable can aid in students coming to know you as being a real person (social presence) and being approachable (immediacy.) These techniques can make the assets more pleasurable to experience, help make them more memorable, and help students bond with you. It is anticipated that if tools are being used for the first time, there can be learning curve where initial use may take longer. The more familiar and comfortable one becomes in using a tool and going through a process, generally the faster the process becomes.

When creating media assets, some are more comfortable working from scripts, while others prefer to speak unrehearsed. Scripting can allow for better organizing of thoughts in advance and lead to a smoother presentation. It can also help in providing transcripts for accessibility concerns. The approach one decides to take can be formed in considering who the audience is, whether the media asset is intended to be reused, and how one best presents themself. Time should also be built into the process to allow for editing and uploading.

In the second phase of the DISCOVER model, which is implementation and evaluation, the second set of four steps is followed as shown in Figure 3.
The Offer step is when the created asset is made available to learners. If it is something for an entire class to experience, it may be a link to the asset within the LMS. If it is feedback for individual learners, it may be linked to a message sent to them or perhaps noted within gradebook feedback. It is important to ensure that permission levels on whatever system the assets are stored are adequate for it to be accessed by the intended audience.

In the Verify step, we seek to measure efficacy of the offered asset in addressing the originally defined learner need. Depending on the purpose and what has been made available, several methods can be used to evaluate. For example, if you created a welcome video for a course where you introduced yourself and told them about your interests, spoke about the importance of the course and what is to be learned, and invited students to contact you with any questions, an end of semester survey might ask if students felt that they came to know you and
that you cared about their learning. Another example could be if you created some informal selfie videos on your smart phone that showed your surroundings, gave an overview of what the class will be doing that week, or even talked about an area where students seem to be struggling. In an era of apps like FaceTime, lower production quality is to be expected and it can even seem more personal. Surveying your students to ask if they are finding the videos helpful and what they like and dislike about them may help drive your future efforts.

In the Evaluate step, we look for opportunities for improvement. Factoring in the experience and observations of the SME and combining that with feedback collected in the previous step, we envision how this can be made more effective. This is another planning time when we step back and think about what we have done and where we can go from here. Consider revisiting what was stated when you originally defined what was to be shared with learners. Perhaps this feedback can inform a revised definition to either recreate the asset or provide some guidance for adjusting technique as new ones are created.

The Revise step is where decisions made in the evaluation phase are put in motion. It may mean that you decide to recreate or tweak an asset. It could also mean that you take knowledge gained through feedback and apply it to new assets that you create.

**Procedure**

This sequential explanatory design research is primarily quantitative in nature and uses qualitative aspects to support the quantitative findings. It is instructor-centric in that the proposed model seeks to help them in their online teaching and connecting with their students. As such, with an initial version of the model available, instructors were recruited who were willing to explore ways in which they can enhance their learners’ experiences through the creation of media assets and assisting the researcher in providing feedback on their experience and
suggestions for improvement of the model. The sample of instructors was selected based on teaching 100% online asynchronously, having a mix of classes representing undergraduate and graduate levels in various subject areas, and being available. One instructor had an existing working relationship with the researcher, and the other two were referred by a retiring faculty member who indicated an inability to participate due to timing. Once an instructor indicated potential interest in participating, they were provided with a minimal risk cover letter (see Appendix A) to further explain the research. Upon confirmation of their intent to participate, an initial email was sent to them requesting the scheduling of a one-hour online meeting, a copy of their most recent course syllabus, suggesting they refresh themselves on its contents in advance of the meeting, and asking that they reflect on things they have historically done to help students come to know them as being real people who are approachable for assistance.

During the initial meeting (see Appendix B for the meeting outline), instructors were introduced to the DISCOVER model, shown the graphic depicting the process, and had the two phases and related parts explained to them. An online template document (see Appendix C) was shared with them that the depicts the phases of the DISCOVER model and allowed them to enter the information for a media asset they wished to create. This document also included a Reflections Journal section where instructors were asked to document thoughts they had throughout the process. Additional copies of this were used for each media asset. The instructor was then shown Table 1 so that they identified the tools that are available to them, the related media types, how they would be used, requirements, and, at a surface level, how they would be used in bolstering perceived instructor immediacy and instructor social presence.

The instructor was asked to participate in a modified talk aloud/think aloud protocol as they reviewed their syllabus and considered areas in which students historically had challenges
in the course that might have benefitted from media asset creation. This technique was used successfully in the researcher’s previous work (Silverman, 2017) to reveal deeper thinking and reflection by the participant as they took time to articulate their thought process. After identifying some areas that might have benefitted from media asset creation in their course, they selected one of them and filled out the define section of the template document to define what was to be shared with learners. The Identify section was filled in next based on an appropriate medium for the intervention. The Select section indicated choice of an appropriate, available tool within the medium.

The Create section of phase one of the DISCOVER model was discussed further by going through Table 2, which is a list of best practices for media asset creation. The instructor participants were given copies of the template and tables that were used as they continued the process on their own. The second phase of the DISCOVER model was examined in the template so that they could enter their initial thoughts and plans for how they would like to offer the asset to learners, verify its efficacy, and so that they could be aware of where additional entries are to be made. This concluded the initial meeting and instructors are invited to follow up with the researcher any time they wished to ask questions, provide feedback, or discuss progress. The instructor then sought to create the identified media assets and offer them in their online courses. This completed phase 1 of the model and began phase 2.

The instructors participated in three short meetings with the researcher throughout the semester during which their progress and reflections were discussed. The researcher also assessed the level at which the instructor appeared to be following the model. This information was used over the course of the interactions with the instructor to establish a three-point rating scale score for model adherence which was later used in data analysis to help measure the degree
to which instructor used the model in contrast with student perceptions of things such as instructor immediacy and instructor social presence. The model adherence scale score was calculated using the rubric shown in Table 3.

**Table 3**

*Model Adherence Scale Scoring Rubric*

<table>
<thead>
<tr>
<th></th>
<th>Evident</th>
<th>Not Evident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Template Completeness</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Assets Created</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Best Practices Use Reported</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

In the latter part of the semester in which the media assets were offered to learners, the instructor sent out an email to the class encouraging students to participate in an online survey (see Appendix F.) The survey included the option for students to opt into consideration for a 30-minute online interview session (see Appendix G) in which the researcher learned more about their experience and perceptions. This session was also used to add to the available qualitative data in the study. The researcher collected the data from the survey submissions and looked for ones that asked to be considered for the interview. Based on the number of respondents opting into this, and the quality of their responses in the survey, invitations were sent to schedule interviews. Six students were interviewed, and the researcher recorded these sessions and took notes during the discourse so that quality records were made of responses.

At the end of the semester, instructors met with the researcher online again for a summative interview (see Appendix H) in which they shared their experiences and visited the remainder of phase 2 of the DISCOVER model to verify efficacy of the interventions they created, evaluate opportunities for improvement of the assets, and sought to revise them accordingly through the recursion that phase 2 can feed back into phase 1. They also discussed
their impressions of this model and how it could be improved. The sessions were be recorded, and notes were taken by the researcher to ensure good fidelity in preserving important aspects of the discourse.

At the conclusion of this phase of research, the collected quantitative data from surveys and instructor and student interviews were analyzed for emergent patterns and areas of interest and statistical analysis techniques were applied to the quantitative data to look for patterns among survey responses.
## Table 4

### Data and Analysis

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Data Source</th>
<th>Data Source Analysis Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RQ1:</strong> How did instructors adapt the DISCOVER Model in their teaching?</td>
<td>Follow up meetings with instructors.</td>
<td>1. The researcher met with instructors three times during the semester in which the model was used. These interactions were expected to yield qualitative data from discussions that were coded and analyzed for items of interest.</td>
</tr>
<tr>
<td></td>
<td>Model template documents.</td>
<td>1. Instructors were asked to fill in their selections for each step of the model process and to keep a reflections journal of their thoughts and experiences throughout the process. These items were reviewed during follow up meetings and discussed. This produced qualitative data that was coded and analyzed for items of interest.</td>
</tr>
<tr>
<td></td>
<td>Researcher perception of instructor adherence to model.</td>
<td>1. The researcher, over the course of the interactions, established a rating for the instructor on a three-point scale that indicated perceived adherence to the model. This came from interactions throughout the process.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. This three-point scale rating was used in applying descriptive statistics to look for alignments in reported student perceptions of instructor immediacy and instructor social presence in comparison to researcher-perceived model adherence.</td>
</tr>
<tr>
<td></td>
<td>Summative instructor interview questions</td>
<td>1. Qualitative responses to questions 5 and 7 were transcribed, coded, and analyzed to reveal patterns of interest.</td>
</tr>
<tr>
<td><strong>RQ2:</strong> How did students in asynchronous media/video-enhanced online courses perceive their instructor’s level of social presence?</td>
<td>Survey of students enrolled in the given class</td>
<td>1. Scale data from survey questions 27 through 33 (see Appendix F for questions) was reviewed and descriptive statistics employed to analyze quantitative aspects.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Narrative responses were analyzed and coded to reveal patterns and areas of interest.</td>
</tr>
</tbody>
</table>
| RQ3: How did instructor’s selection/use of asynchronous media influence perceived instructor social presence? | Survey of students enrolled in the given class | 1. One-way ANOVAs were conducted on instructor social presence perception and instructor model adherence, and on course level and social presence perception. A two-way ANOVA was conducted on course level and model adherence. Robust standard errors were calculated to measure course level and model adherence.  
2. Narrative responses were analyzed and coded to reveal patterns and areas of interest. |
|---|---|---|
| Interview of students from a given class who volunteer | 1. The interviews were turned into transcripts.  
2. The transcripts were analyzed and coded to identify patterns and areas of interest in the responses. |
| Interview with instructor | 1. The interviews were turned into transcripts.  
2. The transcripts were analyzed and coded to identify patterns and areas of interest in the responses. |

| RQ4: How did students in asynchronous media/video-enhanced online courses perceive their instructor’s level of immediacy? | Survey of students enrolled in the given class | 1. Scale data from student survey questions 10 through 26 (see Appendix F for questions) were reviewed and descriptive statistics employed to analyze quantitative aspects.  
2. Narrative responses were analyzed and coded to seek to reveal patterns and areas of interest. |
|---|---|---|
| Interview of students from a given class who volunteer | 1. The interviews were turned into transcripts.  
2. The transcripts were analyzed and coded to identify patterns and areas of interest in the responses. |
| RQ5: How did instructor’s selection/use of asynchronous media influence perceived instructor immediacy? | Survey of students enrolled in the given class | 1. One-way ANOVAs were run on immediacy and model adherence and course level and immediacy. A Welch test was run followed by a post hoc test. A two-way ANOVA was conducted on graduate and undergraduate courses and instructor model adherence on immediacy perception. Robust Standard Errors were calculated using the HC3 method.  
2. Narrative responses were analyzed and coded to seek to reveal patterns and areas of interest. |
| Interview of students from a given class who volunteer | Interview with instructor | 1. The interviews were turned into transcripts.  
2. The transcripts were analyzed and coded to identify patterns and areas of interest in the responses. |

| RQ6: How did instructor’s selection/use of asynchronous media influence students’ learning? | Survey of students enrolled in the given class | 1. Narrative responses were analyzed and coded to seek to reveal patterns and areas of interest. |
| Interview of students from a given class who volunteer | Interview with instructor | 1. The interviews were turned into transcripts.  
2. The transcripts were analyzed and coded to identify patterns and areas of interest in the responses. |

| RQ7: What were instructors’ experiences with using the DISCOVER Model for their teaching? | Interviews with instructors | 1. The interviews were turned into transcripts.  
2. The transcripts were analyzed and coded to identify patterns and areas of interest in the responses. |
The data sources for this study pertaining to instructors included discourse from periodic follow up meetings, instructor-completed model templates that included reflections journals, interviews, and researcher-generated model adherence scores. Student data sources included surveys and interviews.

Instructor follow up meetings were held to discuss progress, review template document contents, and provide any needed support. Meetings lasted approximately 30 minutes and were held three times during the semester in which the model was used. The meetings took place on the Zoom meeting platform and were recorded. The researcher took notes during these meetings in a word processor application and machine-generated transcriptions were obtained.

Instructor model template documents were used for filling in responses for the various phases and steps of the model and to record their observations and thoughts during their interaction with the model and throughout this process. These thoughts were placed in the reflections journal section and were kept for the purpose of discussing module use with the researcher and helping to inform the evaluate and revise steps of the model. These were stored in cloud-based space where the instructors and researcher had shared access.

Instructor interviews were held at the end of the semester to learn about instructors’ experience with the model, the media assets that they created, and what they learned from their students about the experience. The interviews lasted approximately 60 minutes and followed a designated set of interview questions (see Appendix H.) The researcher took notes of responses.
during interviews in a word processor application and machine-generated transcriptions were obtained.

Instructor model adherence scores were established to help quantify the extent to which instructors were perceived to adhere to the model. Scores were based on the criteria specified in the rubric shown in Table 3 and were derived based on interactions with the instructors throughout the course of the semester.

Student surveys were completed on the Qualtrics online platform and used the set of questions shown in Appendix F. This instrument was created for this study and contained original questions as well as ones found in prior studies (Garrison, Cleveland-Innes, & Fung, 2004; Gorham, 1988; Kim, 2011; Pollard, Minor, & Swanson, 2014; Swan et. al., 2008; Swan & Shih, 2005.) The surveys collected demographic information and sought to measure student perceptions of instructor immediacy and social presence based on their experience with media assets in the course.

