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Teaching Higher Education During a Pandemic: A Phenomenological Study of Instructor Decisions Associated with Switching from Face-to-Face to Online-Only Sessions

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TEACHING HIGHER EDUCATION DURING A PANDEMIC: A

PHENOMENOLOGICAL STUDY OF INSTRUCTOR DECISIONS

ASSOCIATED WITH SWITCHING FROM FACE-TO-FACE

TO ONLINE-ONLY SESSIONS

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ABSTRACT

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Due to the COVID-19 pandemic, university instructors were required to shift their course delivery from face-to-face to online-only presentations with two weeks of preparation. Volunteering instructors were interviewed via a semi-structured interview protocol regarding their actions to maintain instructor presence in an online-only setting. The term emergency remote teaching (ERT), defined by fellow researchers as the adoption of just-in-time remote teaching practices that would otherwise be offered face-to-face, aligned with the actions taken by interviewees. The data indicated that given an event requiring ERT, instructors should: overcome technology issues for themselves and their students to verify communication pathways, and exhibit the three elements of instructor presence (i.e., teaching presence, instructor immediacy, and social presence).

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This thesis is dedicated to my wife, Tracie A. Miner, who provided emotional support, motivation, exceptionally nutritious and tasty food, unconventional distractions when I needed them, and unconditional love during the journey. This project requires a huge sacrifice of time from a partner, and I thank her for the patience and graciousness she exhibited throughout.

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CHAPTER I

INTRODUCTION

Overview

In conducting this research study, my intent was to explore how instructors within higher education adapted their interactive methods due to an unexpected phenomenon. In this chapter, I provide the background information describing the need for altering interaction methods, and introduce definitions and key concepts discussed throughout the paper. Additionally, I outline the research problem and the purpose of this study. The research is a phenomenological one as it seeks to discover instructors' experiences. Leedy and Ormrod (2013) define phenomenological studies as identifying participants' experiential perceptions, perspective, and understanding of the phenomenon. This research documents instructors' first-person descriptions of the challenges they identified as obstacles, and how they overcame them with their students given an imposed demand of only presenting online with little time for preparation.

Background

In January of 2020 (Taylor, 2020), a global pandemic identified as COVID-19 spread to the United States of America. By March 2020 (Jernigan, 2020; Taylor, 2020), the United States had declared a national emergency and each state began initiating steps (e.g., quarantining, wearing of masks, social distancing, closure of non-essential businesses) to combat the transmission of the disease. On March 11, 2020, the President of a large, mid-Atlantic university – John Broderick – issued a letter indicating that the remainder of the Spring 2020 academic schedule would be completed online (Broderick, 2020) as a measure of social distancing to protect faculty and students from the pandemic.

Statement of the Problem

The university's proactive response to the pandemic both protected the health of students and faculty, and simultaneously provided an avenue for the continuation of courses. The university was also proactive in establishing transition teams to aid instructors shift to an all-online format. However, university departments and individual instructors were nonetheless required to quickly determine how to present their course material.

Instructor experience with online presentation varied based on whether they taught only in face-to-face settings, were currently teaching a course including online sessions, or if they had taught online previously. Additionally, for those that were experienced teaching online, there were technical alterations that may have affected their presentation practices. Examples include:

- Instructors that had used the university's technical building aligned specifically for the presentation of online sessions in designated classrooms were required to use an alternative method due to the campus quarantine.
- Access to university buildings, including offices that held instructor computers, had limited access and thus instructors had to determine how to access their files and how to access the university servers from alternate locations (such as their homes).

Ultimately, the university's instructional staff – regardless of department and topic - had to quickly determine how to provide instruction and interact with students in an online-only setting from computers that were accessing the university's servers remotely. Additionally, instructors needed to be proactive with communication efforts as students were forced to interact online-only as well. For some instructors, this was already their norm. For others, it required substantial alteration to their established methods.

After the hectic shift of presentation methods required in the Spring 2020 semester, university instructors were then faced with the prospect of continuing their classes via online offerings throughout the Summer and Fall 2020 semesters.

The shift to online instruction due to the COVID-19 pandemic is a unique event and it seems appropriate that an exploratory study should be undertaken to describe the transition by instructors within higher education to identify what decisions they made regarding the interactions with their students. Within the realm of instructional design, Tessmer and Wedman (1990) identified that real-world factors – such as time or resources – influence instructional design actual practices to allow creation of strategies that only address the most needed learning outcome as opposed to more formalized theoretical designs or models that are more nuanced and address a larger scope of learning. As an example, an instructional design could be prescriptive with limited student interaction or collegial with significant student-instructor collaboration. Within the hypothetical example given, the latter instructional method would likely require more alteration due to the pandemic. Hence, by following Tessmer and Wedman's (1990) idea, this study employs the concept of "How did the instructors alter their interactions with their students given the imposed limitations?" This study gathered the experiences and perceptions of instructors, and identifies challenges, resolutions, and successes.

Purpose and Significance of the Study

Andriessen (2014) outlined the importance of the practical relevance of research while maintaining methodological validity. Andriessen (2014) posits these questions for researchers:

- To what extent do the results connect to practice?
- How can we ensure the results are used?

- How can the research help to improve practice?

- How can this be supported by choices of methodology which will ensure that the results are valid?

- How can this lead to broad statements that are valid and how can this make a valid contribution to what is already known about the subject?

These questions provided guidance during the research to ensure that the results would have a good degree of relevance. Chapter Three, Methodology, includes research practices that provide valid and transparent results.

This study identified the obstacles instructors had to overcome to provide instruction in an online-only setting, but focused on how they maintained instructor presence with their students. The research items, when compiled and analyzed, will further aid instructors at institutions of higher education with student social engagement beyond the material. This investigation and documentation of the decisions, strategies, and practices higher-education instructors used that were effective in creating a positive learning environment – especially during periods that require implementation of emergency remote teaching - will likely be of interest to instructors, instructional designers, and administrators faced with resolving similar issues in future scenarios and provide them with information that will provide preparatory guidance and lessons learned to improve instructor self-efficacy, craft effective instruction, and encourage student interaction/engagement.

Research Question

This study is exploratory in nature because the historic worldwide pandemic event required college instructors, as opposed to them voluntarily opting, to rapidly alter their

instruction and interaction methods. And, due to the nature of the pandemic's transmission factors, morbidity, and mortality concerns there exists the potential for adopted changes in interaction methods to be a long-term solution within higher education. Hence, the goal of this study was to obtain information at the forefront of the event to identify decisions made by college instructors to maintain their instructor presence as part of their effort to provide a quality learning environment for students. The following research question guided this study:

1. In the midst of the COVID-19 pandemic, how did instructors alter their instructor presence when transitioning from face-to-face to an online-only setting?

Delimitations and Assumptions

Mauch and Park (2003) succinctly differentiate delimitations from limitations in that the former is controlled by the researcher. For this study, and as validated by Creswell (2013), the delimitations include (a) instructors that were teaching only in face-to-face settings within their classes in the Spring and Summer 2020 semesters prior to being required to teach online-only due to the pandemic and who volunteered to participate in the study; and (b) the singular qualitative data collection technique of semi-structured interviews. It is assumed that responses received accurately reflected the respondent's professional opinions and that the participants answered all questions openly and honestly.

Definitions and Terms

To provide clarity for the types of content delivery that were included within this research, some terms required further discussion.

Online learning is a term with many different terminologies which poses a difficulty in offering a uniform definition. Online learning is also referred to as distributed learning, distance

learning, e-learning, Internet learning, virtual learning, computer-assisted learning, and web-based learning (Anderson, 2008). Online learning can be both distance learning and face-to-face learning, and can include synchronous, asynchronous or blended (hybrid) delivery options (Mayadas et al., 2015). Martin et al. (2020) defined hybrid teaching that includes synchronous instruction supported by asynchronous materials as bichronous online learning. Online learning has been described as instruction delivered on a digital device in support of learning (Clark & Mayer, 2016). Within this study, online learning is the term used to indicate that the learner: is at a distance from the instructor, uses some form of computer device (e.g., desktop, laptop, tablet, smartphone, etc.) to access the learning materials, and uses their device and related software applications to interact with the instructor and with their fellow learners. The expediated shift from face-to-face presentation to providing curriculum only online in response to the pandemic is best defined as emergency remote teaching (Erlam et al., 2021; O'Keefe et al., 2020).

Emergency remote teaching, or ERT as often abbreviated, differs from online learning in that ERT involves an immediate change in instructional delivery based on the imposed demand from the pandemic and instructors needed to differentiate and decide what was essential material to present and what could be eliminated (Al-Freih, 2021; Brooks et al., 2020). Within traditional online education and associated presentations, course development is lengthy and both instructors and students have a mental model expectation for what is involved for learning whereas with ERT the model might be described as temporary access to instructional opportunities (Abramenka-Lachheb et al., 2021; O'Keefe et al., 2020). Bozkurt and Sharma (2020) offer that the learning experience from ERT will likely differ from traditional online learning but since the continuance of instruction as an over-riding factor for universities, ERT is not an option, but rather an obligation.

The term multimedia presentation, which is used throughout this study, in itself is a broad concept literally meaning multiple forms of communication (Mayer, 2009). Within this study, unless stated otherwise, the term multimedia presentation indicates visual displays – both static and dynamic – with included audio. Examples include: live video, film clips, recorded video speakers, animations, screen capture, visual display with narration, and demonstrations.

The term streaming refers to a user accessing and watching a multimedia presentation live or from a stored location on an internet accessible server. This differs from downloading in that the user is only viewing the material and not capturing a copy of the original content on their device. However, similar to downloaded material, as long as the user has access to the storage location, the material is available for viewing at the user's discretion. Whereas streaming can be either live or pre-recorded, live streaming may or may not include recording for later access and if not recorded must be considered only as a synchronous event.

The Blackboard Learning Management System^{TM}, often mentioned as merely Blackboard, is a digital file management system with a variety of interactive components to allow instructors and students to communicate. Instructors can post material to be viewed or uploaded, including multimedia files, for their students and allow students to upload similar materials as well. Additionally, instructors can specify when material is and is not available for viewing and if the material can be downloaded, uploaded, amended, or only viewed.

Instructors choosing to provide live-stream sessions can utilize a variety of university supported software including, but not limited to, Zoom^{TM}, Adobe Connect^{TM}, Skype^{TM}, and Google G Suite^{TM}. Separately, private media entities such as Facebook, Vimeo, YouTube,

Discord, and Twitter have live-stream services as well but unlike university sponsored software

there is no pre-existing requirement for either instructors or students in the use of these products.

CHAPTER II

Literature Review

Overview

Given that university instructors were required to alter presentation methods for delivery via an online setting only, this literature review section addresses the viability of online education within higher education, how expediency in providing the curriculum may have affected presentation decisions, and how instructor presence is maintained in an online setting.

Teaching Online Within Higher Education

Nearly twenty years ago in the infancy of online learning, Rossett (2002) indicated that with a proper design, a focus towards the learners themselves as well as their learning process, and adequate support from the institution, online learning offered a promising educational outcome. Hence, having already defined online education, a more detailed review was needed to determine the usage within higher education.

