THE SILENT SECRET: COLLEGE INSTRUCTORS' NONVERBAL BEHAVIOR AND ITS CORRELATION WITH STUDENT IMMEDIACY

by

Jared Fujishin

Liberty University

A Dissertation Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy in Communication

School of Communication and the Arts

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ABSTRACT

This quantitative research study focuses on the relationship between college teachers' nonverbal communication behaviors and the influence that those behaviors have on college students' perception of immediacy. Understanding the factors of immediacy, or trust and rapport with another, is imperative for educators as the current literature suggests that how students feel toward their instructors plays a role in the retention or attrition of students. Although nonverbal communication is only one part of a complex set of variables that go into the equation of student retention, it is an important aspect of the equation to study because nonverbal communication is constantly happening in every lecture and every student-instructor interaction. By gathering Likert scale data from over 1,800 college students across the nation, this study found that the most highly correlated nonverbal categories (haptics and proxemics) were the two that required individualized interactions with students. The findings from this study suggest a correlation between student-instructor immediacy and educators who go out of their way to connect with students on an individual and personal basis. This study has theoretical implications within the nonverbal immediacy field and practical implications for educators and higher education.

Keywords: immediacy, nonverbal communication, college student, relationships

Dedication

This dissertation, along with every other work in my life, is dedicated to the one who gives and sustains that life. Seeing the hand of God bring this dissertation to fruition has been so fun to watch. It often feels as if I am watching a movie as I watch Him put all the pieces together. This dissertation was no exception and only furthered my deep awe, admiration, and affection for Him. To write down every way in which God has brought this dissertation about would require a document longer than this dissertation itself; from funding, to opportunity, to timing, to the people he brought alongside me, to the family I was born into… He has done it all. With deep humility, I thank Him for continuing to guide the path of my life, and I dedicate this work and all that comes from it to Him.

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CHAPTER ONE: INTRODUCTION

Overview

One cannot *not* communicate (Watzlawick et al., 2017). Even in the absence of words, every head nod, smile, hand gesture, or roll of the eye acts as a constant stream of nonverbal communication (Britto, 2018, Cherry & Susman, 2019; Danesi, 2021). Although an individual can limit the amount he or she wishes to speak to others, they cannot stop their nonverbal communication. Humans are constantly putting forth a message based on their physical actions or lack of actions. In addition to being constant, nonverbal communication also holds the power to support or alter the meaning of the verbal message being shared (Camarillo-Abad et al., 2019; Döring & Pöschl, 2017; Friedman, 2019). When someone says, "I am so happy to see you!" with a smile, and steady inflection, the nonverbal action of smiling and steady inflection supports the verbal message that they are indeed happy to see you. If the same person were to say, "I am *so* happy to see you" while rolling their eyes, crossing their arms, and putting a sarcastic tone on the word "so," then their nonverbal actions would drastically alter the message of the verbal communication being shared. Nonverbal behaviors give added meaning to messages that are sent with and without words and have the power to enhance or detract from a sender's intended message to another.

Nonverbal communication is something that affects all people in every field of work (Burgoon et al., 2021; Cherry & Susman, 2019; Frymier et al.). This study aimed to zoom in and look at nonverbal communication's effects on education. Specifically, this study examined how a teacher's nonverbal behavior correlates with student immediacy trends. Although studies have been done on both college retention and educational immediacy trends (Estes, 2021; Juszkiewicz, 2020; Zheng, 2021), little is known about the specific nonverbal traits that lead to

student retention and immediacy in college classrooms today. This researcher reviewed the literature surrounding retention, nonverbal communication, and immediacy and used the knowledge gained from the literature to craft a questionnaire for current college students about retention, immediacy, and nonverbal communication.

Chapter one contains a clear yet concise overview of nonverbal communication, student immediacy, and student retention. Chapter one accomplishes this by sharing the background of the topic, the researcher's situation to self, the problem statement, a discussion of setting as it pertains to the college classroom, the significance of this study, the study's research question and hypotheses, and key definitions of words used throughout the study.

Background

The following background section contains a general overview of the most relevant literature pertaining to nonverbal communication, immediacy, and student retention. The following background section will be broken up into three major sections: the historical, educational, and theoretical backgrounds of nonverbal communication, immediacy, and college student retention. From these three major groups, the reader will be introduced to the major concepts, norms, and theoretical frameworks that have guided the discussion of nonverbal communication in the academic world.