Student interviews took place at the end of the semesters and sought to gain additional insights into the experience of students beyond what the surveys collected. Selection occurred based on opting into interview consideration in the student survey, having representation from all four classes, considering the quality of narrative responses in survey question 39, and choosing students showing low and high perceptions of immediacy and social presence on the survey. The interviews lasted 30 minutes and six students were selected to participate. The flow of interview and questions used are shown in Appendix G. The interviews took place on the Zoom meeting platform and were recorded. The researcher took notes of responses during these interviews in a word processor application and machine-generated recordings were obtained.
Once all data were collected, quantitative aspects were analyzed first in support of the study being sequential explanatory design with emphasis placed on quantitative data being primary and qualitative data supporting them. IBM SPSS and Microsoft Excel were used for analysis of the student surveys and the model adherence scale entries. Scale data from the survey were reviewed and descriptive statistics employed to analyze them pertaining to questions about instructor immediacy, social presence, and asynchronous media asset usage.

Notes and transcripts from instructor follow up meetings and summative interviews were analyzed, and similar items were grouped together which provided a focus on commonalities and emergent areas of interest. Reflections journal comments from model templates were collected and reviewed for items of interest and to help inform model improvement.

Narrative question responses to the student survey were grouped together using in vivo and informal/memo-style coding. Coded analysis of narrative responses from the survey questions and interview questions were used to identify commonalities and areas of interest brought forward from the pool of participants so that a more concentrated picture of what was obtained could be experienced while maintaining the fidelity of the collective respondent voice.

The student interview recordings were turned into transcripts. The transcripts were coded to identify emergent patterns on questions and comments pertaining to instructor immediacy and social presence pertaining to media asset usage.
Results

The results are presented below according to each research question after the brief description of participants’ demographics and descriptive data collected from them.

Instructor Participants

Three instructors utilized the DISCOVER model in four online university courses. Two of the courses were undergraduate level and two were graduate level. Our instructors are referred to as Rico, Jerry, and Jessica. Most of the data collected from instructors were qualitative. These included transcripts and notes from the discourse of three 30-minute meetings during the semester and one-hour summative interview meetings, and reflections journals kept by instructors as they used the model in filling out template documents for each of the media asset types they created. All meetings were conducted and recorded with their permission on the Zoom platform. Quantitatively, the researcher used a three-point scale to rate perceived low, medium, and high model adherence by the instructors, with scores of 1, 2, and 3 respectively.

Student Participants

Quantitatively, an online survey of students (see Appendix F for survey) included 24 questions in five-point Likert scale format regarding perceptions of instructor immediacy and social presence in their courses. Respondents across the four courses yielded a gross of N=141 and net of N=136 due to the removal of four submissions that were found to have been enrolled in more than one of the courses being studied and one submission that was found to be a duplicate entry. These removals were performed to help ensure uniqueness of the individual records being analyzed and not bias the pool with the perspectives of one person counting more than once. IBM SPSS (Statistical Package for the Social Sciences) and Microsoft Excel software
were used to perform numerous tests and analyze the data set and these results are discussed in data answering individual research questions.

Qualitatively, six students were interviewed at the conclusion of their classes using the guiding questions in Appendix G. Transcriptions and notes from these interviews were used in part to answer the research questions as were narrative survey responses to open-ended question 39 in the student survey that asked if there was anything else they would like to say about the instructor in the course. Of the 136 student surveys, 111 students submitted narrative responses and inductive coding was used to group responses with descriptive and in vivo codes to assist in answering the research questions. Responses were categorized into the emergent descriptive codes of contact comfort, grading/feedback, immediacy, learning impact, response time, and social presence.

**RQ1: How did instructors adapt the DISCOVER Model in their teaching?**

Instructors were given a one-hour individual orientation session to the model during which the process was explained, and the documents for Common Tools, Uses, and Media Asset Types (Table 1), Best Practices for Media Asset Creation (Table 2), and the DISCOVER model template (Appendix C) were reviewed. Instructors were then asked to identify areas in which their courses might benefit from media asset creation and filled out their first template document and walked through the steps in phase one of the DISCOVER model with the researcher present to answer questions and offer guidance. They also filled in information for the Offer and Verify steps of phase 2 of the model as to how they intended to make the asset available to learners and soliciting student feedback for examining the efficacy of what they did. Instructors were asked to independently continue filling out additional template documents for the other areas they identified. They were also encouraged to continually update the reflections journal sections in the
template documents as they had thoughts throughout the experience. These were created in shared cloud-based storage space where the researcher could review them periodically and discuss them during three subsequent “temperature check” meetings and when summative interviews (Appendix H) were conducted with each instructor participant at the end of the semester.

During the initial meeting as instructors looked over the Common Tools, Uses, and Media Asset Types document, the researcher noted excitement and optimism as they became aware of tools that had not previously considered using and used the model to integrate them into their template plans for media asset creation. In particular, the smartphone camera for selfie videos was of interest as was the use of webcam and screencasting. The remaining tools of podcasting and document cameras were not used by the three instructors. Podcasting was of reduced interest due to the visual nature of what was to be shared in these courses, and instructors did not have the need in these areas to share things that were physical in nature that might lend themselves to the use of a document camera.

Quantitatively, to help in determining the perceived degree to which instructors utilized the DISCOVER model in their teaching, a three-point scale was employed by the researcher to evaluate the instructors on their model adherence. Low, medium, and high adherence correlated with scores of 1, 2, and 3 respectively. The researcher established these model adherence scores based on completeness of model templates, creation of the related media assets, instructor self-reporting of the use of the techniques in the Best Practices for Media Asset Creation document and interactions with instructors during temperature check meetings and a summative one-hour interview (Appendix H) that focused on their model use and perceptions recorded in their reflections journals. These evaluations led to the model adherence scores for the three instructors
across the four courses shown in Table 5. This model adherence score is also used in answering other research questions in this study.

**Table 5**

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Course Level</th>
<th>Model Adherence Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rico</td>
<td>Undergraduate</td>
<td>3</td>
</tr>
<tr>
<td>Jerry</td>
<td>Undergraduate</td>
<td>3</td>
</tr>
<tr>
<td>Jessica</td>
<td>Graduate</td>
<td>1</td>
</tr>
<tr>
<td>Jerry</td>
<td>Graduate</td>
<td>3</td>
</tr>
</tbody>
</table>

Model adherence scores were assigned based on completeness of model templates, the self-reports of following best practices, and the creation of specified media assets. This is shown in the Table 3 rubric and each category was worth a maximum of one point. Jerry and Rico consistently followed the model closely as was evidenced by the quality and completeness of their model templates, the use of the Best Practices for Media Asset Creation document during our discourse, and the creation of their intended media assets. Rico earned three points for his undergraduate class, and Jerry earned three points for each of his classes. Jessica received a low score for multiple reasons. She did not work on her model templates after the initial orientation as she indicated she would. As such, she was not prepared for our first temperature check meeting, and she asked that I repeat the orientation session as a refresher. She did not follow directions of editing the template documents well and was again not prepared for the subsequent temp check meetings. One of the templates she had planned to implement focused on using the video feedback tool that is integrated into the LMS gradebook. She wound up not using it as she was concerned her level of dissatisfaction with student work submissions would convey displeasure in her face and voice in videos and this would be counter productive. She released only some module introduction videos and did so days after
the modules had been released in some cases. She also indicated that she forgot to send out
the student survey she had specified in the verify step of the model templates. As
such, this could not be used to inform her evaluate and revise steps and she had to
work from her own impressions. She received one half point for model templates and another
half point for her assets created.

The first instructor, Rico, taught an undergraduate course where he completed three
model template documents (Appendix C). Based on having taught this course over 20 times, with
an average enrollment of 70 students, he reflected on areas which might benefit from
interventions using media assets. He chose to use a visual medium with smartphone camera
selfie videos. The videos were created in his office, uploaded from the smartphone to YouTube,
and offered to the students through the course LMS email tool.

His first model template addressed a challenge he identified in wanting more of his
students to complete student evaluation of instruction surveys at the end of the course.
Historically he had experienced low response rates for this and felt that underclassmen may not
appreciate the importance and value in their providing feedback on their course experience. He
reported a 63% response rate at the end of this semester which was higher than what he had
historically seen at an estimated 50% response rate. He believes that use of this video, in which
students could hear him make a personal plea and take a serious tone pertaining to the
importance of this, as opposed to what he called “just another faceless email,” was able to sway
additional students into completing the survey who may have been on the fence about it.

Another area in which Rico had historically seen lower-than-desired participation was in
course extra credit opportunities. As this course was introductory level, some students attending
are newer to university classes and struggle with some assignments or make missteps along the
way. The extra credit opportunities were said to potentially have a significant impact on their final grade, and he decided to create a video seeking to boost awareness and participation for his second model template. At the conclusion of the semester, Rico reported seeing an increase in questions pertaining to extra credit opportunities and submissions.

The third area Rico identified as potentially benefiting from a video intervention pertained to graded discussion forums. In his model template for this, he indicated wanting to explain expectations and address common mistakes he had seen in the past. In his summative interview, he said adherence to standards in the discussion forums was much higher this semester.

Rico reported that he purposefully employed aspects of the Best Practices in Media Asset Creation document while creating his videos. In particular, he referenced maintaining eye contact with the camera, using humor, smiling, using personal examples, and trying to be a real person to his students.

For the Verify stage of phase two of the model, Rico elected to do a Wufoo survey of his students in which he asked if the smartphone videos provided students with meaningful information that helped them in completing tasks. All students who indicated watching the videos responded “yes” to this question. He also asked for narrative comments about the experience of using smartphone video in the course. There were no negative comments.

Regarding the videos, one student shared:

I always enjoyed seeing them and they helped clear up directions.

Another student indicated:

The videos were very helpful in fully explaining information while doing so in a more personal manner.
Based on these responses and his own experiences in using the model, he indicated intent to use the model to make additional assets as needed in the future.

Jerry was the second instructor, and he taught an undergraduate course in the first semester and a graduate course in the second semester. In the first course, he completed two DISCOVER model templates. The first covered a course introduction video which used a notebook computer with webcam, Mediasite for cloud-based storage space, and shared it with students via a link in the course LMS. The video was under five minutes in length, was semi-scripted, and included course information, professional background, and some personal background. He sent some early videos to the researcher to get feedback on them. The researcher suggested increasing camera distance to avoid going out of frame when moving around and reminded him of some of the immediacy behaviors referenced in the Best Practices for Media Asset Creation document. Subsequent videos Jerry shared were greatly improved. In his reflections journal and revision plan, Jerry indicated that as he created additional videos, he became more comfortable in doing so and would like to reshoot the original course introduction video to capture a potentially perceived higher level of comfort and redo the flow of items presented to facilitate a smoother transition among topics.

Jerry’s second model template for his first course covered the creation of eight weekly module introduction videos he called “professor chats.” He elected to make these informal by using his smartphone camera and chose to shoot each one in different locations around his farm to give students a look into his life and potentially boost their perception of his social presence. He purposely included his dogs in some of the videos and horses in others. This was to further portray his being a real person with a real life and attempt to further boost perceived social presence. In one video, while he was speaking, his horses started bumping him to try to get treats
out of his pockets. He laughed while this was happening and decided to leave this in as it showed he had a sense of humor, which is an immediacy boosting behavior. These videos were generally two minutes in length, and he worked from a list of bullet points he kept off to the side on paper to help him keep on track. The videos were shared with students via the course LMS. One challenge that Jerry experienced was in uploading his smartphone videos to Mediasite. The audio synchronization with the video content would at times become significantly off which could be perceived as off-putting to viewers. The researcher was able to duplicate this problem and contacted system administration staff who subsequently contacted the vendor. A bug was confirmed where the system can allow synchronization to be lost during processing of key frames and compression in some instances and formats. This was said to be slated for correction in a future release and the suggested workaround was to run all video content through HandBrake software before uploading. In the interest of time and workflow simplicity, Jerry opted to use YouTube for his uploads instead. This enabled him to upload directly from his smartphone if he was happy with the take. In some cases, he chose to edit videos using Adobe Premier software before uploading. Of interest to note were Likert scale and narrative responses in the student survey from one student who seemed to suggest being displeased with the video content and finding it lacking. The researcher invited this student to be interviewed and observed the student expressing disappointment in that there had only been an introduction video to the course and the student had wished there to be much more use of video. When the researcher confirmed with the student that the remaining eight weekly videos had not been seen, the researcher met with the instructor and looked at the positioning of the videos in the course through a shared screen. The instructor had placed all the videos at the bottom of a page that contained the eight weekly modules. Unless students scrolled to the bottom, they would not see
them. Jerry stated that he thought everyone would look at every item on the page as this is how he normally does things. This was easily adjusted in Jerry’s second course by placing the videos for each module right before each module so that they would be seen together. Jerry confirmed this change led to a higher percentage of views of each video in the second course.

In his second course, Jerry completed three model templates. He again created a course introduction video, eight module introduction videos, and this time added a video to address a course project with which students previously found significant challenges. All videos were uploaded to YouTube and links were shared inside the course LMS.