In the second edition of *The Theory and Practice of Online Learning* (Anderson, 2008), online learning is stated as becoming embedded within higher education. Roughly a decade ago as online education was becoming more prevalent within higher education, studies identified a reluctance from instructors to adopt new teaching methods which better utilized online technology but theorized that offering quality examples of online practices would reduce trepidation and provide an easier transition to both using new presentation technologies and facilitating online learning (Crawford-Ferre & Wiest, 2012; Ertmer & Ottenbreit-Leftwich, 2010). At higher education institutions, online education is becoming increasingly common via

fully online and/or hybrid/blended courses combining online instruction with face-to-face teaching (Dumford & Miller, 2018; Sun & Chen, 2016). The National Center for Education Statistics reports that one-third of higher education students within the United States are utilizing online classes (*Distance Learning*, 2018) and for a variety of reasons, online learning within higher education will likely increase (Lederman, 2019; Magda et al., 2020). A simple example of the advantages of online learning have been emphasized as: studying from anywhere, at any time; student time management; no commuting on crowded public transportation; more flexible choices for learning; potential for decreased costs (Brown, 2017; Dumford & Miller, 2018; Mirkholikovna, 2020).

Despite indication that a third of students within higher education are enrolled in at least one online class (de Brey et al., 2021), instructors within higher education are inexperienced with remote education (Erickson & Wattiaux, 2021). With online classes being more prevalent at colleges and universities, there is interest in identifying the characteristics of a quality online learning environment – a template for successful learning. According to O'Keefe et al. (2020) the keystone for success in online education is the organization of course content. Kenzig (2015) concluded that the key factor for learning is the students' ability to connect with the course content, their fellow students, and the instructor. This concept of connectedness, otherwise known as presence, is discussed later within the study. Kenzig (2015), a medical professional, also specifies that successful online teaching must adhere to what researchers have identified as best practice standards with regard to course design and presentation. The standards she identifies are from the Center for Disease Control which produced guidance in the form of E-learning essentials as represented in figure 1 below with permission.

Baldwin and Ching (2019) developed an online course design checklist which stipulated actions to be taken by an instructor before, during, and after presenting an online course. In addition to some common instructional design elements (e.g., learner characteristics, learning objectives, information chunking, student engagement, instructor presence, assessments, student feedback), Baldwin and Ching (2019) specifically added a requirement to optimize use of beneficial multimedia to encourage the use of additional presentation strategies and avoid the overuse of text materials, PowerPoint, or video lectures.

Martin et al. (2019) established a conceptual framework for effective online education which includes a symbiosis of facilitation, instructional design, and assessment & evaluation. Martin et al. (2019) emphasize that instructional design processes are necessary for guiding the design and development of effective online courses. However, as Martin et al. (2019) continued their research into the roles and responsibilities of online instructors, they identified that the most important factor within successful online learning is the instructor is a facilitator that establishes strong instructor presence.

Use of Multimedia Presentations

Since the COVID-19 pandemic forced instructors to determine how to present their material in an online-only format, literature research was necessary to determine the various types of multimedia presentations available for comparison to the delivery decisions instructors made. The use of multimedia presentations in higher education can lead to a number of positive benefits for students, faculty, and the university (Leonard, 2015). Greenburg and Zanetis (2012) suggest that easily accessed multimedia presentations are the medium that will greatly alter educational presentation by adding value to the learning experience due to quality productions

and students' comfort level with receiving information in this manner. There has been an increase in video-based learning since 2003 (Bell & Federman, 2013) and as multimedia video has become more affordable to produce and accessible to students, it is playing a larger role in educational settings (Copley, 2007; Parson et al., 2009; Siemens et al., 2015). Given that students in higher education enjoy short multimedia presentation strategies and have easy access to view them (Miner & Stefaniak, 2017), instructors shifting their curriculum from face-to-face to online-only delivery can enhance the learning experience by providing microlectures with media-rich, interactive, and engaging content (O'Keefe et al., 2020).

Figure 1
E-learning components and best practices, as identified by CDC's e-learning developers

Component	Best Practice
Analysis	E-learning products are based on results of analyses that identify learner audiences and inform their needs by focusing on - Knowledge or skills to be learned - Clear and measurable learning objectives - Strategies that support learning
Interactivity	E-learning products facilitate learning by applying interactive strategies that engage learners and stimulate recall of prior knowledge. Different levels of interactivity may be used to suit content and audience needs. All interactions work within the organization's web architecture and meet the organization's accessibility requirements, such as Section 508.
Interface and Navigation	E-learning interface is learner-friendly with a main menu and other navigational elements that help learners know where they are within the course and move easily through it.
Content	E-learning content is accurate and reading level is appropriate for the audience. Information is succinct, logical, and clearly divided through the effective use of color, graphics, borders, and white space. All screen elements adhere to organizational guidelines for digital media.
Product Evaluation	E-learning products undergo formative and summative evaluations to ensure that learning strategies are effective and long lasting.
Learning Assessment	E-learning products include an assessment that can be completed by all learners. This assessment determines the product's impact on intended learning outcomes.

Figure 1: E-learning components and best practices. From 2013 CDC's E-learning Essentials: A Guide for Creating Quality Electronic Learning. [Centers for Disease Control and Prevention], Office of Surveillance, Epidemiology, and Laboratory Services, Scientific Education and Professional Development Program Office. https://www.cdc.gov/training/development/pdfs/design/e-learning-essentials-508.pdf. In the public domain.

As Clark indicated, given a solid instructional design, learning will not be influenced by the medium in which it is presented (Clark, 1983, 1994). Hence, using the basic framework of instructional design known as ADDIE (analyze, design, develop, implement, evaluate) instructors should be able to prepare quality learning events that would be effective whether presented face-to-face or online. But, as Tessmer and Wedman (1990) indicated, limiting factors can influence the instructional design. This study investigated how instructors altered their instructional interactions and instructor presence in a higher-ed setting when the normal implementation scheme was interrupted by the pandemic.

Emergency Remote Teaching

The international COVID-19 pandemic required many institutions of higher education to alter their course offerings to continue in an online-only method but the focus was to convert the curriculum to an online environment rather than reconfiguring as online pedagogy (Bozkurt & Sharma, 2020; Mohmmed et al., 2020). Whereas online education represents fully developed instructional designs with planned multimedia interactions, the conversion of face-to-face curriculum methods to an online setting did not allow for the thoroughness of online implementation strategies and resulted in the adoption of ERT strategies (Colclasure et al., 2021). A review of ERT literature was conducted to identify trends and considerations which aided the semi-structured interviews. As Tessmer indicated thirty years ago, a neglected portion

of instructional design was to analyze the educational environment for factors that would affect

learning (Tessmer, 1990). Table 1 below provides the main factors and descriptors are included

for each factor that are especially germane for considerations of ERT.

Table 1.

Tessmer's environmental analysis factors, questions, and interpretations.

Tessmer's Factors	Tessmer's Questions and Concerns	Possible Interpretations
Physical factors:		
Instructional environment:		
Facilities	Are there facility aspects, such as lighting conditions, size of room noise, electrical power, that will impact training?	What equipment and software are needed by instructors to instruct online from home?
Instructional lifespan	Will instructional products require updates due to change in content, equipment, or materials?	
Equipment	Is certain equipment (e.g., computer) required for instructional strategies? Do the students require special tools or materials?	What equipment and software are needed by students to access the delivery options?
Support environment:	Will learning environment be different at distribution sites? Will	
Site distribution	inadequate equipment training affect use and therefore negatively impact training/learning?	
Management and coordination	Is there a specific person who will oversee storage, delivery, dissemination, and administration of the instructional products?	Will there be enough bandwidth for online distribution and future access? Who will resolve technical issues for
Seasons and climate	Will the weather impact training sessions?	instructors? For students?
Use factors:		
Instructional environment:		
Patterns of use	Will the instruction be ad hoc or scheduled? Will students be together, in groups, or singly interacting? Synchronous or asynchronous?	How will students resolve childcare or computer usage conflicts for synchronous offerings?
Reasons for use	Will the instruction be re-accessible as a reference?	
Student-User characteristics	Will students require special skills? Will students have anxiety about using equipment (e.g., computers)?	How can student anxiety regarding the
Administrator characteristics	Will instructors need training for medium delivery skills?	technology required for online learning
Support environment:		be resolved?
Production services	What production services are available for instructors/students?	
Storage and delivery services	Is digital storage needed?	Where can students find guidance for
Dissemination resources	What services are needed for delivery and further access?	the necessary computers skills to
Support resources	Who is responsible to aid with digital issues?	navigate online learning?

Note. The factors and questions are from Tessmer, M. (1990). Environment analysis: A neglected stage of instructional design. Educational Technology Research and Development, 38(1), 55-64.

Tessmer and Wedman's layers-of-necessity instructional development model (1990) included the pragmatic real-world considerations of external limitations, such as the amount of time or financial resources available, that would alter what instructional design elements were implemented and which were omitted by the designer. Tessmer and Wedman (1990) indicated that layers-of-necessity described a process in which a designer, using his or her experiences, would diagnose an educational problem and determine what design elements could be implemented under the specified limitations. Note that the layers-of-necessity approach is not one of identifying an efficient training solution, but rather a mindset of what can we do under these circumstances. Tessmer and Wedman's (1990) layers-of-necessity concept of design, along with Tessmer's work with educational environmental factors (1990), are directly applicable and have a straightforward comparison with the shift to online-only instruction as required by the university's response to the COVID-19 pandemic which provided university instructors multiple challenges in presenting their curriculum.

Due to the rapid response required to overcome some of these instructional environment factors, and distinctly different from traditionally planned educational offerings that were designed from the beginning to be online, emergency remote teaching (ERT) represents a temporary shift of instructional delivery that utilizes an alternate delivery mode due to the current crisis (Hodges et al., 2020; O'Keefe et al., 2020; Trust & Whalen, 2020). Another way of considering the altered instruction is that instructors adhering to Tessmer and Wedman's layers-

of-necessity model (1990) crafted temporary but reliable training while overcoming imposed demands. Hodges et al. (2020) indicated that the shift to ERT also requires instructors to have complete authority over designing, developing and implementing their curriculum in order to ensure instructional continuity from the institutional mandate. Although Trust and Whalen (2020) focused their research with K-12 institutions, their recommendations that instructors should have access to training specific to using technologies for online learning and cultivate professional networks for sharing effective solutions – especially considering ERT scenarios - can be applied equally to instructors in higher-education.

Based on Rapanta et al.'s investigation (2020) of university instructor's pedagogical preparedness, it is also wise to identify how instructors maintained presence while executing ERT. The analogy Moore and Hill (2020) provided for ERT is simplistic but apropos as they describes university instructors' rapid shift to presentations online is akin to leaving a burning house – you only have time to grab what you think is essential – as opposed to how you will rebuild after the fire. Brooks et al. (2020) phrased the concept of ERT as being analogous to a physician within an emergency room making quick decisions in that ERT required instructors to triage their curriculum to keep only what is necessary and eliminating the extraneous information. This study investigated what decisions (triage) instructors made regarding the instructional design elements and how to maintain connection with their students (essential items they ran back to their burning house to save) they could implement (layers-of-necessity) given the limitations of shifting to online only and given only two weeks preparation.

The pandemic paired instructors, with and without online teaching experience, with students that may or may not have experience learning in an online environment, which ultimately imposed an ERT environment.

Instructor Presence

Instructors teaching face-to-face develop a pattern of interaction with their students to identify learning cues such as: attention, boredom, comprehension, confusion, distraction, and other observational behaviors such that they can alter instruction to accommodate the flow of the class. Such interactions are contained within the broader term of "instructor presence" (Lear et al., 2009). But, due to the imposition of the COVID-19 pandemic, instructors were forced into an online-only environment and were no longer engaging students face-to-face. This study was dedicated to exploring the concept of instructor presence and specifically how instructors achieved it within an online-only educational environment.