Historic Background

Before looking at how nonverbal communication impacts student retention rates, one must learn about the history of communication. One of the earliest recorded instances of nonverbal communication dates to the Jewish Tanakh in the early 900 B.C. (Dever, 2021; Faust et al., 2021) and was philosophical in nature. Around 900 B.C., the final king of the united nation of Israel was Solomon. In King Solomon's book of *Proverbs,* there exist some of the earliest

recorded mentions of nonverbal communication. King Solomon writes on the effects of proxemics (English Standard Version Bible, 2007, Proverbs 31:12–27), kinesis and facial nonverbal behavior (English Standard Version Bible, 2007, Proverbs 16:30), and even the power of body language (English Standard Version Bible, 2007, Proverbs 31:12–27). Faust et al. (2021) suggest that these proverbs are some of the earliest recorded philosophic writings on nonverbal behavior and have shaped the way that many religious readers of Scripture live.

Following the early Jewish and Christian writing, Jones (2020) observed that the Greco-Roman era also held a great deal of writing on nonverbal communication; however, nonverbal communication was not the focus of most Roman writing. Jones (2020) made the case that famous philosophers such as Quintilian and Aristotle would write on various other topics such as oration or presentation and made mention of nonverbal behaviors and effects, but that nonverbal communication was not the primary focus of their writing. Although nonverbal communication was not the primary focus of Quintilian and Aristotle's writings, their work remains vital as their basic nonverbal findings are formative to current-day research in the field of nonverbal communication (Bambaeeroo, 2017; Jones, 2020). The intentional and robust research surrounding nonverbal communication began around the 19th century.

19th and 20th Century Research

In the 19th and 20th centuries, nonverbal communication became a primary area of study rather than a supplementary area of research. During the 19th century, one of the earliest researchers to contribute to the field of nonverbal communication was Charles Darwin (Friedman, 2019; Freitas-Magalhães, 2020; Givens & White, 2021). Darwin (1872) studied the correlation between humans and animals and found great similarities between both humans and animals' use of nonverbal communication. One of his findings was how both animals and

humans bear their teeth in anger before attacking another. From his findings, Friedman (2019) suggested that researchers in the 20th century began focusing more on the importance and meaning of nonverbal behavior. In the 1940s and 1950s, the use of video was employed to better capture and understand nonverbal behaviors in human interactions by researchers like Efron (1941). People like Birdwhistell (1954) also began studying different facets of nonverbal behaviors such as kinesics, oculus, vocalics, proxemics, and immediacy (Givens & White, 2021). Nonverbal immediacy is a subsect of nonverbal communication studies and was introduced to the research world in the 1970s by researcher and psychologist Albert Mehrabian (1972). Teel (2019) shared that Mehrabian's branch of nonverbal communication study sought to better understand how nonverbal behaviors led to immediacy, which is also known as the trust and rapport between two individuals or groups of individuals. Mehrabian (1972) proposed that the way in which people acted, both verbally and nonverbally, would influence whether people were attracted to an individual or wanted to create distance with the individual. Although the original study included both verbal and nonverbal behaviors for immediacy, the research that followed Mehrabian's (1972) original work focused much more heavily on nonverbal behaviors. In the decades to follow Mehrabian's original theory proposal, nonverbal immediacy was studied by a variety of other fields and applied to fields such as education (Tatum, 2018), business (Janevki & Zafirovska, 2015), and the medical field (Lee et al., 2021).

Educational Context

Nonverbal communication remains critical in the classroom because it can underscore and enhance the content teachers share (Keef, 2020; Gardener, 2019; Strauss, 2017). While an educator may have great thoughts and verbal content, they may prematurely lose their audience's attention and not get to relay their important information to students if they do not demonstrate

appropriate nonverbal behaviors. A recent study by Rosati-Peterson et al. (2021) suggested that nonverbal immediacy is correlated with multiple positive student outcomes like increased information retention and decreased anxiety. LeFebvre and Allen (2014) also conducted a study and concluded that a teacher's nonverbal immediacy is directly linked to heightened informational retention in students. Rosati-Peterson et al. (2021) also confirmed Chesebro and McCroskey's (2001) earlier findings that there was a correlation between decreased measures of receiver apprehension and a teacher's use of immediacy in the classroom. Croteau (2020) argues that when students have positive experiences in the classroom or with an educator, their chances of remaining in the class increase. Thus, when a student feels a stronger immediacy with instructors, it stands to reason that retention rates will rise because students want to remain in the classes that they have positive associations with.