For the introduction video this time, he elected to shoot segments in multiple locations and edit them together using Adobe Premier to make use of transitions and make things flow together well. For revision purposes, Jerry noted that he will rerecord the course introduction video and exclude references for dates pertaining to landmarks in the course as this rendered the current version inaccurate for the next semester. He stated that the video introductions worked well and clearly merited their further use. He also is seeking to increase his video editing skills using Adobe Premier to add some additional enhancements.

For his professor chats/module introduction videos, he made them available concurrently with the release of the module content, and as previously noted, placed the links in plain view with the given modules. Jerry stated that he came to feel it was worth reshooting the short module introduction videos each time and using specific dates to give more of a feeling of being current and that he is there for the students if needed. He also liked doing this as he found them to be a very beneficial, additional avenue to relay information. Jerry also plans to make a few of these longer to give some lecture time to important topics. He does want to keep them shorter as he feels this to be important for the sake of the students viewing them in their entirety and not
becoming less apt to watch them. He noted that with each one that he did, it became easier and faster to do. His doing the videos in a single take with little or no editing became commonplace. Jerry’s third DISCOVER model template addressed a long-term challenge in the course. Students access a detailed dataset containing injury reports that have occurred at the university and need to synthesize meaningful conclusion from the data. While discussing this with Jerry, the researcher came to realize that he used to teach a special request Excel workshop for the students who took this course with Jerry’s instructor predecessor. Since Jerry inherited the course, he would do a presentation for the on-campus version, but nothing had been created for those taking the course 100% online. Jerry used his webcam and screen sharing to discuss the assignment, expectations, show the dataset, and provide guidance. This video proved to be the most watched out of all the videos in the course. The video watched count showed to be nearly double the enrollment for the course as the video which was only accessible by a non-published link. This suggests that students watched it more than once while working on the project. Jerry plans to revise the video based on questions that emerged via email and he noted that the quality of the assignment submissions was greatly improved over prior semesters.

Jerry created a quantitative Qualtrics survey to check for efficacy, value, and justification for the time spent in creating the video content. These data were used to help inform the Verify, Evaluate, and Revise steps in phase two of the model. In this survey, he asked eight questions that spanned all three model templates, used five-point Likert scales for responses (“1” being the lowest rating and “5” being the highest), and had 11 respondents. The results were all “4” and “5” specifying “Agree” and “Strongly Agree” which indicates they found value and merit in the video content, it helped in forming a sense of relationship with their instructor and enhanced their engagement in the course. Table 6 shows the results. Jerry indicated that these results
confirmed his thinking in there being merit to continuing the development and revision of these media assets for his students.

Table 6

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1_Did the introduction video help introduce the course?</td>
<td>4.73</td>
<td>0.45</td>
</tr>
<tr>
<td>Q2_Did the module introduction videos help introduce the module material?</td>
<td>4.64</td>
<td>0.48</td>
</tr>
<tr>
<td>Q3_Did the module introduction videos help clarify assignments and objectives?</td>
<td>4.91</td>
<td>0.29</td>
</tr>
<tr>
<td>Q4_Did the injury data video help introduce you to the project?</td>
<td>4.73</td>
<td>0.45</td>
</tr>
<tr>
<td>Q5_Did the injury data video help clarify assignment, objectives, and overall report?</td>
<td>4.82</td>
<td>0.39</td>
</tr>
<tr>
<td>Q6_Did seeing the instructor help form an instructor/student relationship?</td>
<td>4.55</td>
<td>0.50</td>
</tr>
<tr>
<td>Q7_Did you feel more relatable to your instructor when seeing any common interests?</td>
<td>4.73</td>
<td>0.45</td>
</tr>
<tr>
<td>Q8_Did the use of videos help with your level of engagement?</td>
<td>4.64</td>
<td>0.48</td>
</tr>
</tbody>
</table>

The third instructor participant was Jessica, who taught a graduate course and created two model templates and several associated videos, but not all the ones originally intended. The templates addressed module introduction videos and one that covered a challenging assignment and provided directions and expectations. Jessica initially planned to also create individualized video feedback for assignments using a gradebook tool integrated into the course LMS, but later indicated having concerns over potentially conveying nonverbal cues that could give the perception of disappointment in student performance. Due this concern, these were not created, and an additional template was not completed. Another template for an instructor introduction video was started but not completed.

Videos were created using a webcam, were stored on YouTube, and linked in the course LMS as well as sent through email announcements. For her first template, Jessica created several module introduction videos to go over what was being covered those weeks and her expectations. These were not created for all modules. Her second template incorporated the use of screen sharing to go over details of a major assignment and presented things in a point-by-
point manner. Jessica indicated having received positive feedback from several students via email pertaining to this video. They reached out to indicate they watched and appreciated it but had further questions.

Though Jessica’s videos were all shot in the same location, she purposefully used different clothing, changed her background image, and varied her hairstyle regularly to help in the perception of her being a real person, which is a social presence perception bolstering characteristic. Jessica had indicated in phase 2, step 6 of her two model templates that she would create a Qualtrics survey to gather feedback from her students to inform the remainder of the second phase of the DISCOVER model but said in the summative interview that she forgot to do this. As such, the pool of data for her evaluation and revision decisions were initially limited to her own experiences and perceptions formed from student emails and submitted work. Narrative feedback in student survey question 39 and student interviews with two of Jessica’s students mentioned the desires to see video introductions for all modules and having videos released at the time modules became available. The researcher shared this feedback with Jessica, and she incorporated that into her revision plan for future iterations of the process. She also indicated having learned that specific dates should not be included in future videos as this gave them a single-semester shelf life. As such, future revisions will speak to week numbers in which things are due as opposed to dates. She also plans to incorporate a “joke of the week” in the model introduction videos to help in showing humor, which is an immediacy perception boosting behavior and indicated a desire to do additional videos midweek to address any student concerns that arise.

After an initial scaffolding session in acclimating instructors to the DISCOVER model, instructors went on to the process of completing additional model templates to address identified
needs in their courses, identify an appropriate medium, select a tool to use within that medium, and create the asset. Beyond adapting model use to their own specific circumstances, participants indicated the process of video creation became easier the more it was done and formed their own best practices as they learned from their mistakes so that they better adapted to the process. After the media assets were offered to their students, collected feedback from students in the forms of surveys, email communications, and observations of work quality in areas previously known to be problematic, helped participants verify efficacy of their approaches, evaluate opportunities for improvement, and further adapt their approaches for their revision plans in the next iteration of media asset development.

**RQ2: How did students in asynchronous media/video-enhanced online courses perceive their instructor’s level of social presence?**

Student survey questions 27 through 33 (see Appendix F for questions) measured perceived instructor social presence. A five-point Likert scale was employed for each question with “1” being the lowest score and “5” being the highest.

A reliability analysis was run on the set of these items. Cronbach’s Alpha showed .904 which suggested these items accurately measured this construct. This set of questions was then used in the creation of a computed variable field in SPSS to serve as a composite of five-point Likert scale responses pertaining to social presence called Instructor Social Presence Scale. This aided in enabling further data analysis using a combined perception of instructor social presence.

The mean and standard deviation for each of these questions is shown in Table 6 for the 136 respondents. Averaging the lowest mean of 3.46 and the highest mean of 4.23 yields 3.86 indicating a moderately-high level of perceived social presence. On a five-point scale, this
suggests a near-high level of perceived instructor social presence by the students whose instructors utilized the DISCOVER model.

**Table 7**

*Social Presence Descriptive Statistics*

<table>
<thead>
<tr>
<th>Question</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q27_Instructor gave me a sense of belonging in the course</td>
<td>3.72</td>
<td>.913</td>
</tr>
<tr>
<td>Q28_Even though not physically together, still felt connected to instructor</td>
<td>3.82</td>
<td>.988</td>
</tr>
<tr>
<td>Q29_Formed distinct individual impressions of instructor</td>
<td>3.72</td>
<td>.913</td>
</tr>
<tr>
<td>Q30_I feel like I know my instructor</td>
<td>3.46</td>
<td>.971</td>
</tr>
<tr>
<td>Q31_Instructor is a “real person” with students</td>
<td>4.23</td>
<td>.822</td>
</tr>
<tr>
<td>Q32_Instructor’s videos helped me get a sense of who they are</td>
<td>4.15</td>
<td>.946</td>
</tr>
<tr>
<td>Q33_I have a sense of what my instructor is like as a person</td>
<td>3.91</td>
<td>.946</td>
</tr>
</tbody>
</table>

Student interviews and their responses to the open-ended question showed that the videos enhanced the instructors’ social presence. For example, one student commented:

Getting to know your professor through video and audio is much better than not getting to know them. In getting to know them, I can come to them with questions better. More comfort in emailing them. Higher confidence I will get a response.

Similarly, another student shared:

This was my first time seeing the videos and my first time seeing him. I got to see him, and it helped me form an impression. In email, I could not really tell his expressions and how he was. In the video, I could tell he was not uptight.

The quantitative responses to Likert scale survey questions, narrative survey responses, and interview responses all suggest a moderately-high level of perceived social presence in these asynchronous media-enhanced online courses.
**RQ3: How did instructor’s selection/use of asynchronous media influence perceived instructor social presence?**

Initially, two one-way ANOVAs were conducted to examine if students’ perceptions of their instructor’s social presence differed based on their instructor’s model adherence score and the courses in which they were enrolled as both are related to the instructors’ use of asynchronous media. A Levene statistic indicated that the assumption of homogeneity of variances was not violated and, as such, ANOVA was appropriate. Pertaining to the three-point model adherence scale, as Rico and Jerry both scored “3” being high, and Jessica scored “1” being low, and there were no entries scoring “2” which excluded medium adherence being shown in the results. The analysis showed that although students had a higher level of perceived social presence ($M = 27.14$, $SD = 5.076$) when their instructor had high adherence to the DISCOVER model over when the instructor had a low model adherence score ($M = 26.54$ and $SD = 5.666$), the difference was not statistically significant with ($F(1,132) = 0.280$, $p=0.597$).

The second one-way ANOVA performed analyzed the courses in which students were enrolled and their levels of perceived instructor social presence. A Levene statistic test indicated that the assumption of homogeneity was not violated and, as such, ANOVA was appropriate. $F$ from the ANOVA is significant ($F(3,130) = 4.118$, $p = .008$), which indicates students’ perception of instructor social presence varied significantly depending on the course in which they were enrolled.

To identify which courses may be different, post hoc comparisons were made, which indicated that students in Jerry’s graduate-level course had a statistically significant higher level of perceived social presence ($M = 29.65$, $SD = 3.527$) than those in Jerry’s undergraduate course ($M = 25.44$, $SD = 5.884$), $p=0.005$. Jerry’s graduate course had a social presence score mean and
standard deviation of 29.65 and 3.527, while his undergraduate course had 25.44 and 5.884 respectively. Jerry’s graduate and undergraduate courses had a significant mean difference at a value of 4.204.

Given the observed differences between the same instructor’s graduate and undergraduate course student perceptions of instructor social presence, a two-way ANOVA was next conducted to examine a potential interaction between graduate and undergraduate level courses and instructor model adherence on students’ perception of instructor social presence. A Leven’s Test of equality of error variances produced of significance of .05 which indicated violation of assumption. Due to this, the two-way ANOVA results were not interpretable.

Next, Robust Standard Errors were calculated using the HC3 method. The results indicated that while there was not interaction between model adherence and degree levels, both variables were observed to be significant predictors of student perception of instructor social presence. Specifically, students had a statistically higher level of perceived instructor social presence (Mean = 27.14, Standard Deviation = 5.08) when their instructor had high adherence to the DISCOVER model over when the instructor had low adherence to the model (Mean = 26.54, Standard Deviation = 5.67) (p=0.021, partial $n^2$=0.04). Also, graduate students had a statistically higher level of perceived instructor social presence (M= 28.21, SD= 4.80) than undergraduate students (M= 26.12, SD= 5.30) (p<0.001, partial $n^2$ =0.04).

The data indicated differences in the groups of students at undergraduate and graduate levels. As students in graduate classes had a statistically higher perception of social presence, it may be they are more accustomed to being students, are studying in classes that are more focused on their area of interest and pay more attention to content. Beyond that, they may pay
more attention to instruction directly from the instructor and, in doing so, they may feel the instructor’s social presence to a greater degree.

During student interviews, a recurring pattern emerged among graduate students coming to see their instructors as being real people through video. This speaks directly to perceived level of social presence through use of asynchronous media. One student shared:

I got to know him well personally in terms of the videos. It is a positive in an online course getting to know the professor better.

Similarly, another student shared:

Got to know him as a person. Took videos in his house, or on his farm, or with his dogs, that was refreshing to get the perspective into his world.

Graduate students also commented about the speed in which they received email responses being important to them and this enhanced the sense of having an interactive relationship with a real person. Undergraduate students also offered interview comments showing perceptions of their instructor being a real person. One student said:

It is hard to get to know your professor in a fully online, asynchronous course. This helped me get a better sense of who I was talking to.

Another student commented:

Seeing him in video helped form more of a relationship with him as I got to see his demeanor and hear him.

Undergraduate student interview and survey narrative responses showed some similarities to graduate students but seemed to emphasize more importance on the sense of instructor approachability and quality of feedback over speed of response. This may suggest that these students reached out less to their instructor than graduate students did despite coming to know
them and like them as a real person. As such, there may have been fewer two-way exchanges that did not afford the opportunities for higher social presence perceptions as they did in graduate-level classes.