The COVID-19 pandemic required online learning to become more important for education as it was, in many cases, the only opportunity to remain in touch, even if remotely, with classmates and instructors while attending online lessons (Ferri et al., 2020). Instructors must communicate with students – both verbally and non-verbally – to provide a perception of a more intimate interaction and this phenomenon is referred to as instructor immediacy (Andersen, 1986; LeFebvre & Allen, 2014). As online learning was becoming more prevalent within higher education, researchers began to examine the interaction between instructors and students, students and the curriculum, as well as students and their peers (Richardson & Swan, 2003; Wallace, 2003). Garrison, Anderson, and Archer (1999) conceptualized their community of inquiry (CoI) framework to describe instructor presence as having social, cognitive, and teaching dimensions. Their continued research indicated that all three dimensions are important for student success in online education, but it is specifically teaching presence (defined as the design, facilitation, and direction of cognitive and social processes for the purpose of realizing

personally meaningful and educational worthwhile learning outcomes) that unifies and focuses the teaching and learning transaction (Garrison et al., 2003). Redstone et al. (2018) reviewed multiple peer-reviewed research articles relating to the CoI instrument and found that teaching presence was the most critical element as student perceptions of this CoI element also influenced their perception of instructor social presence and cognitive presence, perceived learning, and satisfaction. Researchers within the CoI domain have recommended further study of teaching presence and in particular instructor behaviors (Garrison, 2017; Hayes et al., 2015; Redstone et al., 2018; Stenbom, 2018). Fiock (2020) indicated that within the CoI framework, there also exists a focus on three components of online courses: design and organization, instructor interaction and facilitation, and direct instruction. The CoI framework includes instructional strategies for increasing instructor presence in online course including: prompt feedback, being active in discussion boards, exhibiting a sense of humor, offering diverse interactions, being empathetic (care), and the inclusion of their "personality" (Morrison, 2021). Anderson (2008) recognized that while quality facilitation of course material includes a bit of cognitive dissonance, the teacher must first develop a sense of trust and safety within the electronic community that is shared with the students. Van Huevelen et al. (2020) indicated instructors need to be aware of multiple issues, including instructor presence, that may impact students' learning environment. Oyarzun et al. (2017) provided a detailed description of instructor presence by segregating it into three elements: teaching presence, instructor immediacy, and social presence. Teaching presence is further defined to include the instructional design and class organization used; the materials, presentations and learning activities; and the facilitation of the course, interactions among students, direct interactions from the instructor with individual students, and feedback mechanisms (Oyarzun et al., 2017). Immediacy, a term coined by psychologist

Mehrabian (1969) and later expanded to education environments by Andersen (1979), are communication behaviors – both verbal and non-verbal – that can reduce the perceived gap between instructors and students. Examples of behaviors include proximity, smiling, body language, and vocal tone/inflection and these communication behaviors can have positive influence on student achievement (Creasey et al., 2009; Pogue & AhYun, 2006; York, 2013). Fahara & Castro (2015) expand the immediacy concept to address online learning environment and identified actions such as responding to emails within twenty-four hours, providing updates and feedback directly to students via email or instant messaging, and establishing a direct dialogue with each student (using polite and informal social greetings/goodbyes) as positive influential interactions that increase connectivity with students and therefore can have a positive impact on academic performance.

A unique situation arose from the switch to online-only interactions between instructor to students in that instructors were teaching from their homes. Teachers working from home had challenges of their own such as child care (daycares were closed) or school-aged children needing to use their parents' computer for their own online learning (Leask & Younie, 2021). Working from home allowed instructors to alter their instruction time and availability to match better with their students (Leask & Younie, 2021; Watermeyer et al., 2021). While working from home allowed flexibility of availability to students, it also often meant instructors found themselves on-call to their students and pending the individual this was seen as another avenue to expedite feedback or a need to set limits for their own work-life balance (Erlam et al., 2021; Valsaraj et al., 2021; Watermeyer et al., 2021). Another facet of working from home was that without separation of home and work locations, instructors found themselves working (i.e., answering emails, phone, bulletin board posts, video chats, reviewing lessons, reading and

grading student submissions, etc.) more hours in their day compared to their norm before the pandemic (Erlam et al., 2021; Valsaraj et al., 2021; Watermeyer et al., 2021). Despite exhaustive factors such as more hours spent working and student requests for communication at random times, instructors indicated working from home was an advantage and assisted in providing much needed connection with students experiencing anxiety or worse affectations to their well-being due to the pandemic (Colclasure et al., 2021; Erlam et al., 2021; Ryan, 2021; Valsaraj et al., 2021; Watermeyer et al., 2021).

Social presence is the awareness of two or more communicators within a medium (Short et al., 1976), and is better defined within an online setting as the interactions – and perception of interactions – between instructor and student (Oyarzun et al., 2017). Kennette and Redd (2015) describe social presence as the ability of both instructors and students to present themselves online as individuals and exhibiting their unique personalities. Instructors need to be approachable to their students as interpersonal interactions are considered the most important course quality factors by students (Jaggars et al., 2013). Instructors with a higher degree of social presence in online learning environments are viewed by learners as being more positive and effective (Shin, 2002; Wang & Antonenko, 2017) and engagement between students and their instructors also has a significant effect on student's learning outcomes (Bétrancourt & Benetos, 2018; Kuh, 2009; van Wermeskerken et al., 2018). Kopus (2021) determined that factors such as empathy, student motivation and engagement, and ultimately student learning outcomes are all greatly impacted by social presence in online and remote education. Bernard et al. (2009), in a seminal work regarding distance education, identified that when planning online learning instructors should include processes for student interactions as that will increase learning outcomes. Hodges et al. (2020), one of the first researchers to focus on instruction at higher-

education institutions during the pandemic, noted that it is imperative to view learning as a social and cognitive process rather than only a process of information transfer. Within another study conducted in conjunction with the COVID-19 pandemic, Alvarez (2020) found that instructors indicated their greatest challenge was to create connections with their students as part of developing a productive learning environment. Deacon (2012), identified that instructors offering a more open dialogue and creating an atmosphere of care in an online setting are able to aid students in reaching their learning potential. Delving specifically into instructor social concerns for students– otherwise termed care for students – VandenAvond et al. (2020) described factors such as personal attention, accommodating individual differences, responses to student inquiries and emails, and in general prompt interactions with students as necessary factors to facilitate successful student learning. Hence, care in the sense of attending to students within an online setting, is described as personal attention to students including concern for their well-being and responding to emotional communications (VandenAvond et al., 2020). Instructors should recognize the impact of student care, and model associated behaviors to foster care, as it has been found to facilitate student learning (Rose & Adams, 2014; VandenAvond et al., 2020). Karakaya (2020), who focused his research with university instructors and ERT, also identified a need for pedagogy of care and recommended that university instructors be flexible with their course management and consider student needs - which I associate with the instructional design principle of identifying learner needs. More specifically, both Bozkurt et al. (2020) and Karakaya (2020) specified that especially during ERT, university instructors should support their students via clarity of communication, prompt feedback, multiple ways for contact, personal connection, and reciprocity of caring – each of which intended to provide much needed empathy and shared resiliency to support student well-being during the uncertainties caused by the pandemic.

However, as identified by Cameron-Standerford et al. (2020) and Hodges & Barbour (2021), instructors may choose to prioritize student care over rigor within ERT. In what could be described as a primer for teaching online during the COVID-19 pandemic, O'Keefe et al. (2020) detailed the need for university instructors to consider student differences in technological ability and individual experiences and thus take steps to improve or enhance their instructional offerings with an equitable course design including academic, pedagogical, psychological, social, and technological factors. Institutions in which faculty had developed relationships with their students prior to the pandemic were found to have an easier transition to online learning (Gares et al., 2020).

Higher education students within an online learning environment place a high value on instructor interaction and exhibit a greater academic performance with these increased interpersonal interactions (Cameron-Standerford et al., 2020; Chan et al., 2021; Coman et al., 2020; Jaggars et al., 2013; Osman, 2020). Or, more inclusively, undergraduate students' frequency of interactions with their instructors and peers has a significant positive influence on their academic outcomes (Erickson & Wattiaux, 2021; Oyarzun et al., 2017; Richardson et al., 2017). Wieman and Gilbert (2014) describe improved student academic outcomes as being correlated with collaborative assignments and frequent instructor feedback. Fuchs et al. (2021) identified that students in higher education experiencing ERT reported greater satisfaction and perceived learning outcome commensurate with instructors content organization, patience, and perceived friendliness. Continuing with the concept of caring for students, Kaplan-Rakowski's (2021) study advises instructors should provide increased emotional support during times of crisis.

Given that instructor presence is a meaningful factor in the learning outcomes for students in higher education, this study investigated what actions instructors took to alter their instructor presence when forced to shift their presentation methods and what perceptions they gained from this event.

Summary

The fluidity in which instructors had to overcome technological obstacles, make alterations to their presentations, and the decisions they made to maintain instructor presence are entwined due to the immediacy of action required by the pandemic and the truest anchors for this study.

The literature review differentiated online teaching from ERT to address how instructors transitioned course content delivery from face-to-face methods to the methods they utilized within the online-only setting, and specifically focused on how instructors upheld presence in an online setting, dissected presence into three subset categories - teaching presence, instructor immediacy, and social presence.

CHAPTER III

METHODOLOGY

This study investigated the challenges instructors faced and overcame during the COVID-19 pandemic with respect to: their transition to an online setting, and the actions they took to maintain an instructor presence. With regard to instructors' transition to an online setting, this study sought to identify challenges they encountered with technology and the instructional strategy decisions they made to present their curriculum.

Research Design

This study is qualitative and exploratory in nature to capture the experiences of instructors who were unexpectedly forced, with an extremely short preparation time, to alter their presentation methods to accommodate online-only access. Specifically, this was designed as a phenomenological study in that it portrays the experience of teaching under the constraints imposed by the COVID-19 pandemic from the participants point of view. Because this study was developed to investigate a phenomenon that had had little previous attention in prior research it employs, data collection is performed via open-ended interviews which allowed instructors to tell their stories regarding the challenges they had to overcome to achieve their goal of uninterrupted course delivery. A structured interview protocol and credibility checks were utilized to ensure that the data gathered adhered to scientific rigor.

Participants

Characteristics

Since the study was developed to investigate how collegiate instructors overcame challenges and altered their presentation methods, participation was limited to only those

instructors that were actively teaching within the Spring, Summer, and Fall 2020 semesters and had only taught face-to-face prior to the Spring 2020 semester. The initial study parameter anticipated that twenty participants, across a variety of academic disciplines, would provide the necessary cross-section of experiences for validity. The study concluded with 33 participants. Participants in the study met the following inclusion criteria:

- Teaching assistants, adjunct instructors, and tenured instructors that provided instruction at the university in Spring, Summer, and Fall 2020 semesters and had only taught face-to-face prior to the Spring 2020 semester

- Instructors communicated in English

- Instructors used some form of multimedia presentation method

- Instructors who were willing to volunteer approximately 1 hour of their time for an audio-recorded interview including the potential for follow-up contact to provide further clarification.

Detailed demographic information was not solicited from each participant as another measure to assure anonymity. However, another consideration for not collecting demographic information was the limited correlational value due to the small overall sample size and even smaller subsets created when sorted for demographical information. Additionally, there was a concern for unintentional misrepresentation from demographical information such as a chronologically older instructor stating years of online teaching experience but upon further investigation finding that they had only been involved with a single camera portrayal of lecture capture. Or, a chronologically younger instructor that has very few stated years of teaching experience but is employed by three institutions and extremely avant-garde with interactive

technology. These examples, when portrayed within such small sample sizes, would skew

analysis or at the least require explanatory comments that could just as easily be included

without the demographic data points.