Implementation Benefits

This quantitative research study sought to understand how nonverbal behaviors in the college classroom can improve student retention rates. The study provided data that colleges and universities can use to help support teacher communication behaviors and influence student success. Educators who implement the findings from this proposed study may be benefited as they will be able to know what specific nonverbal behaviors, they should spend their time and focus their attention on increasing student retention rates and student immediacy within their classes. Offering educators this valuable data may save educators time, which is often something educators do not have an excess of (Edwards, 2017). College teachers work over 50% more than their usual contracted 40 hours a week across the board (Flaherty, 2014; Worth & Brande, 2019). Saving them time by specifying precisely what they need could be of extreme value in helping

them retain students while saving them valuable time not having to conduct this research on their own.

A second group that may benefit from this study in the educational sphere is the educational institution. When faculty are committed to best practices, and students reach high retention and success rates, a beneficial byproduct is that the college institution might succeed as well. Word of mouth is a great marketing tool for colleges, and the happier students are with their educators and education, the more positive word of mouth advertising the college may get (Harahap et al., 2017). With millions of students entering the college market every year (Hanson, 2021), colleges are constantly recruiting students to enroll on their campuses. Although many colleges have different assets to use to advertise to students, having a reputation from word of mouth as being a college that is full of teachers that students feel a profound immediacy with and a college that has a strong retention rate are both extremely valuable to a higher educational institution. While this study has the potential to impact the faculty and the students of the faculty who employ the findings, the researcher hopes that the educational institution of the faculty employing these findings will be benefited as well.

Problem Statement

The problem this study sought to investigate was the increase in student attrition. Student attrition remains a problem because dropping out of college may decrease a student's future opportunities as well as their financial situation. The *National Center for Education Statistics* is a government-run organization that posts yearly trends of college enrollment, retention, and attrition rates. It was reported that over the last six years, graduations across all higher education institutions have been declining. The graduation rate of public college institutions was down to 61%, the graduation rate of private nonprofit college institutions was down to 67%, and the

average graduation and persistence rates of males and females were down to 59% and 65%, respectively (U.S. Department of Education, 2020). These findings are only further exacerbated by the recent onslaught of COVID-19, the global pandemic that affected the global economy as well as educational institutions' enrollment and persistent rates. The enrollment trends for two-year and four-year public schools saw a significant dip in their student numbers, the largest of which was two-year community colleges which had hundreds of thousands of student dropouts at the start of the pandemic (Bulman et al., 2021).

This alarming number of students dropping out of college and not persisting through to graduation poses a large problem for a college dropout's future opportunities. In terms of occupations, there are 57% more job opportunities available to individuals who hold a college degree, and over 80% of the fasting growing fields–including STEM, nursing, and education—all require higher education degrees (Joubert, 2020). In addition to a college degree opening the door to more occupational opportunities, Knerl (2018) shares that those individuals with a college degree report more long-term satisfaction in their careers than those who do not have a college degree, much because of the advancement opportunities that are available to them in an organization. Failing to persist through to graduation significantly limits a student's future opportunities both for jobs they can apply for and organizational positions they can be promoted to later in their careers.

Dropping out of college before reaching a degree also places financial hardships on students (Joubert, 2020). According to the U.S. Bureau of Labor Statistics (2019), individuals without a college degree make $27,610 less than their bachelor-educated counterparts and $42,120 less than those with a graduate degree. Over the course of a 40-year working career, those without a bachelor's education could stand to lose over $1,684,800 ($42,120 a year x 40

years = $1,684,800) purely because of their lack of persistence in getting a college degree. Failure to persist through to graduation also creates a secondary financial problem for dropout students. When a student drops out of college, they earn less money after leaving college and may also have student debt loans to pay back. Sixty-nine percent of students took out loans in 2019, and the average total debt for college was $29,900 (LendingTree, 2021). For students who persist through to a degree, their higher-paying job opportunities can help offset these loan payments. Students who drop out, however, often have a compounding financial disadvantage as they are earning less money than their degree-obtaining counterparts and have student loan debts and no degree to show for it.

The three major attrition theories on attrition are posited by Tinto (1993), Spady (1970), and Pascarella (1980) (Amirian et al., 2021; Guerrero, 2017; Lui, 2021). Each of these three theories has a multitude of factors that the theories believe lead to a student dropping out of college This study on nonverbal immediacy in the college classroom was aimed at zooming in and taking an in-depth look at one of the aspects these theories believe lead to a student's attrition—faculty interactions through the lens of immediacy.

Student interactions with their professors are believed to play a role in the larger attrition equation (Amirian et al., 2021; Guerrero, 2017; Lui, 2021). Although many things lead to a college student dropping out, the present study will investigate one specific aspect of this equation, student–faculty interactions, through the lens of immediacy. The researcher hopes that by focusing on the immediacy relationship between faculty and students, the data produced may lead to future studies in which researchers can continue researching the correlation between immediacy and retention.