Narrative comments from question number 39 in the student survey further showed evidence that use of asynchronous media influenced perceived instructor social presence. One student had this to say about a high-model-adherence instructor:

Professor (Rico) was very personable and engaging. His videos seemed as though you were having a face-to-face conversation, which was refreshing in an online course.

Another student had this to say about Jerry:

I enjoyed how in the videos he made it a point to film them in different setting which helped me get a better understanding of who he was beyond being just my professor.

Another pattern that emerged from student interviews and narrative responses was comparison of not only having other courses without the use of video but having other courses with the same instructors previously where video was not used. One student indicated:

Another course I had was completely online and it was way worse. I did not even know what they looked like. I was glad my professor used all the videos here.

Another student offered this perspective:

This class was better for sure. I had one other online class with him before. In it, he gave a short (text) description of himself in eCampus (LMS). Seeing him in video helped form more of a relationship with him as I got to see his demeanor and hear and see him.

The quantitative and qualitative data collected to answer this research question show the use of instructor-created asynchronous video had positive impact on student perceptions of instructor social presence.
**RQ4: How did students in asynchronous media/video-enhanced online courses perceive their instructor’s level of immediacy?**

Quantitatively, student survey questions 10 through 26 (see Appendix F for questions) measured perceived instructor immediacy. A five-point Likert scale was employed for each question with “1” being the lowest score and “5” being the highest. A reliability analysis was run on the set of student survey question items 10 though 26 which measured perceived instructor immediacy using five-point Likert scales. Cronbach’s Alpha showed .865 for this suggesting these items accurately measured this construct. This set of questions was then used in the creation of a computed variable field in SPSS to serve as a composite of five-point Likert scale responses pertaining to instructor social presence called Instructor Immediacy Scale. This aided in enabling further data analysis using a combined student perception of instructor immediacy.

Table 8 shows the mean and standard deviation values for each of these questions. Questions 16 and 22 are designed to have lower values reflect higher perception of immediacy and their mean values were on the lower end of the scale at 2.09 and 2.20 respectively. The remainder of the questions are designed to have higher Likert scale scores reflect higher perceptions of immediacy, and these values ranged from 3.57 to 4.49. Averaging these values yields a score of 3.92, which suggests that students reported near-high perceptions of instructor immediacy in their courses.
**Table 8**

*Immediacy Descriptive Statistics*

<table>
<thead>
<tr>
<th>Question</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q10_Instructor invites meeting with him/her</td>
<td>4.43</td>
<td>.842</td>
</tr>
<tr>
<td>Q11_Instructor uses personal examples</td>
<td>3.91</td>
<td>1.026</td>
</tr>
<tr>
<td>Q12_Instructor uses humor</td>
<td>3.57</td>
<td>.894</td>
</tr>
<tr>
<td>Q13_Instructor uses a variety of vocal expressions</td>
<td>3.70</td>
<td>.964</td>
</tr>
<tr>
<td>Q14_Instructor smiles or sounds happy</td>
<td>4.07</td>
<td>.935</td>
</tr>
<tr>
<td>Q15_Comfortable asking instructor questions</td>
<td>4.49</td>
<td>.836</td>
</tr>
<tr>
<td>Q16_I feel isolated in this course</td>
<td>2.09</td>
<td>1.082</td>
</tr>
<tr>
<td>Q17_Instructor addresses me by name</td>
<td>3.73</td>
<td>1.134</td>
</tr>
<tr>
<td>Q18_Instructor praised my work, actions, or comments</td>
<td>4.29</td>
<td>.900</td>
</tr>
<tr>
<td>Q19_Felt comfortable interacting with instructor</td>
<td>4.47</td>
<td>.792</td>
</tr>
<tr>
<td>Q20_Instructor creates attitude of sharing</td>
<td>4.34</td>
<td>.813</td>
</tr>
<tr>
<td>Q21_I feel connected to the instructor</td>
<td>3.66</td>
<td>.957</td>
</tr>
<tr>
<td>Q22_Instructor uses monotone/dull voice</td>
<td>2.20</td>
<td>.948</td>
</tr>
<tr>
<td>Q23_Instructor is approachable</td>
<td>4.48</td>
<td>.680</td>
</tr>
<tr>
<td>Q24_Comfortable contacting instructor</td>
<td>4.51</td>
<td>.733</td>
</tr>
<tr>
<td>Q25_I like my instructor</td>
<td>4.40</td>
<td>.716</td>
</tr>
<tr>
<td>Q26_When contacted, I heard back in a reasonable period of time</td>
<td>4.28</td>
<td>.872</td>
</tr>
</tbody>
</table>

Qualitatively, student interviews and narrative responses to student survey question 39 revealed interesting reflections on perceptions of their instructor’s level of immediacy. These often supported sensing the instructor being likable and approachable, which are signs of immediacy. A student in Jerry’s undergraduate course mentioned: "Just seeing him being nice with his animals… he seemed caring and empathetic. It made him more approachable over email when I needed to contact him." Another of Jerry’s students said, “Seeing him in video helped form more of a relationship with him as I got to see his demeanor when I heard and saw him.” These comments suggest that Jerry conveyed himself in a way that led high perceptions of immediacy among his students while he shared important information about the course.

Another student in Jerry’s second semester course made the following statement, which further supports this thinking: "The videos alone made him seem more approachable… the way he would go over assignments. He always responded quickly, I worked ahead on assignments, and he would not wait to respond." This statement also emphasizes another pattern that emerged
in reviewing this data. An initial perception of immediacy could be created with the video content, which made students feel more comfortable in making contact, but the speed and quality of email responses were also very important in maintaining this sense of relationship. Related to this, in open-ended narrative survey question 39, which asked, “What else would you like to say about this instructor,” nine students stated they were pleased with response times for replies to questions and feedback on work, and three students indicated being displeased with the speed in which their work was graded. Those who indicated being displeased with grading speed were enrolled in a course where the instructor had a low model adherence score. Praising of student work is an immediacy behavior (Gorham, 1988) and nine students stated that they found their instructor’s comments in feedback on their work to be helpful, thoughtful, kind, and appreciated. Eleven students stated they felt their instructors were approachable and they felt comfortable contacting them.

During an interview, one of Rico’s students said the following of his videos: "He was nice and made a few jokes. He did not seem scary, and this made me more comfortable approaching him for help. This was especially helpful as things can come across differently in email. He used expressions, like body language. He did not seem uptight. He wasn’t like straight-faced. I could tell he was nice.” This statement strongly suggests that Rico’s use of immediacy perception boosting behaviors were impactful in a positive way and helped strengthen students’ perceived level of immediacy. Another of Rico’s students emphasized the feeling of the videos helping set the tone for email messages by saying that “I got to see him, and it helped me form an impression. In email, I could not really tell his expressions and how he was. In the video, I could tell he was not uptight.”
Conversely, during an interview, one of Jerry’s first semester students said: "I was not really able to get a personality sense throughout this course other than perhaps the introduction video." Further exploration revealed the student had not seen eight additional module introduction videos in the course due to them being in a place may not have been obvious to all students. The student offered that had he seen more videos it was very possible a better sense of the instructor’s personality would have emerged. This student had also rated the instructor lower on some immediacy questions than others in the same group. Based on this feedback, the video link locations were corrected in the following semester.

Based on the quantitative and qualitative data collected, students showed having a moderately-high level of perceived instructor immediacy in their asynchronous media/video-enhanced online courses. A recurring pattern presented itself where students indicated having a relationship with their instructors that began with seeing them in videos in ways that boosted perceived immediacy and continued from being monolog format into more of a dialog as email interactions arose. The transition from one-way to two-way communication was capable of sustaining and further promoting instructor immediacy through expedience of responses and quality of informal discourse.

**RQ5: How did instructor’s selection/use of asynchronous media influence perceived instructor immediacy?**

Initially, two one-way ANOVAs were conducted to examine if students’ perceptions of their instructor’s immediacy differed based on their instructor’s model adherence score and the courses in which they were enrolled as both are relate to the instructors’ use of asynchronous media. A Levene statistic indicated that the assumption of homogeneity of variances was not violated and as such, ANOVA was appropriate. Pertaining to the three-point model adherence
scale, as Rico and Jerry both scored “3” being high, and Jessica scored “1” being low, there were no entries scoring “2” which excluded medium adherence being shown in the results. The analysis showed that although students had a higher level of perceived instructor immediacy (M = 66.91 and SD= 8.517) when their instructor had high adherence to the DISCOVER model than when the instructor had a low model adherence score (M= 65.46 and SD= 9.240), the difference was not statistically significant with (F(1,132)=0.584, p=0.446).

The second one-way ANOVA performed analyzed the courses in which students were enrolled and their levels of perceived instructor immediacy. A Levene statistic test indicated that the assumption of homogeneity was violated, and as such, ANOVA was found not to be appropriate. A Welch test was next used and was found to be statistically significant as shown in Table 9.

Table 9

<table>
<thead>
<tr>
<th>Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welch</td>
<td>7.200</td>
<td>3</td>
<td>66.135</td>
</tr>
</tbody>
</table>

a. Asymptotically F distributed.

A post hoc test was next performed using Games-Howell to further delineate this significance.

Table 10 shows the results in which Jerry’s graduate-level course had a greater mean difference than all other courses being studied.
### Table 10

**Multiple Comparisons**  
**Dependent Variable: Instructor Immediacy Scale**  
**Games-Howell**

<table>
<thead>
<tr>
<th>(I) Course Enrolled</th>
<th>(J) Course Enrolled</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rico Undergrad</td>
<td>Jerry Undergrad</td>
<td>1.286</td>
<td>2.136</td>
<td>.931</td>
<td>-4.36</td>
<td>6.93</td>
</tr>
<tr>
<td></td>
<td>Jerry Graduate</td>
<td>-5.625*</td>
<td>1.501</td>
<td>.002</td>
<td>-9.57</td>
<td>-1.68</td>
</tr>
<tr>
<td></td>
<td>Jessica Graduate</td>
<td>.236</td>
<td>2.151</td>
<td>1.000</td>
<td>-5.50</td>
<td>5.97</td>
</tr>
<tr>
<td>Jerry Undergrad</td>
<td>Rico Undergrad</td>
<td>-1.286</td>
<td>2.136</td>
<td>.931</td>
<td>-6.93</td>
<td>4.36</td>
</tr>
<tr>
<td></td>
<td>Jerry Graduate</td>
<td>-6.911*</td>
<td>2.032</td>
<td>.007</td>
<td>-12.31</td>
<td>-1.51</td>
</tr>
<tr>
<td></td>
<td>Jessica Graduate</td>
<td>-1.050</td>
<td>2.550</td>
<td>.976</td>
<td>-7.80</td>
<td>5.70</td>
</tr>
<tr>
<td>Jerry Graduate</td>
<td>Rico Undergrad</td>
<td>5.625*</td>
<td>1.501</td>
<td>.002</td>
<td>1.68</td>
<td>9.57</td>
</tr>
<tr>
<td></td>
<td>Jerry Undergrad</td>
<td>6.911*</td>
<td>2.032</td>
<td>.007</td>
<td>1.51</td>
<td>12.31</td>
</tr>
<tr>
<td></td>
<td>Jessica Graduate</td>
<td>5.861*</td>
<td>2.048</td>
<td>.033</td>
<td>.36</td>
<td>11.36</td>
</tr>
<tr>
<td>Jessica Graduate</td>
<td>Rico Undergrad</td>
<td>-2.236</td>
<td>2.151</td>
<td>1.000</td>
<td>-5.97</td>
<td>5.50</td>
</tr>
<tr>
<td></td>
<td>Jerry Undergrad</td>
<td>1.050</td>
<td>2.550</td>
<td>.976</td>
<td>-5.70</td>
<td>7.80</td>
</tr>
<tr>
<td></td>
<td>Jerry Graduate</td>
<td>-5.861*</td>
<td>2.048</td>
<td>.033</td>
<td>-11.36</td>
<td>-.36</td>
</tr>
</tbody>
</table>

* The mean difference is significant at the 0.05 level.

Given the observed differences between the Jerry’s graduate course and student perceptions of instructor immediacy across the other courses, a two-way ANOVA was next conducted. This examined potential interaction between graduate and undergraduate level courses and instructor model adherence on students’ perception of instructor immediacy. A Leven’s Test of equality of error variances produced of significance of 0.029 which indicated violation of assumption. Due to this, the two-way ANOVA results were not interpretable.

Considering this, Robust Standard Errors were calculated using the HC3 method. The results indicated that while there was not interaction between model adherence and degree levels, both variables were again observed to be significant predictors of student perception of instructor immediacy. Specifically, students had a statistically higher level of instructor immediacy (M=66.91, SD= 8.52) when their instructor had high adherence to the DISCOVER model over when the instructor had low adherence to the model (M=65.46, SD=9.24) (p=0.006, partial
$n^2=0.056$). Also, graduate students had a statistically higher level of perceived instructor immediacy ($M=68.66$, $SD=7.79$) than undergraduate students ($M=65.08$, $SD=8.98$) ($p<0.001$, partial $n^2=0.129$.