Recruitment

Rather than target a small singular department, instructors from all departments were

solicited via an email query outlining the participation requirements and requesting volunteer

participation within the study. The initial email list was compiled by reviewing departmental

webpages identifying instructors and their university email addresses. A total of 1009 emails

were delivered in a group offering with an introductory message of recruitment for the study.

From the initial submission, 47 instructors responded positively for participation within a week

of being contacted. Once the positive responding participants were identified and categorized by

their department and specific branch of study, a follow-up series of individual emails to each of

them identified interview times and a communication method mutually agreed upon by the

participant and myself as the interviewer. Of the 47 positive respondents for the study, 13 were

unable to be scheduled for interviews. The final sample of participants comprised 33 instructors

among 17 departments and only one instance of an instructor that taught the same courses as

another respondent.

Data Collection

Interview procedures

All interviews were scheduled at the time and location mutually agreed upon between the

participant and myself, as the interviewer. In keeping with the medical restrictions associated

with the pandemic, all but two of the interviews were conducted via phone to allow convenience

of mobility. The other two interviews were conducted via Zoom connections. In order to ensure

confidentiality, each participant was identified by a participant number and all references to participants' comments were only associated with the participant number. For convenience, each participant number is also the interview number and therefore the two identifiers within the study are synonymous. As an example, interviewee #26, instructor #26, and interview #26 all refer to the same participant.

Semi-structured Interviews

Semi-structured interviews were conducted with each participant. The semi-structured interview is the data collection method used for soliciting candid responses as it follows a distinct protocol designed by the researcher but allows for variance pending participant response (Braun & Clarke, 2013; Rubin & Rubin, 2011). Semi-structured interviews allow an opportunity for the researcher to prod, discover, and clarify the participant's explanation (Rubin & Rubin, 2011). An interview protocol was used to structure each participant interview (see Appendix B). The use of an interview protocol ensures the researcher includes all relevant items within the interview but also provides the opportunity for participants to expand on a topic or thought (Rubin & Rubin, 2011). As interviews were the main data gathering technique it is noted that this study is limited by the self-reporting nature and the subjectivity in analysis and interpretation by the researcher (Creswell, 2008).

Interview questions in this exploratory design focused on the challenges instructors encountered and overcame, their decisions regarding curriculum delivery, and how the instructors maintained a presence – both pedagogically and socially – with their students.

Instrument

The instrument in this study was a semi-structured interview format (see Appendix B) that was reviewed by an expert faculty researcher to ensure appropriateness, cohesiveness, and

understandability. No changes were made to the instrument after review nor as a result of the interviews.

Review of Course Materials

To substantiate subject responses, I gained access to subjects' course curriculum via Blackboard™ and observed items such as the syllabus, the organization of course material, interactive forums, and the various course materials (e.g., handouts, assignments, and multimedia presentations).

Data Analysis

According to Clarke & Braun (2018) and Creswell & Creswell (2017), there are six steps to data analysis. The first step is to organize and prepare the data for analysis and this was done by transcribing the interviews, and familiarizing myself with it to provide a general sense of the information. Step two requires reading, interpreting, and sorting the data. In addition to differentiating what is important and what may not be representational for the study, this step also allows for the researcher to reflect on the overall meaning of the information collected. Beginning in step two, step three is the formal coding process for the data. This step organizes the data into specific categories and potential sub-categories to allow for more detailed observance of interrelated concepts. Step four is the coding process that generates descriptions for the data within the identified categories. The descriptions provide detailed information about the people, places, or occurrences involved in the study. Step five further develops how the descriptions of categories are thematic and how they will be represented within the qualitative narrative. This step includes specific data points and perspectives from the subjects. Lastly, step six is the final step that provides the researchers interpretation of the information. The researcher

captures "What were the lessons learned" from data review, subject opinions, comparison with

extant literature, and personal interpretation.

The intention of this study is to use the results to develop a detailed, comprehensive database for:

- The challenges instructors had to overcome to present their material online and solutions
  they found for resolution

- An indication of how instructors altered their instructor presence given such a short
  turnaround for transitioning to online presentations.

I organized the collected raw data by coding the responses for context from each

interview. The captured data was reviewed and coded according to the identification of themes

and categories, and establishing credibility for these categories (Creswell, 2008; Leedy &

Ormrod, 2013).

Categories

As each interview was coded the events and anecdotes described were compared to

previous interviews to discover similarities and themes. The prevalent themes were further

organized into temporary categories. As additional interviews were deciphered, their concepts

were aligned with the existing categories or formed new categories. This process continued until

all transcribed interviews were reviewed to ensure identified items were categorized. The

categories were reviewed to determine if they were too broad or too narrow, if they overlapped

or needed to be combined, and if they were sensible. The final categories were used for the

credibility checks.

An example of how early interviews provided influence was the unsolicited response

from interviews 16, 17, and 18 in which each of the interviewees mentioned student feedback as

particularly important. In addition to noting this within working notes, I was keen to listen for

future interviewees offer unsolicited recognition of this phenomenon and offer follow-up

questions. Later, during the coding process of all interviews, student feedback ended up not

being specifically mentioned directly by later interviews but was encapsulated by the broader

term of student engagement.

While an anticipated baseline of categories was present due to the specific questions used

within the interview instrument, the semi-structured nature of the interviews allowed the

respondents to offer rich and interesting details tangential to the initial question. Another

example of how coding instructor answers expanded the categories was the responses for

instructor presence which matched to the literature review regarding social presence and the

category of accessibility, that was discussed in even more detail as how office hours or other

distinct student contact options were embraced by the instructors.

Interview #22 turned out to be the point of saturation for responses. Although there were

excellent anecdotes provided by the following eleven interviews, the base themes had been

established and no truly new concepts were developed afterwards. Although I had developed a

gut-feeling as the interviewer that responses were becoming anticipated, a more thorough review

of transcripts confirmed the saturation concept.

Validity Checks

In qualitative research, the researcher is the primary research instrument. What the

researcher brings to the investigation from his/her own background and identity should be

treated as his or her bias (Maxwell, 2012). Since qualitative research is interpretative

research, researcher biases, beliefs, and assumptions can intrude into the analysis of data

(Rubin & Rubin, 2011). Researchers should attempt to minimize or contain their biases through

full disclosure (Creswell, 2002; Leedy & Ormrod, 2013). Although acting as the lone interviewer

removes the concern for inter-rater reliability, it does provide a singular bias from my experiences and interpretations. To minimize any personal bias on the results of this study, I provided each interviewee a transcript of the interview to allow them a final review to ensure an accurate depiction of their information (Miles et al., 2013). Following the guidance of Miles et al. (2013), relevant quotes offered by participants were included within the study to substantiate the findings.

Butterfield et al. (2005) identified a series of data-analysis checks that are recommended for incorporation to studies to add credibility. Since there is a singular interviewer, the process for interrater reliability occurs by having a separate subject matter expert familiar with qualitative methods and the terminology within the study be utilized in review of various methods. For this study, a faculty staff experienced with qualitative research was provided random interviews from the study for analysis and comparison to my input. The initial transcripts had been altered by excluding verbal connectors – umm, and, uh – to ease readability. However, after discussion with the reviewer, the transcripts were revised to exactly as the audio reflected. The specific data-analysis checks are discussed below.

Audio recording

Recording the interviews provides a credibility check in that it offers an accurate accounting of each participant's responses (Butterfield et al., 2005). Each of the interviews within this study were recorded and transcribed. Furthermore, specific quotes from participants responses were included in the final data report when applicable to best describe an incident. The reviewer validated that the transcripts matched the audio.

Participation rates

Simply stated, participation rates are determined by calculating the number of participants that mentioned an event divided by the number of participants within the study (Butterfield et al., 2009). A coding category should have a 25% participation rate to be considered valid, but this was treated as normative guidance based on a small sample size (Creswell, 2008). Creswell & Creswell (2017) further intimated that the higher a participation rate a category is assigned equates to the importance of that category within the study. Aided by the interview instrument categories, and having only myself as the interviewer and thus a cumulative knowledge of derived potentials for follow-up questions to elicit more detailed responses from the interviewees, each of the coded categories were above 25% participation rate.

Interview fidelity

To ensure interviews are being conducted properly, a secondary researcher familiar with interviews was enlisted to listen to a sample audio recorded interview and review an interview transcript from the study in question to ensure that the protocol is being followed and that leading questions are not included (Butterfield et al., 2009). The reviewer found that protocol was followed and that the questions were asked in the same manner for the interviews sampled.

Participant crosschecking

Providing participants the opportunity to review the identified incidents and associated coding categories allows participants to confirm the validity of the categories and that their experiences are accurately represented by the incidents selected (Butterfield et al., 2009). This check also provides (a) participants the opportunity to amend any incidents as needed and (b) allowed me an opportunity to follow up with participants on any outstanding questions regarding incidents where clarification would help the study. While none of the interviewed instructors requested alterations nor requested follow-up discussions, one instructor did question how the

transcripts were performed. A description of the process using audio deciphering software as well as my individual review of every audio file to ensure transcription had no omissions or mistaken verbiage was acknowledged.

Theoretical agreement

As described by Maxwell (2012) and Butterfield et al. (2005), theoretical agreement includes the inclusion of assumptions associated with the study and a comparison with relevant scholarly literature. My assumptions with this study included the following: university instructors experienced challenges with how to present their course content online, these same instructors overcame their challenges in a variety of ways, they developed new perspectives regarding the use of multimedia presentations, and they developed effective approaches for staying connected with their students.

The literature I reviewed was focused on ERT, multimedia presentation inclusion methods, and instructor presence. The Discussion chapter of this report includes a comparison of the coding categories and the literature review.

Limitations

Although multiple steps were enacted to remedy potential validity issues from deciphering the data to be collected, the small number of participants may have an effect on the overall validity of the study and any inferences depicted. Additionally, I recognize that well-documented limitations (Leedy et al., 2014; Stone et al., 1999) are inherent within self-reported data, but the similarity of responses from independent participants aids in the general categorization of themes.

After reviewing and categorizing the interview data, I recognized another limitation

existed from not specifically differentiating interview responses from the Spring 2020 semester (the time of immediate ERT) and later semesters (where instructors had gained experiential learning regarding overcoming the obstacles of online-only presentation methods). Specifically, an interviewee that taught in Spring 2020, Summer, and Fall 2020 semesters may or may not have indicated a difference in their actions between the semesters and I did not differentiate or universally probe all interviewees in this manner either.

CHAPTER IV

RESULTS

Thirty-three instructors representing 17 departments participated within the study. Only two of the instructors taught the exact same courses within their department. Women made up 58% of the participants. This study explored the challenges and obstacles instructors faced due to the imposed demands from the COVID-19 pandemic, and the resolutions they enacted in order to continue teaching their curriculum and provide a quality learning environment for their students. This qualitative study implemented a phenomenological approach to data collection and analysis. The results demonstrate that higher education instructors exercised proactive and resourceful responses to ensure their students continue learning despite alterations to delivery. This study also demonstrates that instructors offered empathetic interactions with their students in recognition of the external impact from the pandemic.

Interview Themes.

The interview questions were organized to encompass a variety of subject responses related to the overall theme of overcoming instructional obstacles and communication created by the pandemic. While the interview questions offered guidance to potential streams of discussion within the framework of the study, the participants freely offered their own distinctive opinions regarding what they considered to be priority issues.