Discussion of Setting

This quantitative study sought to examine how a teacher's nonverbal behavior correlated with student immediacy trends. In order to view the data collected in an appropriate context, one must have a basic understanding of what types of communication take place in a traditional, face-to-face college classroom setting. This section will look at four categories of communication that take place in a traditional college classroom setting. These categories of communication include public speaking, group communication, digital communication, and nonverbal communication.

Public Speaking

One of the primary jobs of a college instructor is to verbally share content on a specific subject with their students (Guillaume & Kalkbrenner, 2019; Emptage, 2017). This sharing of content is traditionally done in a face-to-face classroom where the instructor lectures through a section of the textbook using a PowerPoint or written notes on a whiteboard or smartboard. The teacher stands in front of seated students and verbally presents the information necessary for the student to complete major exams, papers, research, presentations, or projects for the college course. Teachers will typically select a textbook for students and lecture through major ideas in the assigned reading for the week during their lectures or support main ideas from the students' weekly reading with tangential information that supports a general theme (Strauss, 2017). Morell (2018) pointed out that while education used to consist primarily of lectures, an increasing number of educators are changing their pedagogical stance and balancing their lectures with interactive class activities.

Group Communication

Sheridan (2021) of Brown University highlights the importance of learners in the classroom engaging with one another because it proves students' opportunities to deepen their knowledge through applying concepts rather than simply hearing about concepts. Some examples of ways that students can work and communicate in groups to enhance their understanding include *think-pair-share*, in which a question is given for students to think about, then they gather in small groups to share their thoughts, *case study learning*, in which the instructor shares an example of problem pertaining to the lesson and students gather in groups to problem-solve and come up with solutions, and *role play*, where students are given a prompt pertaining to an issue and then at act out ways the prompt may apply to everyday situations (Sheridan, 2021). Cahyahi (2018) shared that this pedagogical approach to learning through group interaction has shown strong correlations to improving speaking performance as well as information retention. Due to the positive student outcomes from group work, an increasing number of college educators are implementing these forms of participatory pedagogy in their classrooms (Berlin, 2017). Group communication and interactive student participation are a large part of effective classroom norms.

Digital Communication

Even in traditional face-to-face higher education classrooms, a large amount of communication is done via technology (Bedenlier et al., 2020; Castañeda & Selwyn, 2018; Englund et al., 2017). Although the majority of communication in a traditional face-to-face classroom is done in the classroom, there is still a large amount done via learning management systems (LMS) such as Blackboard, Canvas, Google Classroom, Moodle, LearnDash, and the like. The LMSs are used for turning in assignments, weekly announcements, and even discussion boards as a means of building community outside of the classroom walls (Chen & Almunawar,

2019; Cabero-Almenara et al., 2019). Teachers are also moving toward the use of technology in the face-to-face classroom to engage students through the use of things like PowerPoint, Kahoot, Storybird, ClassDojo, Socrative, Edmodo, and Animodo, to name a few (Dreimane, 2021; Buheji & Ahmed, 2020). The rise in technology and affordability of technology over the last two decades has produced with it a large increase in digital communication, even in fully face-to-face traditional classrooms.

Nonverbal Communication

The fourth major communication component in a traditional face-to-face classroom includes nonverbal communication. One of the most prominent ways in which nonverbal communication is used in the classroom is through complementation. Complementation occurs when a speaker's verbal and nonverbal communication are used to enhance the meaning of one another (Searle & Streng, 2018). To illustrate, imagine a college music teacher lecturing the students on the importance of taking a big breath before singing a long note. This teacher could use complementation with nonverbal communication to take a big breath and visually show the class what is verbally being spoken. Teachers also use nonverbal communication in the classroom when they wear professional attire as well as when they employ visuals in their PowerPoint lectures or rearrange the seating in the classroom to sit students in circles (Burgoon, 2016). Nonverbal communication in the classroom happens any time an instructor alters their gestures, appearance, artifacts, movements, space, or use of time to convey meaning to their students.