In terms of qualitative data, student interviews and narrative responses to student survey number 39 showed a pattern of high perception of immediacy behaviors. One of Jessica’s students said: "When she posted videos, she always said at the end if there were any questions to email her. This made her seem approachable.” This act boosted the student’s perception of her immediacy as inviting students to make contact is a known immediacy behavior (Gorham, 1988). One of Rico’s students said “It is nice to see his personality. He shares some jokes sometimes. Seeing him smile showed that he was into the class and wanted to help us too. He seemed very personable and like he wanted to help.” The use of humor and smiling are both immediacy perception boosting behaviors as well (Gorham, 1988). Another of Rico’s students said “He was nice and made a few jokes. He did not seem scary, and this made me more comfortable approaching him for help. This was especially helpful as things can come across differently in email. He used expressions, like body language.” Making oneself approachable and using non-verbal cues are also immediacy boosting behaviors (Gorham, 1988). Jerry’s students indicated perceiving him as being caring and welcoming. One example of this is in this comment:

    The professor chat for each module made it more comfortable to ask questions and showed the professor actually cared.
Another student had this to say:

Although I have only known Dr. (Jerry) for eight weeks, his instructor recap and introduction videos have made me feel more welcome in this class as well as helped with keeping me going even when it may feel overwhelming.

In Jerry’s summative interviews, he stated that in both semesters, emails received from students were more conversive, less standoffish, and even more small talk was made than in prior course runs. He felt that this was due to students perceiving him as having a higher level of immediacy from his use of videos in the course.

The collected data show evidence of near-high to high student perceptions of instructor immediacy using asynchronous media. Students mentioned seeing immediacy bolstering behaviors in course videos and perceiving their instructors positively.

**RQ6: How did instructor’s selection/use of asynchronous media influence students’ learning?**

Data sources for answering this research question include student interviews, student survey narrative responses, and instructor interviews. Numerous students made narrative survey comments indicating that the added level of detail and explanation videos provided to assignment descriptions helped them better understand what was expected as they worked through the course materials which lead them to achieve better results on assessments. One student said: “I have enjoyed the format of this course and learned a lot. The videos explaining assignments have proven to be extremely useful.” Another student said that “there is only so much that can be put into words in an assignment and having the person who created and is grading it further explain it in a video helped me better accomplish what was needed.”
Additionally, two students referenced their performance in the courses and their desire to succeed being directly impacted to the use of instructor-generated videos in the course. The first student referenced social presence and immediacy perceptions of the instructor by saying:

It was conversational and not just him talking. I was smiling watching some of the videos. Some classes feel like a robot is teaching them. He made me want to try harder.

The second student had this to say:

Honestly one of the best online courses I have taken. I can get a sense of what the expectation are from the videos. I always seem to perform better with video lectures and feedback on my work.

Another recurring pattern that emerged in seeking to answer this question was students indicating a feeling of not being afraid to ask for help via email due to finding their instructor to be approachable based on the impressions they made in the videos. They felt that being comfortable in asking for help when they needed it directly influenced their learning in getting clarification in challenging areas. Students also mentioned having a sense that they would hear back quickly due to a perception of their instructor caring about their success in the course. One student had the following to say about this:

The best thing about it was being able to get familiar with who he was as a person so that I was more likely to reach out. It kind of calmed the initial introduction of asking a question by email. It was not so business-like. It was not like I needed to speak all professionally, it was more like talking to a buddy.

Similarly, another student said:

I like hearing personal things about my teachers. Things other than just course stuff. Helps you get to know them. This helps me do better in the course as I feel like I am able
to talk to them if I get confused. If I do not do well on something, I can reach out and talk about it. I do better in courses where I feel like I know the professor.

Another student cited the length of the videos being a factor in their learning:

They weren’t long videos. Usually, if videos are long, I skip a couple seconds at a time. These were maybe only a minute long and easy to watch. I got more out of it because it was shorter, and it was able to keep my attention on him and it was easy to follow.

Instructors indicated that the use of video was another venue to help students keep on track in the course and accomplish what was required to succeed, thus helping in their learning. These also highlighted things students needed to spend more time on and offered guidance on how to avoid pitfalls and roadblocks others historically encountered in their learning and performance. One instructor mentioned reflecting on prior iterations of the course so that questions previously raised could be discussed and addressed in new videos. The instructor indicated seeing fewer recurring questions by email, and that the ones received often delved more deeply into the given areas suggesting the students had learned from watching the videos.

**RQ7: What were instructors’ experiences with using the DISCOVER Model for their teaching?**

The data supporting this research question were qualitative in nature and came from instructor reflections journals in their model template documents and summative one-hour interviews at the conclusion of the semesters in which the model was used. Instructors reported positive experiences in using the DISCOVER model framework and creating their associated media assets for their asynchronous online courses. One routinely mentioned benefit was the use of the Common Tools, Uses, and Media Asset Types document as it exposed instructors to new tools and approaches they reported having not previously considered. The use of a smartphone
for creating selfie videos was an example of this and was very well received by Rico and Jerry and used extensively.

Rico used a tripod for his smartphone and created post-it notes with key talking points that he positioned by the right side of the phone to avoid giving the perception of looking away. He made the videos in his office and reported being very pleased with the video and audio quality and simplicity of the workflow from shooting to sharing.

Rico observed that in having previously used tools like Zoom, Collaborate Ultra, or Mediasite to record himself, he found there to be an unnatural expectation that the video needed to be perfect. He also stated that it felt natural in recording with the smartphone device that he often has in his hands through the day, and there was very little to set up which made it time efficient to do. He was often able to do his recordings in a single take as his comfort level was high and there was an expectation of this type of recording to be less formal. In his summative interview, he stated that “Students are used to seeing less produced video in talking to friends. This is more like a casual conversation. It lets them put a face and voice to what they need to know about the course.”

When asked if Rico experienced any challenges in working with the DISCOVER model, he said “Not really. Not with the technology or the model. I had quiet space to record, and it is just so simple with so much added value.” In addition to being an instructor, Rico also serves as a technology coordinator for a large academic program, and he indicated the belief that others are not aware of how little is needed in terms of equipment to do this, how easy it is, and this lets online students put a face and voice to what they need to know about a course. He also stated that students are used to seeing informal videos like these when talking to their friends and that this makes the communication more like a casual conversation. He further stated that based on his
experience and feedback that he received, he wants to suggest this approach to all other instructors in his program and shared his thinking with his dean who was receptive to it.

Rico’s media asset creation focused in part on increasing student participation rates in extra credit opportunities and submissions for student evaluations of instruction at the end of the semester. He also wanted to better establish expectations in discussion forums and help students to avoid historic pitfalls. He stated a noticeable increase in student participation of extra credit opportunities, and where evaluation submissions had historically averaged around 50%, he saw 69% this time. He also indicated being certain the video pertaining to discussion forum expectations helped in the quality of what the students had to say. Rico also shared that he liked the fact that the videos he created were short, direct, and to the point. They were roughly two minutes in length, and he felt this helped hold students’ attention and get the important points across to them.

Jerry noted that students seemed to enjoy the introduction videos he did for each of his courses. He used a magnetic mount for his smartphone and positioned it on places such as the side of a tractor in a field or against building structures. He received some comments from students regarding his farm, workshop and tools, and dogs and horses both in email and when he was in public places and students recognized him and approached to say hello. He inferred that the students enjoyed seeing those aspects and making those connections with him due to common areas of interest and his being a real person with a real life. Jerry mentioned that he initially found recording with his desktop computer easier due to having an LED light showing the location of the camera lens while recording and having screen space for notes. As he used his smartphone camera more, he learned where to look at the lens, despite the lack of an LED light, and was able to put paper talking points near it. Due to the ease in using it in different
locations and having a variety of interesting settings, he soon came to prefer using the smartphone for his videos. The exception to this was one in which he needed to present material in Microsoft Excel and share his screen to do so.

Jerry reported that the more he recorded and made himself use items from the Best Practices for Media Asset creation document for both technical aspects and incorporating behaviors for boosting the perceptions of immediacy and social presence, the easier it got. As these behaviors became second nature to him, he was able to relax more and felt this was conveyed to his students. In his revision plan, he intends to go back and recreate some of the ones he felt to be less natural.

Jerry was asked if he experienced any challenges with the DISCOVER model and process both in formative temperature check meetings and during his summative interview. He shared two of these during temperature check meetings that were able to be addressed by him and the researcher. The first was him stating a common challenge in not liking the sound of his own voice on recordings. This made him a little reluctant to record himself and a little ill at ease. The researcher shared with him what was covered in a document (Silverman, 2010) that explained the way in which others hear us speak is the same way that microphones do. It lacks the internal bone and tissue structure that causes us to hear lower frequencies when we speak.

The researcher asked Jerry to cover his ears and talk to experience that most of what he heard was lower midrange and bass frequencies. The researcher shared that is the part other people and microphones do not hear. They only hear the vibrations in the air coming from vocal cords. The researcher further stated everyone that has every heard Jerry speak has heard him essentially the same way as he hears himself on the recording. He joked that no one has every screamed and run when he spoke and said that he has a perfectly fine sounding voice. Jerry later
reported that this exchange got him past being self-conscious about how he sounded on recordings. The second issue Jerry raised was problems in video and audio losing synchronization once uploaded to Mediasite. As previously stated, the researcher was able to duplicate the problem, consulted with others, and Jerry elected to use YouTube instead. This solved the issue and provided an easier workflow for each time he went to upload recordings.

Any challenge Jerry commented on was a challenge the researcher uncovered with his first semester course that was corrected for the second semester. This was the positioning of the weekly module video introductions. As previously mentioned, it was determined they were placed as a group too far down the page and some students had not known to scroll down and see them. In the second semester, Jerry positioned the videos in line with the course modules and he reported seeing higher percentages of views on the videos.

When asked if he felt the videos help in his students’ learning and in connecting to him, he said “It allowed them to have another venue of information. I reminded them of due dates, what to study for exams, etc. Another outlet to share coming things. It made it easier for students to relate to me, which was the whole point of this. When they wrote emails, they were less formal this semester. A student said to me that this one of the best online classes and it was more interactive with the videos, and it was interactive without actually being interactive.” He went on to say “After grading the injury data projects, I can tell a noticeable difference between this course and last year’s course. The reports are far more in-depth, detailed, and they present the data much better. I believe this is mostly due to the video that introduced the project.”

Jerry stated that for some time he has felt there to be a need to make their program more humanized for their online students and use of the DISCOVER model and creation of the related
media assets was clearly helpful toward achieving this goal. He plans to continue using these approaches moving forward.

Jessica found challenges in complexity of workflow in recording on her smart phone and getting the files into cloud space for sharing. She came to prefer using her desktop computer for her videos. She chose to use the Zoom conferencing environment to record using virtual backgrounds. She worked on some aspects of the Best Practices for Media Asset Creation, such as making eye contact with the camera. This can seem unnatural at first and is certainly different than talking to someone who is there, but it is important for the viewer to sense they are the subject of the speaker’s attention. Another immediacy perception boosting behavior that was reported became easier as it was practiced more. Jessica also noted that during the semester she found challenges in carving out time to create her media assets and, in her revision plans, she will put one-hour blocks on her calendar schedule for making these. Jessica’s reflections on the experience included this statement:

“With the assignment expectations, when I did get questions, I would hear ‘I watched the video and it helped me, but I still have this question.’ This let me know the students were using them.”

She also mentioned liking another aspect of using the videos, which was being able to go back to the videos to point out that she explained things previously when students might not have understood and asked.

When the instructors were asked during their summative interviews about their experiences with the model and how they might suggest improving it, the following responses were given:
Rico: “It is really straight forward. You pretty much have control of it the whole time. Good job outlining (referring to the researcher). I liked going through the phases of needs assessment, planning, doing, evaluating. If more faculty knew how easy it was to participate, I think they would. It was not convoluted or time-consuming.” He went on to say “I have shared with a lot of my colleagues that I was amazed at the ease of use of this process. I have used most of these tools to create things for courses, but I was pleasantly surprised how relaxed and comfortable I was with using my phone. The unspoken rule is that you must use a known tool and produce something high-end. Without going through this process firsthand and trying it, I likely would not have used the cell phone camera, and this ended up being eye-opening for me.” He mentioned that he did one on a Sunday morning and did not shave. He felt he could be himself and that the students related to this well. His conclusion was “As long as you come across as concise, to the point, and giving them expert information, it will resonate with them regardless of location and quality.”

Jerry (First Semester): “For the five tools document, I would mention explicitly using YouTube and the technique of uploading directly from the cell phone. I don’t not have a whole lot to add. It is straight forward and outlined well. Once we went through it, it all made sense.”

Jerry (Second Semester): “I don’t know that I have any. It works! This second session went much easier, having had the first as a practice a practice one. I hate recording myself, and if I can do it with fair amount of easiness, I think anyone can do this. I think it is good! It works well. I was happy to get the feedback that I did from the students. They all seem to enjoy it.”

Jessica: “I like the model. A real-time example where we take one and work through it would be helpful. For someone who would not have an instructional designer explaining it to them and walking them through it, this would be helpful. I would add (in the Best Practices for
Media Asset Creation document) to not mention dates in videos as this gave them a single semester shelf life.” Jessica also stated that, although her participation in this research concluded, she is looking forward to using the model again in her next semester as she now has a good sense of how to use it and she found the process to be fun and worthwhile.