Technical challenges and considerations

The initial concern for the majority of instructors (66%) was related to the technological requirements for them to shift to online teaching. Study participants indicated that the university's Center for Learning and Teaching (CLT) was quick to announce available workshops and a comprehensive guide to explain and assist with remote teaching, and three-

fourths of participants (73%) reported contacting CLT for guidance. The positive comments regarding CLT's proactive support for instructors is perhaps best captured from instructor #24 that indicated, "I mean, they were really helpful and supportive, and they were kind of like, if you need help, like, reach out to us, we'll hook you up." Only one of the instructors, instructor #27, indicated a negative experience stating "I have found that the workshops that I did attend still as worthless as ever. And I found that either experimenting by myself or looking at other sources was more helpful." While a third of participants (36%) indicated they used self-study methods to learn the technical aspects of teaching online, half of them (58%) also used CLT resource material. Another third of participants (39%) relied on interactions from knowledgeable colleagues who were able to provide one-on-one guidance for a more tailored assistance.

Technical concerns included both hardware and software concerns. Since the university closed, the instructors needed to extract their laptops or desktops from their offices in order to use them from their homes and all participants indicated having internet access. None of the participants indicated difficulty with accessing their materials as the digital files were either located on their computing device or stored on university servers linked within Blackboard^{TM}. Participants indicated difficulty with obtaining hardware (e.g., laptops, camera's, microphones, headsets, and associated wiring) from the university and six instructors chose to use and/or procure personal hardware to present their materials within online teaching sessions. For three instructors, the use of their personal laptop also required juggling of usage times as others within the household (e.g., children needing to attend school remotely via the "family" laptop) needed to use it as well. For one instructor, the ability to display information on a whiteboard was imperative to presentations and whereas the initial solution of creating a lighted studio with whiteboard at home was minimally effective, the final solution was the integration of a

purchased tablet with a high-end software to facilitate live screen capture. Four of the instructors indicated altering their homes to establish an isolated area for online streaming of classes.

All of the instructors used Zoom™ as the online presentation platform to teach their students and this aligns with the meta-analysis research conducted by Bond et al. (2021). A third of participants (36%) specified Zoom™ usage skills as the first obstacle they prioritized needing to overcome. Instructors found guidance for using Zoom™ as they did for all technical matters via a variety of resources including CLT, colleagues, and self-learning with YouTube videos. Instructors indicated that the experience and savviness with software applications, including Zoom™, exhibited by their colleagues ranged from highly knowledgeable to what could be politely described as less-than-novice. Thus, the 13 more technically savvy instructors interviewed described scenarios in which the training from CLT or inter-departmental gatherings regarding the use of online software was often rudimentary. As instructor #16 emphatically stated about an intra-departmental training session, "It was also this real moment where I was like, oh my God, a lot of my colleagues know nothing …they know nothing about Zoom … nothing about anything. Like, one lady literally didn't know how to save a Word document." All instructors also indicated they used the ability for Zoom™ to record sessions to utilize lecture capture for later viewing.

A third of the participants (36%) indicated their first obstacle was ensuring their students had online access. Fortunately, all instructors indicated their students had internet access from their own homes. In addition to being able to access Zoom™ instructional sessions, students needed the internet for access to instructor communication via email, Google suite services (e.g., Google Docs, calendars, etc.), and BlackBoard™ (e.g., syllabus, bulletins, notices, announcements, assignments, multimedia presentations, reading materials, etc.). One instructor

indicated frustration with presentation limitations in Zoom[TM], utilized the online platform Discord[TM] to provide streaming sessions and provide multimedia content specific to the course. The instructor indicated no hesitancy from students to opt into another freely available user-friendly online application that is designed for communication. Although Yoon (2020) and Ferri et al. (2020) indicated issues with internet bandwidth, and university server and/or Learning Management Software malfunctions being a prevalent issue within their research of higher education during the pandemic, the instructors I interviewed mentioned these items as initial concerns but in practice only experienced isolated incidents.

Three distinct technology outliers were identified during the interviews. The first stemmed from a course that required students to use a university laboratory setting. The only acceptable solution required special permissions and limited physical access to the university lab while maintaining health precautions associated with the pandemic. The second outlying issue dealt with the dedicated use of audio for multimedia and assigned reading materials. An instructor described accommodating students that were affected not by blindness as I erroneously anticipated, but rather dyslexia. By providing material in audio format, it allows students affected with dyslexia to attend to much larger volumes of information at a faster rate than it would be for them to read the material. Fortunately, that instructor was able to provide all of the course content in traditional and audio supplanted formats – even if having to record the audio files themself. Lastly, and perhaps the most influential admission from three instructors, was the use of closed-captioning for Zoom[TM] and other applicable multimedia presentations with included audio. Instructors indicated surprise that students asked for closed captioning options within Zoom[TM] or other audio laden presentations so that they can either read the dialogue to avoid using headsets or earpieces while muting external audio so as not to interfere with others, or

access a transcript of the dialogue as replication of notes for the course material. Instructors commented that a portion of their students indicated a preference for multimedia presentations with condensed material such that they can utilize their listening skills and efficiently manage their time. However, some of the same cross-section of students also requested the same multimedia presentation have closed-captioning included to allow for quiet reading or transcripts. Based on this study's small sampling, accommodations for the whole of students requires multiple technological resolutions that instructors must decide for or against implementation based on a perceived return on investment.

Pedagogical challenges and considerations

The interviews revealed that instructional practices were mostly either traditional lecture-based sessions led by the instructor or arranged as student-centered discussion sessions. Since the Spring 2020 educational semester had already started prior to the pandemic response requiring ERT, instructors already had developed and implemented course components (e.g., syllabus, student interaction within Blackboard[TM] including access to digital materials, etc.). Thus, course content required adjustment according to how each instructor planned to present their material via ERT. Each of the instructors interviewed expressed an attitude of proactivity to determine the best solution for continuing their courses.

Asynchronous or synchronous delivery. A by-product of the Spring 2020 semester already being underway was that instructors already had established class times they could utilize if they chose to continue with synchronous teaching. Amongst the interviewees and all the courses they represented, only one instructor did not offer synchronous sessions due to the inaccessibility of a specific university laboratory and the realization that without this space the coursework was more adapted for asynchronous delivery. Just over half of the instructors

interviewed (55%) provided asynchronous instruction either as part of their instruction offerings within a course or entirely for the course. The interviewees provided similar responses characterized by two concepts: asynchronous sessions allow students the freedom to review course materials at times best suited for them but synchronous sessions provide a better instructor connection with their students. Eleven instructors also commented that maturity and study discipline were needed for asynchronous courses. Three instructors indicated a preference for asynchronous instruction based on their own time limitations imposed by the pandemic. For the purpose of this study, the pandemic's-imposed demand on childcare and young children needing to attend school online are real-world factors that exist for instructors as well as students, and directly affected considerations for course delivery. While two instructors passionately volunteered that in comparison with traditional face-to-face delivery grades decreased significantly in lower-level undergraduate courses (i.e., less mature student population) with an asynchronous only delivery, one instructor indicated that grades increased. This topic, as with many discussions during the interviews, provided a wide differentiation of opinions. The following are a few samples of interviewee comments regarding delivery style:

Instructor #24, "I think for the traditional college students, asynchronous online classes are a struggle."

Instructor #32 indicated "For the student that has a lot of other distractions, or life, asynchronous is very helpful."

Instructor #28, "I would much prefer being face-to-face and synchronous because I feel like I thrive on that type of interaction."

Instructor #18:

> If you took me out of the equation, asynchronous, I probably… those classes would be terrible. I mean, because I feel like part of what makes the classes work is my ability to make the discussions work, to answer student questions, to reorient students when they're down a wrong path, encourage them when they are on the right path.

Instructor #26, "I think in an asynchronous setting, it's less stressful for the students, because they don't have to show up for a certain class session."

Instructor #31, "A number of the students really needed the structure of that weekly meeting. And I would say I had roughly 50 to 60% of the class come in live."

Instructor #27, "I find that students tend to do their work, you know, particularly assignments at 10-11 o'clock at night. If it was synchronous, that might not be so easy to do."

Three instructors found that providing a hybrid course that had limited synchronous sessions (e.g., bi-weekly) with coursework being assigned and reviewed within an asynchronous format was a solution that optimized the learning environment. Among those teaching online synchronous courses, only three instructors required mandatory attendance to all sessions but this decision was based on course content requirements that had already been established before the pandemic altered the delivery style.

Access to course materials. Instructors were queried regarding when they provided students access to digital course materials. For this discussion, course materials included: references, multimedia associated with the course, past lecture captures, bulletin board threads, and in general the items stored within BlackBoard^{TM} associated with the course. The discussion of "when available" included whether the information was available to students all-at-once from course start, provided at limited intervals, was available during assessments, was ever removed, and any other specific situations associated with material availability.

Nearly three-fourths (72%) of instructors provided students access to all digital materials associated with their courses from the start of class and additional materials (e.g., lecture captures) were immediately added and available as well. However, a quarter of those interviewed (24%) only provided access to materials during the week of delivery after which they were available until the end of the course. The decisions to have all materials accessible up front were related to convenience for the instructor, or the allowance for students to utilize time management and work ahead in cases where they may have external factors limiting their interaction with the course. The instructors using a limited-release of information strategy unanimously indicated the decision was based on controlling course pacing (e.g., not wanting students to work ahead). Two instructors had past experience with students working through an entire semester worth of material, including discussion thread posts, within the first two weeks of a course and their decision to use a limited-release of material stemmed from not wanting more traditional students (e.g., those performing assignments weekly as they are assigned) to be influenced by early-adopter peers' inputs, and to limit the early-adopters input such that they must (hopefully) interact with their peers' inputs rather than only providing a singular perspective. As instructor #31 detailed:

> I mostly have everything up at the beginning of the semester. However, the way that I held my class structured with the assignments and the peer learning and reflections, you cannot do one of my asynchronous classes at your own speed, there is a very specific weekly structure and schedule that you have to follow. Because I'm trying to create more of the face-to-face classroom experience in the online environment. But you can read ahead. Of course, you just can't do all the assignments ahead and you know, finish the course in two weeks.

Although the study was focused on the shift from face-to-face to online only instruction, the

interviews did not differentiate practices from instructors that had previously taught in an online

capacity. Hence, I cannot unequivocally state that the ERT scenario was causational for those

instructors' decisions regarding availability options. However, the study does validate what

instructors presented to students, when the course materials were made available, and instructors'

opinions regarding why they chose this option.

     Assessments. Five instructors mentioned that they had conversations with department

colleagues regarding leniency towards academic rigor and assessments based on the shift in

presentation delivery methods and concerns that the pandemic was causing additional stress to

students which may negatively impact their study habits.

     Each of the instructors utilized assessments to measure student comprehension of course

material. Six instructors used projects rather than examinations as their assessment mechanism.

Of the 27 instructors that used examinations as their assessment method, 10 offered an open-

book exam in which students had full access to materials. However, the open-book examinations

had a required submission date after-which the examination was inaccessible nor could students

submit their responses. Of the 17 instructors that offered traditional examinations, students were

required to complete the exam within a period of hours after it was provided to them. Four

instructors utilizing traditional examinations also required observed proctoring during test-taking

which required students to employ a second device (e.g., phone, camera) to display them within

their home testing environment as a means of ensuring no cheating. The proctored examinations

required a live synchronous Zoom^{TM} session to allow course proctors the ability to randomly

check-in and observe individual students via the secondary camera device they employed.