The experiences shared by instructors pertaining to use of the DISCOVER model painted a positive picture of successfully trying new approaches to better address learner needs while further humanizing the courses by allowing their students to get to know them. Some instructors reported there being some learning curves in modeling immediacy and social presence perception boosting behaviors and becoming comfortable in recording themselves. Once they got used to these things, it became more second nature to them and significantly easier.
Discussion

This study used the following research questions:

1. How did instructors adapt the DISCOVER Model in their teaching?
2. How did students in asynchronous media/video-enhanced online courses perceive their instructor’s level of social presence?
3. How did instructor’s selection/use of asynchronous media influence perceived instructor social presence?
4. How did students in asynchronous media/video-enhanced online courses perceive their instructor’s level of immediacy?
5. How did instructor’s selection/use of asynchronous media influence perceived instructor immediacy?
6. How did instructor’s selection/use of asynchronous media influence students’ learning?
7. What were instructors’ experiences with using the DISCOVER model for their teaching?

The following data were collected to answer these research questions:

- Discourse from periodic meetings with instructors
- Instructors’ reflection journals
- Instructor interviews
- Student survey results
- Student interviews

The results from this study used an explanatory sequential approach with quantitative data supported by qualitative data. Instructors adapted the model to their own unique teaching
circumstances and learner needs by creating videos to introduce courses and topics, add detail to clarify challenging areas, and provide updates on course milestones. Students perceived their instructors as having near-high levels of immediacy and social presence due to instructors’ use of media assets. Student learning was shown to be enhanced through reduced reluctance to ask for assistance, additional detail provided on major assignments, and, in some cases, students reporting trying harder in courses to please the instructors. Instructors reported positive experiences in using The DISCOVER model to become exposed to new tools and techniques to help their students come to know them, their courses, and how to succeed in them.

Use of the DISCOVER model was at the core of the experience for both instructors and students. Instructors often loosely consider planning to do something someday to improve problem areas in a course, but competing time demands and lack of a complete plan can prevent these things from coming to be. Use of the model templates guided instructors through the process and carved out a period for them in which they considered areas to improve their courses and articulated them into actionable plans. It allowed them to explore tools and techniques they might not have considered. It made them aware of best practices for creating optimal productions in which the technology itself could be more transparent due to optimal conditions. This allowed the messages to be conveyed optimally. Further, the best practices gave insights into behaviors known to boost instructor immediacy (Garrison, Cleveland-Innes, & Fung, 2004; Gorham, 1988; Pollard, Minor, & Swanson, 2014; Swan & Shih, 2005) and social presence perceptions (Kim, 2011; Pollard, Minor, and Swanson, 2014; Swan et. al., 2008; Swan and Shih, 2005) in students. Collectively, these aspects allowed media assets that otherwise might not have been created at all to serve the purpose of addressing learner needs while also affording them opportunity to connect with instructors on an interpersonal level.
The flow of the research began with a one-hour meeting individually with instructors to introduce the model, have them identify needs for which they wanted to create media assets, and begin filling out DISCOVER model document templates (Appendix C) for each media asset type they specified. In this process, they referred to the Common Tools, Uses, and Media Asset Types document (Table 1) and the Best Practices for Media Asset Creation document (Table 2) to make informed choices in picking formats, technologies, and gaining awareness of desirable recording conditions and behaviors to bolster student perceptions of instructor immediacy and social presence in the recordings. The instructors each had three, 30-minute temperature check meetings during the semester and as they completed that phases and steps of the model. These meetings were provided to check progress, answer questions, exchange ideas, and collect any formative feedback. At the conclusion of the semesters in which each of the four courses ran, survey responses were collected from students, instructors participated in one hour interview sessions (Appendix H) and a set six of students were individually interviewed (Appendix G) regarding their experiences in the classes. This collected pool of data provided rich qualitative and quantitative aspects that were used to answer the seven research questions. In doing so, several particularly interesting findings emerged.

The first such finding was in seeing a statistically significant relationship between the course in which students were enrolled and their perceptions of instructor social presence. Jerry taught an undergraduate and a graduate course and his graduate course had a higher perception of his social presence. Further analysis showed a higher level of perceived instructor social presence when the instructor’s model adherence score was high. Additionally, graduate students had higher perceptions of social presence over undergraduate students.
Similarly, a statistically significant relationship between instructor model adherence scores and student perceptions of instructor immediacy was found to exist. High model adherence scores were related to high perceptions of instructor immediacy. Conversely, low model adherence scores showed relationship to lower perceptions of instructor immediacy. This too was particularly evident among graduate students.

Jerry had high model adherence scores for both his undergraduate and graduate courses. Interview responses and reflections journal entries showed that he was more comfortable and had better tuned his approaches for making videos in his second semester of model use which was for his graduate class, over the initial semester which was for his undergraduate class. He felt that the more he did this, the more comfortable he was, and the more this conveyed to his students. This could explain some of the difference in the higher social presence perceptions in his graduate class over his undergraduate class. As revealed in the literature review (Bozkaya, 2007), the constructs of immediacy and social presence are related in the perception of immediacy boost perception of social presence. In seeming more relaxed, it stands to reason that he might be perceived as being more likable and approachable. This could reduce the perception of psychological distance instructor and student and in students forming connections to the instructor, which are social presence constructs.

Rico had a high model adherence score, and his videos were highly targeted in purpose and scope. There were fewer of these than what had been used in Jerry’s class. Rico’s students indicated his use of immediacy behaviors such as smiling and using humor helped them see him as being a real person to whom they felt connected. These contributed to his social presence perception for his students. Rico’s mean score on the instructor social presence scale is 26.67. This is higher than Jessica’s mean score of 26.54. Jessica had a low model adherence score but
also had a different level of student population than Rico. Jessica created several videos and some students reported these being released later than the modules were made available and that they received assignment feedback and grades later then they would have liked. As previously stated, students indicated there being a relationship between not only how they perceive their instructors in the videos, but in the timeliness of responses from them pertaining to their needs and work. The factors may have made the videos and feedback less useful to the students, and as such created a sense of distance between them and their instructor which may have reduced perceived social presence.

A somewhat unexpected result was how well received one tool in the Common Tools, Uses, and Media Asset Types document was. Specifically, the smartphone camera. Rico and Jerry initially indicated never having thought of using it for the purposes of their courses. They wound up using them extensively and were very pleased with the experience and the results. They mentioned liking the ease of access, simplicity of use, and being able to upload directly to the cloud. In the document that lists this tool, the researcher describes its potential immediacy perception relations as being useful in convey personality and making oneself approachable. Based on the data collected from instructors and students, the researcher came to believe that the medium itself might boost immediacy perceptions in that it can be so informal and a common way for people to interact with friends. In terms of social presence, it can also convey a piece of real life.

**Toward an Improved Model**

In seeking to find ways to revise and improve the DISCOVER model, instructors were asked what they thought about the existing version and what would make it better. All three instructors stated they liked the existing model framework and found it to be very useful in its
existing form. Their suggestions for improvement were more in the companion materials than the phases and steps of the model itself. Jessica shared: “A real-time example where we take one and work through it would be helpful. This would be for someone who would not have an ID explaining it to them and walking them through it. From conception to showing a media asset that is created.” She also shared that she was not going to not mention dates in future videos as this gave them a single semester shelf life. Based on this valuable feedback, a video lesson that takes instructors through the process, in a way, similar to the initial orientation session that was conducted with participants. This example can take the form of designing an intervention that would have broad appeal and relatability to numerous subject areas with walking through the completion of the first phase of the model and references to the Offer and Verify stages of the second phase as they can be planned in advance. A second video could then go through the second phase of the model with this example. These videos would allow the model and related materials to become more readily available to others and can become completely asynchronous and autonomous. This could also help with model adherence in making the process and related materials clearer.

Rico and Jerry stated that they both found it necessary to use something like a tripod or magnetic mount to hold the position of their smartphones while recording selfie videos. In Rico’s case, this was done to elevate and stabilize the unit which freed his hands and showed his head and upper torso. In Jerry’s case, a magnetic mount was used to position the camera on things such as a tractor at his farm while shooting videos in the fields with his horses and other animals. This suggests the addition of a statements in the considerations section of the Common Tools, Uses, and Media Asset Types document (Table 1) for Smartphone Camera and the Camera
Placement and Angle section of the Best Practices for Media Asset Creation document (Table 2) to further improve the model.

Rico also made an important observation regarding the use of smartphone cameras. Unlike desktop and notebook computers that have built-in cameras and often have LED lights showing the camera is on and the location of the camera, smartphones generally do not. This can make it challenging to know where to maintain eye contact in wanting to give the viewer the impression of being looked at in the eyes. This is more noticeable when the smartphone camera is up close, and Rico needed to familiarize himself with the location of the tiny camera to optimize this. This suggests the addition of wording in the Maintain Eye Contact section of the Best Practices for Media Asset Creation document and the Considerations section for Smartphone Camera in the Common Tools, Uses, and Media Asset Types document to reflect this in the revised model.

Jessica and Jerry both mentioned having learned that in attempting to help students keep on track, they put references to specific dates in their videos and this wound up giving them a short shelf life. To improve the model’s ability to accelerate the learning curve of others in terms of best practices, an item called Shelf Life will be added to the Considerations While Recording section of the Best Practices for Media Asset Creation document.

As previously referenced in the literature review, the constructs of instructor immediacy and social presence are related (Schutt, Allen, & Laumakis, 2009). The present study showed that instructors who used immediacy perception-boosting behaviors while creating media assets to address learner needs had near-high perceived instructor immediacy reported by their students. As use of immediacy behaviors can boost social presence perception, the results also showed near-high perceptions of social presence as well.
Research Limitations

A limitation of this study was the inability to test the model in a wide variety of course topics. Another limitation is the small number of instructors in the study and that they were all from the same institution. Some suggestions for improvement to the existing model have been incorporated and may aid in an improved experience for a new user of the DISCOVER model. In moving forward and seeking to publish this research, the improved version can then be offered for use in a wide variety of other courses with different instructors and student populations.

Implications

The development and refinement of the DISCOVER Model is done in the hopes that it will aid higher-education instructors in efforts to effectively teach online asynchronous courses. While there are existing models for instructional design, this one is unique in being specifically designed to guide instructors through the selection and use of tools and techniques to enhance student perceptions of instructor immediacy and instructor social presence in media asset creation. In current times of expanded online teaching due to a pandemic, this is more important than ever in seeking to provide meaningful experiences.

Specifcally, the model is designed to enhance student learning in giving instructors a framework to follow for making informed choices in the creation of needed instructional interventions and creating deeper connections with their students by helping them be seen as real people with personalities to whom students might bond and become be less fearful. Behaviors that boost perceptions of immediacy and social presence can be used while working to achieve specific goals in media asset creation. This can help give a better-defined sense of who is on the other end of the connection in the online course and enhance the sense of a two-way relationship between instructor and student. Having a positive perception of their instructor is important for
students feeling comfortable in reaching out for help and potentially working harder in seeking to please them.

With the findings indicating the effectiveness of the model and suggestions to improve it, the current study helps contribute to the understanding of how to support instructors’ social presence and immediacy in online settings.

Conclusion

This study sought to offer, test, and improve a new model designed to bring the benefits of established instructional design practices to those who may not have access to instructional design professionals. It is situated for use in online asynchronous courses that may benefit from media asset creation in the forms of video or podcast. The DISCOVER model was designed to aid in the creation of instructional interventions to answer learner needs while also using techniques to bolster student perceptions of instructor immediacy and social presence. “DISCOVER” is both an acronym and mnemonic device. The word depicts a positive connotation while using the first letter of each step of the process. Through the steps included in the two phases of the model, instructors Define what is to be learned, Identify the appropriate medium to be used, Select an available tool, Create the asset, Offer it to learners, Verify its efficacy, Evaluation opportunities for improvement, and seek to Revise the media asset as needed.

The study took place at a university and involved three instructors and four courses. Two courses were undergraduate level and two were graduate level. Data collected consisted of 136 student responses to an online survey about their experiences, six student interviews, discourse documentation from periodic meetings with instructors, and summative instructor interviews that occurred at the conclusion of the semesters.
Qualitative and quantitative data analysis revealed that instructors who exhibited a high level of model adherence in the creation of their media assets had students who indicated high levels of perceived instructor immediacy and social presence. The data also supported prior research indicating a relationship between use of immediacy bolstering behaviors and perception of social presence (Bozkaya, 2007).
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Appendix A: Cover Letter for Instructor Participation

West Virginia University  
OFFICE OF HUMAN RESEARCH PROTECTION

Cover Letter  
Minimal Risk

Dear Participant,
This letter is a request for you to take part in a research project that explores student perceptions instructor immediacy, and instructor social presence in online courses.

This project is being conducted by Lee Silverman in the Department of Learning Sciences and Human Development at WVU under the supervision of Dr. Ugur Kale, a faculty member in the department of Counseling and Learning Sciences, to fulfill requirements for a doctoral degree in Instructional Design and Technology.

If you decide to participate, you will be asked to take part in an initial meeting during which you will be shown a model framework to use while evaluating a course that you teach for potential areas that may benefit from the creation of media assets. The goals of the media assets can be to help your students get to know you, better understand aspects of the course, and to convey a sense of you being approachable should they need assistance. Tools that are available to you can be used to create videos, podcasts, or whatever might be used to best convey what needs to be shared with students while helping to humanize your online course. The initial meeting will approximately be no more than 90 minutes, and the goal is for you to walk away having strong ideas on what you will create for your course. It is suggested that you have a copy of course syllabus handy for this and you consider in advance what common areas are that students tend to find challenges that additional resources may help.

Once you have decided on what media assets you wish to create, the next task will be to create these and integrate them into your course. You will be asked to keep a journal of your reflections during the semester and also to note any relevant experiences or feedback you may receive from students pertaining to these assets. You will also have three short online meetings with me throughout the semester to see how things are going with the model.