However, three instructors also indicated that students with special accommodations requiring

extra time to complete examinations required a separate observed session due to the increased

length of time allowed. And, in the case of a lengthy (e.g., 4 hour) final exams, online proctoring

often required multiple proctors (to allow for restroom breaks) and unfortunately had an

increased potential for transmission loss which often required the testing software to be reset to

allow the student to re-engage with the examination.

Regarding cheating, the instructors that offered open-book assessments adhered to an

ideal that students respected the honor code but also were pragmatic and accepted that some

students may cheat. As instructor #34 providing open-book exams offered, "I have more of a

feeling that on exams, there's some, probably some cheating going on, but it's not possible to

pinpoint where it is occurring."

The interviews revealed that the imposed teaching changes due to the pandemic provided

further evidence to many instructors that instead of a midterm and final examination a better

assessment strategy would be to have more frequent assessments (e.g., quizzes, projects) focused

on smaller curriculum content (e.g., smaller "chunks" of information). Instructor #30 summated

the decision for shorter assessments very distinctly:

> I have moved into more of a smaller set of assessments, so more quizzes, less big exams.
>
> Every class now has lots of smaller assessments. Part of its just to keep people moving, as
>
> opposed to like one big paper at the end or one big exam at the end to have them. You
>
> know, I think students get into a routine of I'm just going to read a little bit and watch this
>
> video every week, and it's every Sunday or every Monday. There's something too, I think
>
> it helps keep engagement up. So, I have just moved to a lot of smaller assessments that
>
> are quizzes that are open book, open notes … I'm really still assessing what they're doing,
>
> or what they know. But they're often timed and I have multiple questions …so students

don't all get the same question. And that way, … I think it's a little bit better at

preventing cheating.

Pedagogical summary. This study found that during ERT, instructors using synchronous

delivery relied heavily on instructor-centric, lecture-based teaching strategies, whereas those

utilizing asynchronous delivery had more student-centered learning strategies.

Research Question: In the midst of the COVID-19 pandemic, how did instructors alter

their instructor presence when transitioning to an online setting?

Teaching presence

While the obstacles for interacting with students that existed prior to the pandemic would

likely not change, new concerns arose when shifting from face-to-face to online only and

include: internet access (at all or during specified times), being able to log into sessions

(bandwidth, browser incompatibility, server overload), file manipulation (e.g., opening/editing

PDFs), navigating between Zoom^{TM} and other files on screen, Zoom^{TM} fatigue, in-class group

dynamics, equity of instructor access, and others specific to class type.

Since the pandemic interrupted the Spring 2020 semester already in session, instructors

already had their course content (e.g., syllabus, assignments, multimedia presentations loaded or

linked, discussion threads, etc.) arranged within BlackBoard^{TM}. A review of syllabus information

from each participant found no ambiguity in any of the courses regarding attendance policies,

assignments, due dates, grading policies, discussion board interactions, and instructor contact

options. All instructors provided emails and bulletin board notifications for the changes to their

courses necessitated by the shift to online-only delivery. All of the instructors either changed

their syllabus, or made an addendum, to reflect how sessions would be continued, date changes

for assignments, and providing an updated plan to all students for how the course would be

facilitated as an online-only offering. Every instructor also provided some version of technical assistance guidance via email or bulletin board post that mimicked the universities IT guidance. None of the instructors reduced or changed the curriculum materials provided at course beginning.

Interactions and Feedback

The interviews revealed that 17 instructors included bulletin board discussion threads within their courses that required peer interaction as well as their own comments. During the interviews a common concern amongst instructors regarding required bulletin board posts was a value proposition. These discussions were similar in that instructors had experienced scenarios in which the early posters (often the same students weekly) provided input and following students merely echoed the initial posts thus not providing truly independent input. Instructor #38 succinctly stated that student posts were not reflective of literature or concepts but either a simplistic comment merely to meet a participation requirement or only an opinion of like/dislike without reflection or content characterization. Unsurprisingly, for those instructors that do require posts, their instructions for what is required, question constructs, model answers, and constructive feedback all combined to provide an interactive discussion regarding the curriculum and avoid the poor types of posts indicated by their colleagues.

All of the instructors mentioned the need for providing feedback to their students. Some also had developed creative, but time-consuming, methods to provide students directed feedback regarding their assignments. One instructor chose to use a software application that embeds audio clips such that the feedback is spoken to the student with the advantages of tone and inflection. The instructor believes, due to student responses, that even a simple "Great Job!" delivered in their voice provides a better connection with the students – especially during the

online-only situation. Some specific examples of instructor and peer feedback comments from the interviews include:

Instructor #16, "And since it's their peers, I'm trying to build a positive feedback loop where like, the people who see like, oh, wow, that's because it has their names and be like, oh, wow, she picked mine as an example."

Instructor #24 stated, "And I'm like, alright, hey, like when you did this, you know, that was really good. Or, you need to work on this right now, just this happened. And I think students are more willing to take that feedback, as opposed to having to go back and look for those comments."

Instructor #26 offered these opinions regarding feedback, "So, you have more time to dedicate to one-on-one feedback. And I personally think that's better for the students. Because I address them individually, they feel that they get my full attention", and, "The one-on-one feedback, and the tasks, and keeping them engaged, keeping them working, it was actually a pretty good format and I was really happy about that."

Two instructors described ensuring that their first interactions were positive, especially in scenarios where the students had failed to achieve the desired academic outcome, to instill a feeling of connectedness with the students and hopefully gain their trust while also guiding them to better performance. Instructor #16 stated:

> Hey, I thought but you didn't quote or you're really vague. So, it's cool. For me to tell if you've read the text next time, make sure you use quotes. And then I'll get responses from them students to a lot of time be like, okay, I'll try better. And then like anytime somebody is doing a good job, I just send them a quick email so it looks personalized.

Instructor #18 offered:

"Even if it only has one good idea, all often right, you know, you have something to

contribute, please, you know, feel free to express some of this in classes is excellent. And

try to give them an opportunity to do that with some of the feedback on the paper so that

you're affirming the positive in the paper and offering the students a chance to take that

from the written communication to oral communication."

Lastly, one instructor stumbled upon a feedback process accidentally when students were

not quick to attend traditionally scheduled "office hours" offered via Zoom^{TM} but did seek to

schedule individual one-on-one sessions. The instructor soon realized these one-on-one sessions

were re-teaching materials but absolutely beneficial to the students and therefore the time-

intensive meetings were well worth the effort. In instructor #21's own words, *"I provided a lot of

one-on-one after class feedback during independent sessions and the students who opted for

these sessions liked the individual contact."*

Instructor immediacy

All of the instructors within this study relied on email as the direct and independent

communication method with students. For many, the use of the bulletin board provided an

additional communication stream – especially for assignment feedback. Instructors also

mentioned that while they and their students were working from home it was not uncommon for

both parties to be responding to emails throughout the entirety of a twenty-four-hour day.

Although a strong advocate of twenty-four-hour access via email, one instructor did describe a

disadvantage as compared to traditional office hours in that students across differing courses

would send emails with individual questions and it became cumbersome due to both the volume

of emails and associated investigation time as students might not indicate which course they

were attending. Another instructor wrote a script for their email inbox to direct emails by name

to the appropriate course inbox to overcome investigative efforts and focus on the topic the student was addressing. Many of the instructors also indicated keeping their synchronous sessions open after the allotted course time was completed to allow student questions. Instructor #23 passionately described answering student questions and providing a positive interaction experience as follows:

> It was just kind of an interesting, dynamic, you know, man, just a lot of email. When I say a lot of email, I mean, it was a lot of email. And just something, particularly when students really seemed like they had a problem, you know, what I mean? I'd say, let's, let's talk about this and, you know, half the time, it was like they were just stressed, you know? Or, just a lot of email, really, and then some discussion after class.

Instructor #25 succinctly added regarding student contacts, *"So, they email me, you know, when they have a question, if they need to interact, privately, I did have some office hours, you know, where I was available to them. But, yeah, it's mostly email."* Regarding student interactions and coursework, instructor #27 offered, "Well, basically, I try to encourage people through email and to, you know, keep up. My students tend to fall into either they're doing nothing, or doing very little, or they're doing fine."

Regarding students that are not high or low achievers, but somewhere in the middle, instructor #28 chose an engagement action to include them more and explains:

> "Yeah, so every day after class, I send a recap email. So, people who are sort of, sort of engaged but not so real…, not really all the time, and maybe miss some of the important details, I send a recap email every day with the reminder of what to do before next class and what they should. In my case, they're watching videos before the next class, at this point in home teaching. So, I send them like a daily reminder to try to keep those people

who are sort of, kind of in the middle. On board, I also add names to the end of every

email that have to do with the [redacted]content of that day.

Instructor #30 identified a concern from students that they did not review all assignments despite

having provided a grade or individual feedback. The instructor, wanting equity and transparency,

supplied, "I write a weekly, or like a module wrap, email where I highlight certain discussions

from different people to want to show them that I'm reading it for real not just like telling them

that I'm reading it."

Social presence

Availability. One aspect of instructor presence is the ability for students to

contact instructors separately from scheduled class sessions. All of the instructors provided either

a university or personal email address for students to contact them. All of the instructors

indicated they stopped using a scheduled office hours model and switched to student-requested

meetings to best accommodate their students. Just under half of the instructors interviewed

(48%), in addition to email, utilized bulletin board interactions as well. For those that did, they

offered that it was tedious to monitor the different communication options but it was worth the

effort to accommodate students. A small number (15%) of instructors interviewed also chose to

give out their personal cell phone numbers to maximize contact capability. As a whole, the

instructors accepted some personal time imposition in order to provide students with ease of

contact with a unanimous self-imposed response protocol of less than twenty-four hours.

Instructor #21 stated:

These abnormal circumstances that we are living under still, to some extent, primary

clear to all the students that they could call me at any time between 10 o'clock in the

morning and 10 o'clock at night, on this phone, or on my home phone, or at the office

phone, I would always be available.

Instructor #14 offered:

I had twenty-four-hour email and phone availability, the zoom, no one took me up on the

zoom office hours. And so, I just decided to pull the plug on it. I think that they would

just rather hear a live person or get an immediate response to email, I try to be very quick

about it.

Instructor #29 shared:

But the number one issue I have is it's like, hey, are you available? Are you free? It's like,

yes, I am, like, these are things you can do to get me and like, I've gotten multiple

messages, students tend to treat email as like text messaging.

Care. Instructors within this study were aware of the affective domain

relationship with their instruction and actively sought to foster care within their student

interactions. Interview highlights are included to indicate the concerns they shared. Instructor

#16 stated, "It's very important for me that they [students] feel seen, you know, and be like, I see

you, I see you, I see you, you know." Instructor #35 stated, "I did an individual email to all 80 of

my students … And I heard back from like, 70 of them with a wow, you emailed just me and

helped me figure it out."

Instructor #28 offered:

So, like, I think that trying to reach out to them, by some means to let them know that you

are a person and not just somebody who shows up and talks [redacted] is important. And

I think that that's one of the ways you build relationships with people who may not be

your top performing students.

Instructor #38 shared:

> I always gave them my personal email, in addition to my regular [work] email, and I gave
> them my phone number, which was, surprisingly, people were like, you gave 50 students
> your phone number?! … But it's, I mean, it really, it helps them. Like then they get to
> choose how they respond, because I'm like, if you send it to my work email, its likely I
> just don't check it very often, because I have to go through 20 steps of verification or
> something. But if you text me, or send me something in my private email, and say, I need
> to hear from you immediately, then, you know, it was like, I'm sorry, you have to go to
> all that trouble. They learn pretty quickly. If they texted me, they would get a response
> right away.

The Biggest Lessons Learned.

Instructors were queried at the end of each interview and requested to provide what they considered their biggest "lesson learned" during the period of emergency remote teaching and their responses are consolidated within Table 4.

Table 4.

Lessons learned indicated from instructor interviews. (n=33)

Consolidated lessons learned.	Count
Clear and detailed instructions. Organized BB + assignments.	5
Student engagement is key to successful learning. Instructor-student.	5
Adaptation and flexibility for students' needs.	4
Feedback is very important.	3
Learn and master the tech early (e.g., Zoom).	2
Online requires re-focus of content.	1
Use time with students for discussion and interaction vice lecturing.	1
Asynchronous teaching is less engaging. Feels like it isn't "teaching."	1
Students need a live online encounter for questions/summary separate from class.	1
Seek to evoke critical thinking skills and facilitate discussion vice lecture.	1
Informal interactions provoke connection and learning.	1
Lab sessions require extra interaction time.	1
Develop student routine.	1
Clear expectations and nurturing are required for today's online students.	1
Acquire necessary equipment. E.g., Tablet for drawing "Khan-style"	1
Students won't attend online unless you force them or make them want to.	1
Change testing to narrative - grade for understanding.	1
Students need to set aside time - formal seriousness - for classes.	1
Use short videos. Focus on content.	1

Note 1: Student "engagement" included social interactions whereas "feedback" was specific to assignments.

CHAPTER V

DISCUSSION

Summary, Purpose Statement, and Research Questions

This chapter presents a discussion of the study and important conclusions interpreted from the data presented in Chapter IV. Additionally, it includes a discussion of the implications which may prompt action, and recommendations for further research.

The COVID-19 pandemic forced a university to shift to an online-only option for course attendance during the Spring and Fall 2020 semesters. Instructors were given extremely short notice (two weeks) to resume their face-to-face classes. The purpose of this study was to examine how instructors presented their material in an online setting, the types of multimedia presentations instructors decided to use, how they implemented their presentations, and how they maintained instructor presence with their students. The following research question guided this study:

1. In the midst of the COVID-19 pandemic, how did instructors alter their instructor presence when transitioning to an online setting?

Significance of the Study

This investigation and documentation of the decisions, strategies, and practices higher-education instructors used to create a positive learning environment – especially during periods that require implementation of emergency remote teaching - will likely be of interest to instructors, instructional designers, and administrators faced with resolving similar issues in future scenarios and provide them with information that will provide preparatory guidance and lessons learned to improve instructor self-efficacy, craft effective instruction, and engage students.

Findings Related to the Literature

The literature review identified the term *emergency remote teaching* (ERT) that was adopted to reflect remote teaching solutions for instruction and education that would otherwise be delivered face-to-face or as hybrid (blended) courses. The ERT term was used enough by other researchers such that queries into peer-reviewed journals with this term yielded additional studies relevant to this study. Hodges (2020) description of ERT as instructors "having to improvise quick solutions in less-than-ideal circumstances" (p.2) and that they "will be doing the best they can, trying to take just the essentials with them as they make a mad dash during the emergency" (p.3) was echoed by the participants within this study as they provided examples of just-in-time instructional offerings which aligned with the ERT concept of having to differentiate and decide what was essential material to present and what could be eliminated. However, participants did not overtly express an opinion regarding whether their students had a different learning experience.

Although the use of multimedia presentations was a requirement for inclusion, the study had no restriction on the type or fidelity of the presentations. Instructors within this study indicated interest with multimedia delivery options (especially the ease-of-use for them as content creators). Although some courses were taught synchronously online, there was minimal concern indicated for students' learning from missing the live offering as instructors embraced the use of lecture-capture recordings as it allowed students to observe presented information at their convenience. While the ERT literature focused on the differentiation between face-to-face attendance versus lecture-capture, there was not a differentiation for synchronous online offerings versus later viewing of the recorded session.

The 23 instructors that provided asynchronous course offerings provided a wide variety of multimedia presentations to their students. The review of instructor offerings was primarily conducted with the lens of a validity check to observe what the instructors were presenting compared to what they had mentioned within their interviews. In all cases, the materials they described utilizing were present. Additionally, during the review of multimedia presentation options instructors provided, there was no noticeable correlation between type of multimedia material and instructor topic (e.g., it wasn't just science or engineering courses that offered demonstrations or labs) nor did there exist instances where an instructor specifically chose to use only one category of multimedia material.

Due to the pandemic and the abrupt shift to online-only sessions, instructors within this study exhibited facets of Tessmer and Wedman's Layers of Necessity model as well as Tessmer's focus on the need for instructors to assess the learning environment. Tessmer and Wedman's (1990) Layers-of-Necessity model differentiates from fully developed instructional design processes in that it is sensitive to external constraints such as time and resources. More specifically, Tessmer and Wedman (1990) indicate that their Layers of Necessity model emphasizes that effective instructional design is determined by "what can be done not what ought to be done" (p. 81) and instructional designers faced with a variety of constraints (e.g., short time to deliver a working instructional product) should "select activities that are likely to have the greatest instructional benefit for the least resource/time cost" (p. 81). Tessmer (1990) stated unequivocally that instructors need to "identify the aspects of the environment that will influence the instructional system, gather information on each of these aspects and their relationships, and depict a scenario of the instructional products facilities and use" (p. 62).

The following examples offered by participants align with Tessmer and Wedman's work:

- Initial decisions for how they would offer office hours or how often they would interact with students individually were adjusted as instructors realized what decisions were working and which required adjustment. The initial decisions (e.g., set office hours during x time) equate to a Layer 1 design – resolving a functional need – whereas adjustments to the initial plans (e.g., answering students' questions ad hoc without specific times) equate to Layer 2 and beyond designs. There were multiple examples that fit this analogy.

- Instructors realized that although the university had resources available for students to overcome technical issues, that the students relied on them for guidance. Hence, instructors recognized they were – according to Tessmer's environmental factors – providing physical instructional and support measures to ensure their students could overcome technical difficulties.

- Instructors also realized rather quickly that their interactions with students were paramount to student success. When considering the stressors of the pandemic – illness, uncertainty of employment disruption, etc. – instructors' decisions regarding student interactions require a layered approach to assuage students' concerns of technical incompetence and overall assessment of students' well-being.

This study expanded the literature in that instructors independently identified multiple elements of instructor presence as being necessary for student engagement and contributing to a positive educational environment for students.

Instructors mentioned that preparation time for online instruction required more effort than with face-to-face teaching, but the researcher recognizes that the imposed demand of limited

time to shift to online-only delivery options and individual instructors' familiarity with online

teaching were influencing factors. Eight of the 33 respondents had similar responses regarding

the time committed for course enhancement and instructor #26's comments best captured the

sentiment as follows:

> I can tell you that online teaching actually made me work a lot harder because I feel
>
> that just working from home, I'm more relaxed and less stressed too. And I find myself in
>
> front of the computer all the time doing something, finding another video for them,
>
> creating another quiz to go with the video for them.

The results of this study agreed with the literature indicating instructor presence is a

needed commodity that has an impact on student learning. When asked of their top lesson

learned from the shift to teaching online during the pandemic, the top four instructor responses,

and 18 of 33 total, were specific to instructor presence. A sampling of collected anecdotes of

instructor presence items included: providing students with detailed class syllabus changes,

calling each and every student, providing students with personal phone numbers in addition to

email and discussion board communication options, establishing individual one-on-one

discussion time at students' convenience versus traditional office hours (online), and providing

written and audio feedback to individual students regarding their work.

Instructor presence, via a variety of online communication efforts, was found to be an

influential strategy for improving student academic outcomes. A comparison of the literature,

interview statements, and observable data (e.g., syllabus, bulletin board threads, etc.) indicates

that as instructors design their courses for online-only distribution, they should take into account

the following considerations:

- Aligning with Fiock (2020) and Fuchs (Fuchs & Karrila, 2021), course content should be organized, with detailed instructions for assignments, due dates, grading criteria, and participation requirements. Participant #43 stated it directly as, "all your instruction, all your materials, everything needs to be clear, it needs to be organized."

- If discussion board threads are to be used, students should be provided incentive and guidance regarding submissions to stimulate more meaningful interaction. And, interactive instructor feedback within the threads is required. If instructors do not maintain an ongoing presence on discussion boards, students may feel that their participation is a waste of time. Perhaps best indicated by Fahara (2015) that instructor immediacy is represented by actively monitoring discussion forums, providing relevant feedback, and can instill student interaction and collaboration.

Caring, a distinctive component of instructor presence, is well-defined by VandenAvond (2020) as "care in the online classroom is demonstrated most clearly through personal attention to students: responding to emotional tones, accommodating individual differences, responding to student inquiries, checking and responding to emails, and promptly interacting with students" (p. 977). The following three strategies reflect these aspects:

- Instructors should reply to questions promptly as it indicates responsiveness and connectivity.

- Feedback should be provided frequently and include actionable guidance and praise when appropriate.

- Instructors can engender a sense of caring by striving to be accommodating to students' needs and soliciting student feedback about the course, routinely rather than only at course end, and using that feedback to enhance the course.

- My own past research (Miner & Stefaniak, 2017), the Faculty Playbook for delivering instruction during the pandemic developed by O'Keefe et al (2020), and this study's participants each declare the strategy of combined use of multimedia presentations along with written lecture material within instructional sessions provides multiple ways for students to engage with content and aids developing a strong instructor presence.

- Oyarzun et al's (2017) research stated, "The value of instructor social presence in the literature is strong. Instructors are encouraged to establish a social presence by not only being present in the online environment, but also developing a social connection with their learners." (p. 120). Two components of instructor presence, caring and social presence, can be represented within an instructional strategy of having weekly interactive student sessions separate from scheduled class allows for personalized instruction and gives students the opportunity to get to know their instructor. Whereas all of the participants within this study mentioned weekly interactions (i.e., live meetings, discussion board queries, emails) as a minimum, instructor #31 specified "some students really need to have a weekly [virtual] face-to-face encounter". Instructor #31 also gave credit to CLT for the recommendation of an "Ask the Professor" bulletin board thread which they used to allow students' an avenue for asking questions separate from course content but also became a de facto Frequently-Asked-Questions (FAQ) page for other students to peruse as well and ultimately provided another interaction mechanism to engage students.

Implications

The first implication from this study is that instructors need to get ahead of technology obstacles quickly. Whether they have the self-efficacy to learn the specific requirements themselves, choose to adopt strategies and learn from a trusted colleague, or seek institutionally provided assistance, it is imperative that they should not let technology impair their instructional

capabilities. Akin to the emergency responder priority of take care of yourself first, instructors should identify what actions are required by them to present material online and prioritize performing the steps necessary to accomplish these actions. Example actions include: saving digital content onto their computers, uploading content for distribution to students, becoming proficient with online streaming software (e.g., Zoom[TM]), and becoming proficient with the university learning management system (e.g., BlackBoard[TM]) for not only content distribution but also for functions such as access monitoring. A secondary focus, should be with aiding their students with access and usability proficiency. By learning enough information to provide simple tech-level one troubleshooting instructors can reduce the burden on the university IT staff for resolving simpler issues (which aids all users), and provide an active instructor presence with their students by modeling what they have taken the effort to learn and perhaps instill a we are in this together camaraderie. In addition to the obvious instructional gain of ensuring students can access the curriculum material, there is also a long-term gain of earning the students' trust.