In the latter part of the semester the course is being run, you will be asked to share an online survey link with your students and encourage them to participate. This survey collects their impressions of your use of the media assets, if the students found that they came to know you as being a real person, and if they found you to be approachable. They will also be invited to opt in to being considered for 30-minute online interviews where they can be asked more about their impressions of these areas.

After the semester has concluded, you will be asked to participate in an interview where you can share your reflections on this process and suggestions you may have for improving it. It is anticipated that this interview will take approximately one hour. Your interview will be recorded using a computer.

Your involvement in this project will be kept as confidential as legally possible. All data will be reported in the aggregate. Your participation is completely voluntary, and you can withdraw from the study any time. West Virginia University's Institutional Review Board acknowledgement of this project is on file.

If you have any questions about this research project, please feel free to contact me at 304-291-3450 or by email at: lee.silverman@mail.wvu.edu. If you have any additional questions about your rights as a research participant, please contact Dr. Ugur Kale, Associate Professor and Principal Investigator for this study at 304-293-2060 or by email at: ugur.kale@mail.wvu.edu

I hope that you will participate in this research project, as it could help us further improve student experiences with online courses. Thank you for your time and consideration!

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Appendix B: Instructor Initial Meeting Outline for Phase One of the DISCOVER Model

Advance Communication Components

These items are sent to participating instructors by email to help prepare for the initial meeting.

Please do the following to prepare for our initial meeting:

1. Let me know your availability for a one-hour Zoom meeting.
2. Send a copy of your most recent course syllabus to me at least a couple days before our scheduled meeting.
3. Review your course syllabus to have it fresh in mind and consider areas of the course in which students tend to have challenges and might benefit from creation of a media asset to address them.
4. Consider the ways your students come to know you as being a real person and things you have done to make yourself approachable to them when needing assistance or simply to bond with them and be prepared to discuss this.
5. Provide me with your Gmail address so that I can share a collaborative space with you.

Initial Meeting Guiding Directions and Questions

In advance of session, shared Google Doc template is made available to instructors for filling in DISCOVER Model Template Phase 1 aspects during meeting and later further completed for Phase 2 aspects.

Welcome Message

“Thank you for meeting with me today and agreeing to participate in this research. As a reminder, this meeting is being recorded for the purposes of my research and the recording will
not be shared with others. It will be used to help ensure an accurate record of our conversation and to potentially help in identifying aspects to improve this process.

During this meeting, that is to last approximately one hour, we will discuss your course and explore areas in which it might make sense to create media assets for your students to help them come to know you as being an approachable, real person while also helping them succeed in your course. We will discuss areas in which students historically have found challenges in understanding, how your online students have previously come to know you, and what types of things might be created to make the best use of appropriate medium, available tools, and technology in seeking to address student needs.

In addition to wanting to enhance student understanding in areas that have historically been challenging, we want to employ best practices in doing so for enhancing your “immediacy” and “social presence.” Instructor immediacy can be defined as student perception of psychological distance between them in their instructor. Use of verbal and nonverbal cues and best practices can help enhance this perception. Instructor social presence can be defined as student perception of the instructor being a real person and having an active role in their community of inquiry. Historically, some completely online courses that do not employ the use of digital media assets, like videos, can be lacking in ways to help students connect to their instructors with respect to immediacy and social presence.

During this meeting, we will use the first phase of the DISCOVER model and apply to it the identified areas of student need in your course. DISCOVER is an acronym for Define, Identify, Select, Create, Offer, Verify, Evaluate, and Revise. The first phase of this model focuses on defining what is to be shared with learners, identifying an appropriate medium to communicate this information, selecting an available and appropriate tool to use within the
medium, and creating the media asset while using best practices for increasing perceived instructor immediacy and instructor social presence. We will also touch on the second phase of the model as it addresses offering the media assets to your learners and then looking at efficacy and opportunities for improvement.

Do you have any questions on any this and are you comfortable in continuing?”

Guiding Questions

1. Please confirm the name of this course, when it is being offered, and that it is taught 100% online.

2. How many times have you taught this course 100% online?

3. Tell me about the things you have historically done in this course to help your students come to know you as being approachable and a real person. Text welcome message with mix of personal and professional info. Embedded video welcome messages with expectations. First couple of weeks. Mediasite, YouTube, Harmonize discussion platform. Audio feedback embedded into LMS. Recording tool in BB. Audacity.

4. Have you considered creating a welcome video to be placed at the beginning of the course where you introduce yourself, establish your credibility in the field, explain why the course is significant, and help the students come to know you?

5. Have you considered creating “just-in-time” videos that are potentially less formal and might talk about what is to be done each week in the course or address areas that have come up in questions during the week?

6. In looking through the course syllabus, what areas come to mind as potentially benefiting from creating a media asset to enhance understanding?
7. Let’s now look at this list of potential areas we identified and apply phase 1 of the DISCOVER model to them. Using our shared Google Doc template, let’s fill in for the first three parts of the process for each of these identified areas. We can also fill in some initial ideas for planning of the fourth, fifth, and sixth parts.
   a. Define what is to be shared with the learners
   b. Identify an appropriate medium
   c. Select an available tool within the medium
   d. Create the media asset (planning)
   e. Offer the asset to learners (planning)
   f. Verify efficacy by soliciting feedback (planning)

8. Do you feel you will have adequate time to create the media assets you have identified for this course?

9. Do you have questions or concerns at this point, or do you feel comfortable in moving forward?

Description of Process Moving Forward

Now that you have identified the things you would like to create for this run of the course, let’s discuss next steps. I will send you a list of best practices for boosting perceived instructor immediacy and social presence to keep in mind while creating these assets. Please let me know if you have any questions on those.

I suggest creating a schedule for when you plan to create each of these and allowing extra time initially if you are not yet familiar with the tools you will be using.

Once you have completed the Create section of the first phase of the model, we will move to the second phase. The second phase consists of Offer, Verify, Evaluate, and Revise.
Some of this phase will be done by you during the semester, and some of it can be done when we meet a second time for me to learn about your experience, see how you feel this process can be improved, and see what you would like to do to seek to improve the media assets you created.

The Offer section simply makes the media asset available for your learners to experience it online. Once they are created and stored somewhere that is accessible to your learners, you may wish to simply place links to them in the online course.

In the Verify step, we seek to measure efficacy of the offered asset in addressing the originally defined learner need. Depending on the purpose and what has been made available, several methods can be used to evaluate. For example, if you created a welcome video for a course where you introduced yourself and told them about your interests, spoke about the importance of the course and what is to be learned, and invited students to contact you with any questions, an end of semester survey might ask if students felt that they came to know you and that you cared about their learning. Another example could be if you created some informal selfie videos on your smartphone that showed your surroundings, gave an overview of what the class will be doing that week, or even talked about an area where students seem to be struggling. In an era of apps like FaceTime, lower production quality is to be expected and it can even seem more personal. Surveying your students to ask if they are finding the videos helpful and what they like and dislike about them may help drive your future efforts.

In the Evaluate step, we look for opportunities to improvement. Factoring in your experience and observations and combining that with feedback collected in the previous step, we envision how this can be made more effective. This is another planning time when we step back and think about what we have done and where we can go from here. Consider revisiting what was stated when you originally defined what was to be shared with learners. Perhaps this
feedback can inform a revised definition to either recreate the asset or provide some guidance for adjusting technique as new ones are created.

The Revise step is where decisions made in the evaluation phase are put in motion. It may mean that you decide to recreate or tweak an asset. It could also mean that you take knowledge gained through feedback and apply it to new assets that you create.
Appendix C: Template Document for Use with DISCOVER Model

Instructor, please use this document as a template for each media asset you wish to create. It is designed to help you walk through each step of this process and make informed decisions in the first and second phases. It is anticipated that this document will be used throughout the development process and will be revisited at appropriate times as needed. Begin by filling out the Phase 1 information and some initial thoughts for the Offer and Verify stages of Phase 2. Return to Phase 2 after learners have experienced the asset and you are ready to reflect on it. You can then use these reflections to inform another interaction of this process.

The last part of this template includes a reflections journal area in which you can write about any reflections you have while working through this process. This will be used to help in understanding how the model worked for you and how it can be improved. Please be sure to enter reflections there any time things come to mind.

Name of Media Asset:
Phase 1

1. Define what is to be shared with learners:

2. Identify and appropriate medium (auditory, visual, etc.):

3. Select appropriate tool within the medium (Refer to document Common Tools, Uses, and Media Asset Types):

4. Create the asset. Indicate anticipated timeline and what tasks will need to be done and in what order to accomplish this and consider what best practices will be employed for boosting perceived instructor immediacy and instructor social presence (refer to document Best Practices for Media Asset Creation.) Keep in mind any possible accessibility concerns for those who may have visual or auditory limitations.
5. Offer the asset to learners. Initially plan where it will be stored that will be accessible online and how they will get to it. Offer it to the learners once it is ready. Where will the asset file be located and how will it be linked in your course or sent to learners?

6. Verify efficacy by soliciting feedback. Initially consider what potential sources are available to you and what is your plan to acquire these. Execute this plan at the appropriate time.
7. Evaluate opportunities for improvement. Factoring in your experience and observations and combining that with feedback collected in the previous step, we envision how this can be made more effective. What did you learn?

8. Revise the media asset as needed. It may mean that you decide to recreate or tweak the asset. It could also mean that you take knowledge gained through feedback and apply it to new assets that you create. Depending on what is decided, you may wish to feed this information into a new iteration of using the model beginning at the first step of Phase 1. What is your plan?

**Reflections Journal:** Please use this space to enter your thoughts and experiences throughout the use of this model.
Appendix D: Email Message for Instructors to Share with Students

Dear Students,

I am writing to ask for your help in sharing your impressions of some things in this course to aid in making it the best it can be for future students.

A colleague named Lee Silverman is conducting research with me and we are inviting you to take an online survey to share your experiences. Your participation is voluntary, will in no way impact your grade, and your responses will be treated in confidence.

In exchange for your participation, you will be entered into a drawing for an Amazon gift card.

You will also be given the opportunity to opt in consideration for a short interview for which you will be compensated with a guaranteed Amazon gift card if you are selected.

Please consider helping us and your fellow students out by spending 10 – 15 minutes taking this survey.

You can access it here: https://wvu.qualtrics.com/jfe/form/SV_6haaju3hi7aJemh

Thanks for your help!
Appendix E: Cover Letter for Student Participation

West Virginia University
OFFICE OF HUMAN RESEARCH PROTECTION

Cover Letter
Minimal Risk

Dear Participant,

This letter is a request for you to take part in a research project that explores student perceptions instructor immediacy and instructor social presence in online courses.

This project is being conducted by Lee Silverman in the Department of Learning Sciences and Human Development at WVU under the supervision of Dr. Ugur Kale, a faculty member in the department of Learning Sciences and Human Development, to fulfill requirements for a doctoral degree in Instructional Design and Technology.

If you decide to participate, you will be asked to complete an online survey which is estimated to take approximately 15 minutes. After completing the survey, you will be given the option to be considered for a 30-minute online interview that will be scheduled at a later date. Your interview will be recorded using a computer. You must be 18 years of age or older to participate and must be enrolled in one of the participating institutions.

Your involvement in this project will be kept as confidential as legally possible. All data will be reported in the aggregate. Your participation is completely voluntary. Your class standing will not be affected if you decide either not to participate or to withdraw. West Virginia University's Institutional Review Board acknowledgement of this project is on file.

If you have any questions about this research project, please feel free to contact me at 304-291-3450 or by email at: lee.silverman@mail.wvu.edu

If you have any additional questions about your rights as a research participant, please contact Dr. Ugur Kale, Associate Professor and Principal Investigator for this study at 304-293-2060 or by email at: ugur.kale@mail.wvu.edu

I hope that you will participate in this research project, as it could help us further improve student experiences with online courses. Thank you for your time and consideration!

Sincerely,

Lee O. Silverman
Appendix F: Student Survey Questions

Qualtrics Link: https://wvu.qualtrics.com/jfe/form/SV_6haaju3hi7aJemh

Directions

Thank you for taking this survey. In exchange for your doing so, you can opt in to being entered into a drawing for $15 Amazon card. This is not required, and you can choose to be anonymous if you wish.

There will also be an opportunity to opt in to being considered for a one-on-one, 30-minute online interview in exchange for a guaranteed $15 Amazon gift card upon successful completion.

This survey will ask you some demographic questions about you, questions about types of media used in the course and how they were used, and questions about your perceptions of the course and your instructor.