The second implication addresses what was unanimously exhibited by all interviewees as a proactive nature to continue instruction to their students. Regardless of department, topic category, a topic's perceived difficulty, or whether the course was mandatory or an elective, each instructor was keen to ensure the students in each course they taught had access to the materials and felt they had access to the instructor such that they could achieve content mastery. This assessment was more than the concept of a quality instructor should always want their students to excel, but rather an observation of the perseverance of instructors to adapt, improvise, and overcome obstacles to ensure student success. Hence, it is this instructor proactivity that should not merely be acknowledged but exalted and leveraged by department chairs and instructional designers to further develop future plans for presentation strategies and instructor presence.

Using a collegial approach that is inclusive of potential best-practices, whether intra-departmental or inter-departmental, the results of this study indicate that instructors would welcome a cohort of fellow instructors' approach to developing processes that addressed the obstacles identified from teaching during and subsequently after the pandemic.

The third implication regards a value proposition of teaching face-to-face, only online, or a hybrid scenario. Although this study did not address student content mastery outcomes as indicated by course grades, it did address the continued rigor of testing mechanisms during the pandemic. And, assuming the grades are similar to those assigned prior to the pandemic (and specifically compared to courses with face-to-face sessions), there is evidence that online methods were successful. But this implication focuses on the instructor aspect in that they reported teaching from home versus from their on-campus office and twenty-four percent of those interviewed indicated they committed more time to preparing their instructional materials. Hence, continuing with this concept: working from home was successful for providing the required educational content, instructors spent more time working with the content, and they perceived less stress due to a variety of factors (e.g., child care). Given a positive learning outcome for students, instructors spending more time with their material, and instructor perceived quality-of-life benefit from effectively teleworking, it would benefit departments to determine if options such as bichronous (hybrid) courses that offered asynchronous student portions followed by synchronous sessions with the instructor (thus less group sessions overall and the inclusion of more at-home time for both instructors and students) could be implemented. Additionally, the adoption of bichronous courses could also include online group sessions as well as online office hours identified as the preferred method by instructors from the study. Ultimately, the implication is that departments and individual instructors should review what

delivery options are available, have proven academic success, can include a variety of multimedia presentation methods, and would benefit instructors and students.

The fourth implication is the broadest in that there should not be a one-size-fits-all solution for instances requiring emergency remote teaching. Decisions such as: synchronous versus asynchronous, typology of presentations used, student access to course materials, and types of assessments are all independent variables and subject to the ability of the instructor and the content material. Universities as a whole, and individual departments should invest in instructional design training for their staff to address these, and other, variables to offer instructional staff a set of tools for their instructional toolbox. It is assumed that each instructor already had content learning objectives, lesson plans, and assessments within their F2F courses. The pandemic, and thus ERT event, focused instructors to get their curriculum to their students quickly in the new medium (online) and likely use what they'd already created with alterations as needed to overcome delivery obstacles. However, after the initial shock of the event and the scramble to get the curriculum presented to their students, instructors had an opportunity – and still do – to consider different instructional strategies that might better impact students' learning. Rapanta et al (2020) influences this implication within their own conclusory summation:

> Another [pedagogical] strategy is the blending of different instructional approaches that promote a flexible and continuous assessment of the learning activity, rather than sticking to one method or two and following them as an orthodoxy. Teachers must always be willing to design and redesign their syllabi and materials to make sure that they adapt to learners' needs, contexts and capacities. (p. 736)

Continuing his research regarding the impact of ERT and tertiary effects, Hodges aligned with a colleague (Hodges & Fowler, 2020) in challenging instructors within higher education to reflect on their ERT experiences and identify "what "went well" and what "did not go well" with regard to teaching normally face-to-face and hybrid courses fully online via remote teaching." (p. 121). And turning his lens to assessments, Hodges & Barbour (2021) surmised the need for instructors to "take a radical flexibility orientation toward designing, developing, and utilizing assessments that will be adaptable to a host of circumstances including emergency remote education." (p. 92).

Lastly, the fifth implication is prescriptive in that instructors presenting course material online need to understand and exhibit all three elements of instructor presence - teaching presence, instructor immediacy, and social presence – to best accommodate their students and provide a positive learning environment. This is especially true for instructors using asynchronous learning sessions as they are not witnessing their student's interactions with the curriculum materials and must rely on other connections (i.e., discussion boards, individual virtual meetings, phone calls/texts, emails, etc.) to establish instructor presence. But, given variables such as a large class size or student absence from synchronous course offerings where observation of student interaction during a live facilitation/teaching phase may also be limited, all instructors must rely – and depend – on these other connections to establish instructor presence. This implication stems from the Community of Inquiry framework created by Garrison, Anderson, and Archer (1999), the defined elements of instructor presence - teaching presence, instructor immediacy, and social presence - as defined by Oyarzun et al (2017), and continued studies regarding the positive impact of instructor presence on student learning (O'Keefe et al., 2020; Redstone et al., 2018; Richardson et al., 2016; Richardson & Lowenthal,

2017; Van Heuvelen et al., 2020). Ultimately however, this research points to a basic concept of doing what is best for students. I choose to believe this was plainly identified by Tessmer (1990), whom considered external [environmental] factors - such as student perceptions of a delivery medium and needed support mechanisms to ensure a quality learning experience - as being a neglected portion of the instructional design process, when he stated "environmental analysis should precede selection of instructional strategies, media formats, and formative evaluation plans." (p.62).

Recommendations

In part, this study offers future instructors' guidance from the perspective of what decisions others endured and the solutions chosen should an event requiring ERT occur again. Based on study findings, I suggest the following actions:

- A community approach including experienced online instructors, IT subject matter experts (e.g., software applications and compatibility, hardware concerns), and departmental representatives should be enlisted to provide a prescriptive solution for common technical issues for beginners and baseline usage. A simple how-to guide, with examples, would likely be well received.

- A community approach, including intra- and inter-departmental experienced instructors, should establish a university guidebook describing effective practices for teaching presence and include: content organization, instructional designs that entice interactivity, feedback delivery, and student engagement.

- Construction of a university-wide series of faculty training presentations for online learning practices with annual review for updated information.

- Reflection and documentation of lessons-learned associated with emergency remote teaching from higher-education faculty to garner effective practices into wider distribution.

- A plan to address the digital storage (e.g., size of files) and streaming limitations based on bandwidth, each of which coincide with the literature that expresses a concern for technology becoming a limiting factor for access and distribution of online presentations and course materials.

Future Research

The limitations of this study provide a path for future research. Future research focusing on the differentiation between instructor presentation decisions during the pandemic – adaptations associated with ERT - compared to the changes in their approach to online presentations and instructor presence after the period of ERT would provide a more detailed data set and could explore decisions that may have the highest impact on students' learning. Additionally, studies could also include what practices adopted during the pandemic have permanently influenced instructors' decisions even now that there is an allowance to resume face-to-face sessions. Specific to this study, and likely others of a similar style, a secondary review (follow-up) with the same cohort of interviewees or new participants that were instructors during the pandemic, would also offer an approach focused on the practices instructors have adopted or changed based on their pandemic ERT experience.

As this study took place at one institution, it is unclear if the adaptations for instructor presentations and instructor presence were influenced by the university's philosophy and culture passed to each department. Hence, this study should be replicated across multiple institutions to determine if instructor decisions developed due to the pandemic and associated ERT, along with

continued adaptations of instructional presentations and instructor presence, is a universal concept within higher education.

Continuing with the concept of a wider view across multiple institutions, a simple search of scholarly articles reveals multiple studies associated with the impact of the COVID-19 pandemic on higher education. Now that the immediacy from the event has passed, it seems logical that a meta-study project reviewing and correlating the variety and results of these studies into a comprehensive collection is both appropriate (based on timing from the event while memories are not too distant) and would provide the target population of higher education instructors and instructional designers with an informative toolkit.

Conclusion

The study results serve to provide solutions that will preclude many of the obstacles from being as debilitating to future instructors in similar situations. These solutions include technical, pedagogical, and student engagement actions and align with current literature. The study indicates that instructors, exposed to a unique phenomenon affecting both them and their students, with little experiential data to aid them, and whom had minimal online teaching experience, can quickly improvise to create equitable and effective online-only learning environments with strong instructor presence features.

The results broaden the current literature associated with emergency remote teaching during the COVID-19 pandemic. Specifically, the results of the study reinforce the need for a pre-planning guidebook within institutions of higher-education to address the technical, pedagogical, and teaching presence issues reviewed. Instructors are not individually well-prepared for online teaching (García & Weiss, 2020; Hodges & Fowler, 2020; Rapanta et al., 2020) and this study provides additional confirmation to this ongoing issue.

On a promising note, interviews revealed that instructors were very proactive with efforts to overcome all encountered obstacles and provide the best possible learning environment they could when faced with the difficult circumstances from the pandemic and limitations associated with emergency remote teaching. These results reinforce the concept that instructors want the best for their students and will adapt their instructional designs and consider innovative accommodations to aid student academic performance.

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Appendices

Appendix A

Semi-structure interview questions

Name of interviewee
Department/Courses
Participant number
Date of digital interview

- How did you learn that you were going to have to teach the remaining portion of Spring 2020 online?
- What was the first obstacle you identified and decided to overcome?
- What technical issues did you encounter with transitioning to online-only?
  - How did you overcome these issues?
  - Whom did you consider contacting for assistance?
  - What did you learn that you consider to be "must know" information for instructors needing to present online?
- How did you present your content to your students?
  - Mechanism? (Blackboard, Zoom, etc.)
  - When did you make presentations available? Always available afterwards?
  - Do you use multimedia presentations within class time? W/WN?
  - Do you provide multimedia presentations in group sessions? Whole class sessions? Individual viewing?
  - Did you have presentations required for viewing outside of class time? W/WN?
- What types of multimedia presentations did you offer?
- Regarding your presentation strategies:
  - How do you facilitate the presentations: during, immediately after, blog, next class, only when asked?
  - Asynchronous/Synchronous? Why?
  - Did you have assessments associated with your presentations? Explain.
- How did you maintain an instructor presence? Or, in other words, what specific things did you do to ensure your students were able to …
  - ask you questions?
  - interact with other students?
  - feel that their voice was heard?
- How did the quick time of transition affect what you provided?
  - What would you do differently?
- What would you say was your biggest obstacle you had to overcome?
- What would you describe as the thing you learned the most from the experience?
- What perceptions do you have about …?
  - the difficulties of technology to teach online?
  - effectively teaching online?

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Southern Illinois University, Carbondale, IL December 18, 1992
-    Bachelor of Science—Vocational Education Studies

WORK EXPERIENCE

Branch Head-Corporate Training Manager, Corporate Radiation Health, August 2021-Present
Instructional Designer-Fleet Maintenance & Radiological Support Division, December 2013-August 2021
Norfolk Naval Shipyard, Portsmouth, VA

Principle Research Scientist-Medical Readiness & Response Training, February 2010-December 2013
Battelle Memorial Institute, Columbus, OH

Naval Officer/Enlisted May 1985 – February 2010
United States Navy-various locations
Master Training Specialist

PUBLICATIONS

Miner, S., & Stefaniak, J. E. (2018). Learning via video in higher education: An exploration of instructor and student perceptions. *Journal of University Teaching & Learning Practice*, *15*(2), 2.

HONORS AND AWARDS

Summa Cum Laude graduate 1992