<table>
<thead>
<tr>
<th>#</th>
<th>Text</th>
<th>Options</th>
<th>Category</th>
<th>Source</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What is your date of birth?</td>
<td>Drop-downs:</td>
<td>Demographic</td>
<td>Silverman</td>
<td>This approach allows entry for determining exact age and can be flexible for later groupings.</td>
</tr>
<tr>
<td></td>
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<td>- Month</td>
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<td>- Day</td>
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<td></td>
<td>- Year</td>
<td></td>
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<tr>
<td>2</td>
<td>What is your birth gender?</td>
<td>Drop-down:</td>
<td>Demographic</td>
<td>Silverman</td>
<td>“Intersex” was advised to use by Dr. Megan Gandy in WVU Social Work</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Female</td>
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<td>- Male</td>
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<td>- Intersex</td>
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<td>- Other</td>
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<td></td>
<td></td>
<td>- Prefer not to say</td>
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<td>3</td>
<td>What is your race or ethnicity?</td>
<td>Drop-down:</td>
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<td><a href="https://w">https://w</a></td>
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<td>- American Indian or</td>
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<td>Alaska Native</td>
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<td></td>
<td>Where are you from?</td>
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<td></td>
<td>195 countries</td>
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<td>Silverman</td>
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<td></td>
<td>What is your class rank?</td>
<td>Drop-down:</td>
<td>Demographic</td>
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<tr>
<td></td>
<td>Freshman</td>
<td>Sophomore</td>
<td>Silverman</td>
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<td></td>
<td>Junior</td>
<td>Senior</td>
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<td>Master’s Student</td>
<td>Doctoral Student</td>
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<td></td>
<td>Which instructor do you have for this class?</td>
<td>Drop-down:</td>
<td>Demographic</td>
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<td></td>
<td>Sabolsky</td>
<td>Rico</td>
<td>Silverman</td>
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<td></td>
<td>Jessica</td>
<td>Jerry</td>
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<td></td>
<td>Including this class, how many 100% online classes have you taken in your degree/program?</td>
<td>Number slide ranging “1” through “50”</td>
<td>Demographic</td>
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<td>7</td>
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<td></td>
<td>How proficient are you in navigating online courses?</td>
<td>Likert scale: Novice, Below Average, Average, Above Average, Expert</td>
<td>Demographic</td>
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<td>8</td>
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<thead>
<tr>
<th></th>
<th>How long have you known this instructor?</th>
<th>Drop-down:</th>
<th>Social Presence (RQ2, RQ3)</th>
<th>Silverman</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I do not know this instructor</td>
<td>-0-4 Months</td>
<td>-12-24 months</td>
<td>&gt;24 months</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>My instructor invites students to meet with him/her online if they have questions or want to discuss something.</th>
<th>Likert scale.</th>
<th>Immediacy / Verbal (RQ4, RQ5)</th>
<th>Gorham (1988)</th>
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<tbody>
<tr>
<td></td>
<td>1-5. (Higher is stronger agreement)</td>
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<tr>
<th></th>
<th>My instructor uses personal examples or talks about experiences she/he has.</th>
<th>Likert scale.</th>
<th>Immediacy / Verbal (RQ4, RQ5)</th>
<th>Gorham (1988)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1-5. (Higher is stronger agreement)</td>
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<tr>
<th></th>
<th>My instructor uses humor.</th>
<th>Likert scale.</th>
<th>Immediacy / Verbal (RQ4, RQ5)</th>
<th>Gorham (1988)</th>
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<td></td>
<td>1-5. (Higher is stronger agreement)</td>
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<tr>
<th></th>
<th>My instructor uses a variety of vocal expressions while talking.</th>
<th>Likert scale.</th>
<th>Immediacy / Nonverbal (RQ4, RQ5)</th>
<th>Gorham (1988)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>1-5. (Higher is stronger agreement)</td>
<td></td>
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<tr>
<th></th>
<th>My instructor smiles or sounds happy while speaking.</th>
<th>Likert scale.</th>
<th>Immediacy / Nonverbal (RQ4, RQ5)</th>
<th>Gorham (1988)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1-5. (Higher is stronger agreement)</td>
<td></td>
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<td></td>
<td>1-5. (Higher is stronger agreement)</td>
<td></td>
<td></td>
<td>Modified.</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Likert Scale</td>
<td>Scale Type</td>
<td>Source</td>
</tr>
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<td>---</td>
<td>------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>16</td>
<td>I feel isolated in this course.</td>
<td>Likert scale</td>
<td>Immediacy (RQ4, RQ5)</td>
<td>Pollard, Minor, and Swanson (2014)</td>
</tr>
<tr>
<td>18</td>
<td>My instructor praised my work, actions, or comments.</td>
<td>Likert scale</td>
<td></td>
<td>Gorham (1988).</td>
</tr>
<tr>
<td>19</td>
<td>I felt comfortable interacting with the course instructor.</td>
<td>Likert scale</td>
<td></td>
<td>Swan and Shih (2005)</td>
</tr>
<tr>
<td>20</td>
<td>My instructor creates an attitude of sharing.</td>
<td>Likert scale</td>
<td></td>
<td>Pollard, Minor, and Swanson (2014)</td>
</tr>
<tr>
<td>21</td>
<td>I feel connected to the instructor in this course.</td>
<td>Likert scale</td>
<td></td>
<td>Pollard, Minor, and Swanson (2014)</td>
</tr>
<tr>
<td>22</td>
<td>My instructor uses monotone/dull voice while speaking.</td>
<td>Likert scale</td>
<td></td>
<td>Gorham (1988)</td>
</tr>
<tr>
<td>23</td>
<td>I feel my instructor is approachable.</td>
<td>Likert scale</td>
<td></td>
<td>Silverman</td>
</tr>
<tr>
<td>24</td>
<td>I feel comfortable contacting my instructor when I need help.</td>
<td>Likert scale</td>
<td></td>
<td>Silverman</td>
</tr>
<tr>
<td>25</td>
<td>I have come to like my</td>
<td>Likert scale</td>
<td></td>
<td>Silverman</td>
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<tr>
<td>instructor.</td>
<td>1-5. (Higher is stronger agreement)</td>
<td>(RQ4, RQ5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>When I contacted my instructor, I heard back within a reasonable period of time.</td>
<td>Likert scale. 1-5. (Higher is stronger agreement)</td>
<td>Immediacy (RQ4, RQ5)</td>
<td>Silverman</td>
</tr>
<tr>
<td>27</td>
<td>Getting to know the instructor gave me a sense of belonging in the course.</td>
<td>Likert scale. 1-5. (Higher is stronger agreement)</td>
<td>Social Presence (RQ2, RQ3)</td>
<td>Swan et al. 2008. Modified question</td>
</tr>
<tr>
<td>28</td>
<td>Even though we were not physically together in a traditional classroom, I still felt connected to my instructor.</td>
<td>Likert scale. 1-5. (Higher is stronger agreement)</td>
<td>Social Presence (RQ2, RQ3)</td>
<td>Kim (2011) Modified question</td>
</tr>
<tr>
<td>29</td>
<td>I was able to form distinct individual impressions of the instructor in this course.</td>
<td>Likert scale. 1-5. (Higher is stronger agreement)</td>
<td>Social Presence (RQ2, RQ3)</td>
<td>Swan and Shih (2005)</td>
</tr>
<tr>
<td>30</td>
<td>I feel like I know my instructor.</td>
<td>Likert scale. 1-5. (Higher is better)</td>
<td>Social Presence (RQ2, RQ3)</td>
<td>Silverman</td>
</tr>
<tr>
<td>31</td>
<td>My instructor is a “real person” with the students.</td>
<td>Likert scale. 1-5. (Higher is stronger agreement)</td>
<td>Social Presence (RQ2, RQ3)</td>
<td>Pollard, Minor, and Swanson (2014)</td>
</tr>
<tr>
<td>32</td>
<td>My instructor’s use of things like video and podcasts helped me get a sense of who they are.</td>
<td>Likert scale. 1-5. (Higher is stronger agreement)</td>
<td>Social Presence (RQ2, RQ3)</td>
<td>Silverman</td>
</tr>
<tr>
<td>33</td>
<td>I have a sense of what my instructor is like as a person.</td>
<td>Likert scale. 1-5. (Higher is stronger agreement)</td>
<td>Social Presence (RQ2, RQ3)</td>
<td>Silverman</td>
</tr>
<tr>
<td>34</td>
<td>In terms of the videos and podcasts in this course I watched or listened to...</td>
<td>Likert Scale: None of them. A few</td>
<td>Media Assets (RQs 2, 3, 4, 5, 6)</td>
<td>Silverman</td>
</tr>
<tr>
<td></td>
<td>Do you recall having a video introduction to the course?</td>
<td>Drop-down:</td>
<td>Media Assets (RQs 2, 3, 4, 5, 6)</td>
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<tr>
<td>35</td>
<td>Do you recall having a video introduction to the course?</td>
<td>Drop-down:</td>
<td>Media Assets (RQs 2, 3, 4, 5, 6)</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>The video introduction helped me get a sense of who my instructor is.</td>
<td>Drop-down:</td>
<td>Social Presence (RQs 2 &amp; 3)</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>The video introduction helped me to be more comfortable in contacting my instructor.</td>
<td>Drop-down:</td>
<td>Immediacy/Verbal (RQs 4 &amp; 5)</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>Do you recall the course having videos in which the instructor explained concepts or lectured?</td>
<td>Drop-down:</td>
<td>Media Assets (RQ6)</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>What else would you like to say about the instructor in this course?</td>
<td>Narrative</td>
<td>Open-ended</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>Would you like to be entered into the random drawing for a $15 Amazon gift card?</td>
<td>Drop-down:</td>
<td>Demographic</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>Would you like to be considered for a 30-minute online interview in exchange for a guaranteed $15 Amazon Gift Card upon successful completion?</td>
<td>Drop-down:</td>
<td>Demographic</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>Please provide your contact information for possible interview purposes</td>
<td>- Name</td>
<td>Demographic</td>
<td></td>
</tr>
</tbody>
</table>

Appears is #40 or #41= “Yes.”
Appendix G: Student Interview Questions

Process

Students who opted into consideration for a 30-minute interview by indicating this on the student survey will be reviewed and selected for participation based on volume of interest and quality of information provided in their survey responses. It is anticipated that a maximum of six students will be interviewed and that they will be selected from each of the courses being researched if possible. Once selected, students will be contacted by email to confirm their interest and schedule a Zoom meeting.

Email message to students

Dear <name>,

You recently completed an online survey about a course you took with <instructor name>. In this survey, you indicated you would like to be considered for taking part in a 30-minute interview in exchange for an Amazon gift card.

I am excited to inform you that you have been selected for an interview and I am writing to schedule this with you as soon as possible. The interview will take place by Zoom and will consist of me asking you some questions about your experience in the course. Your responses will in no way impact your course standing and your identity will be kept confidential. The information you provide will be combined with what others provide to help improve a model I have created to assist instructors in making decisions on creating things such as videos for their students. I will record this session strictly for my own records and it will not be shown to anyone else.
I will send you an electronic Amazon gift card as soon as we complete the session. For now, I need to know days and times you are available over the next week or two so that I can compare with my schedule. I will quickly reply to you and send you a Zoom meeting invitation.

If you have any questions or challenges, please either let me know by email, or feel free to call me.

Thanks very much for your help with this important project and I look forward to meeting with you!

Lee Silverman

Interview Flow and Questions

“Thank you for meeting with me today and agreeing to participate in this research. As a reminder, this meeting is being recorded for the purposes of my research and the recording will not be shared with others. It will be used to help ensure an accurate record of our conversation and to potentially help in identifying aspects to improve my research.

During this meeting, that is to last approximately 30 minutes, we will discuss your experience in the course as it relates to things your instructor created of themself, such as videos or podcasts, and whether these helped you get a better sense of them than you might have had without them and if these helped in your learning in the course. Please answer the questions honestly and know that your responses will in no way impact your grade and that your identity will be kept anonymous. Do you have any questions about this process and are you OK with our starting?”
Guiding Questions

1. In thinking about the use of things like videos or podcasts in the course, did any of these help you get a sense of who your instructor is as a person, and if so, which? (RQ2, RQ3)

2. Were you able to get a sense of any personality traits that may have made your instructor seem more or less approachable to you, and if so, what were they and how did you get this sense? (RQ4, RQ5)

3. How did any approaches or techniques used in the video or audio content influence your learning? (RQ6)

4. In thinking about this course in comparison to other fully online courses you have taken, do you feel like you got to know your instructor better, the same, or not as well? What aspects led you to form this impression? (RQ2, RQ4)

5. Prior to this course, had you had this instructor before or met with them face to face. If so, did use of video and audio in this course enhance, change, or maintain any impressions you had of them? (RQ2, RQ4)

6. What other things can you tell me about your perceptions of the instructor’s use of audio and video in this course and what you may have found helpful? (RQ6)

7. Is there anything else that you would like to share about all of this?
Appendix H: Summative Instructor Interview Session

After the course has run a second meeting was held with the instructor to assess how things went and examine the use of the second phase of the model. In advance of the meeting the instructor was asked to continue filling out the template document for each asset they created pertaining to the second phase of the model. This was discussed in this meeting.

Questions and Flow for Session

1. Were you able to create and offer all the media assets you originally planned?
2. Were you able to employ any of the suggested best practices for promoting instructor immediacy, instructor social presence, and for optimal recording when creating them? (RQ1, RQ7)
3. Did you experience any challenges during this process? (RQ1)
4. Did you notice any differences in your interactions with students this semester after employing media assets designed to enhance their perception of your immediacy and social presence? (RQ2, RQ3, RQ4, RQ5)
5. How do you feel your creation of the media assets may have influenced the learning of your students? (RQ6, RQ7)
6. Did you receive any feedback from your students in SEIs or through other means that gave you any reflections on having used this approach?

Let’s revisit the second phase of the DISCOVER Model for each of the media assets that you created. Let’s look at your template documents and see what you have learned and what plans you have for revision and improvement.

7. What suggestions might you have for improving this model? (RQ1, RQ7)
8. Is there anything else you would like to say about this experience?