COVID-19

While this study looked at the relationship between college teachers' nonverbal communication behaviors and the influence that those behaviors have on college students'

immediacy in a traditional face-to-face classroom, it is important to note that the years 2019 and 2020 brought with them an interruption to education due to the global pandemic known as COVID-19. As noted by the Center for Disease Control (2021), COVID-19 "is a respiratory disease caused by SARS-CoV-2, a new coronavirus discovered in 2019. The virus is thought to spread mainly from person to person through respiratory droplets produced when an infected person coughs, sneezes, or talks. Some people who are infected may not have symptoms" (para. 1). Due to the highly transmittable nature of COVID-19 and the medical community's lack of understanding of how it worked or its longer-term effects, many educational institutions shut down in 2019 and 2020 following local mandates (König et al., 2020; Mirahmadizadeh et al., 2020; Sahu, 2020). These quick closures of schools forced the majority of educational institutions to shift from traditional learning to an online or hybrid version of learning overnight (Bulman & Fairlie, 2021; Carvalho et al., 2021). Mirahmadizadeh et al. (2020) made the point that many educators who had never taught online were forced to learn how to do so within a very short amount of time. In October 2021, the Center for Disease Control (CDC) (2021) estimated that 96% of colleges were open or partially open to their students again. The disruption to the world caused by the sudden onset of COVID-19 had ripple effects on higher education as a whole and left a great deal of opportunity for researchers to explore further. Although this study's focus was nonverbal communication and immediacy, and not pathogens or medicine, demographic questions addressing COVID-19 were added as a means of gathering the most reliable and accurate data possible.

Purpose Statement

The purpose of this quantitative correlation survey study was to understand the relationship between college teachers' nonverbal communication behaviors and the influence

that those behaviors had on college students' perception of immediacy. *Immediacy* is defined as the closeness and trust a student feels with the instructor, and *nonverbal behaviors* are defined as any form of communication done in the absence of written or verbal language. The data collected on immediacy and an instructor's nonverbal communication will hopefully open the door to future research on the correlation between nonverbal immediacy and college retention.

Two of the major theories guiding this study were Mehrabian's (1972) approach-avoidance theory and Tinto's (2006) Student Integration Model. First, Mehrabian's (1972) approach-avoidance theory speaks to the way in which one's behaviors either attract other humans or repel other humans, thus creating a sense of immediacy and trust, or nonimmediacy and emotional distance between two people or groups of people. This theory helped the researcher examine the correlation between how a college instructor's nonverbal behavior affects immediacy with their students. The second theoretical framework is Tinto's (2006) student integration model concerning student and faculty relationships. Tinto's (2006) theory helped guide the research in understanding how a slight nonverbal shift could be the tipping point for a student's decision to drop out or persist in their education. Clear evidence in the literature exists to show the correlation between nonverbal immediacy and positive student outcomes that lead to persistence, such as increased cognitive learning (Rosati-Peterson et al., 2021) and retention of material (Sözer, 2019), but little is known about the specific nonverbal behaviors that lead to immediacy with students. These listed theories helped guide the collection of data and show where they fit into the large picture of the communication field and student immediacy.

Significance of the Study

With the problem of increasing student attrition, understanding even small parts of the retention equation was of great importance. Although nonverbal actions and student immediacy

alone will not solve the retention problem, Tinto's (2006) student integration model has shown that faculty relationships do play a role in the overall retention equation. This study aimed to focus on student–faculty relationships in the hopes of better understanding practical applications for college teachers concerning building immediacy through nonverbal communication. First, this evidence-based study revealed what specific nonverbal behaviors were reported as being correlated with student immediacy in the classroom, something that was understudied in the current literature on retention and immediacy (Belser et al., 2018; Juszkiewicz, 2020; Ulrich-Verslycken, 2019). It is no secret that most educators work far more than they are contractually required to work. It was thought that any study that saved an educator the time it takes to research something on their own might be of great benefit to them. Although an educator's employment contract may specify a forty-hour workweek, the average college instructor is believed to put in over 61 hours a week—that is more than 50% of extra, unpaid time teachers pour into their work (Flaherty, 2014; Worth, & Brande, 2019). Many of those extra hours that teachers pour into their work are aimed at honing their craft, staying current in their field of study, and enhancing their lectures and teaching methods, all for the sake of serving their students. This practical study saved those educators time by specifying specific nonverbal behaviors that they can employ to help increase their student immediacy, so they did not have to conduct their own research to know what students value most in a teacher's nonverbal communication. This also helped the overall educational institution because when students enjoy their teachers, the reputation of the college may increase, thus increasing the attention of future students and allowing them a bigger platform to serve more students (Lake, 2021; Hanson, 2021). As educators implement the findings of this research study in their everyday teaching lives, students may be served by way of improved teaching practices that are student-centric.

Research Questions and Hypotheses

To better understand the correlation between a college teacher's nonverbal behaviors and student immediacy, the following research questions and subsequent hypotheses were used to guide this quantitative research study.

Research Question 1: What are the primary nonverbal behaviors of college instructors that correlate with student immediacy?

Hypothesis 1 ($H1_1$): Paralanguage will be the highest-ranked nonverbal category that students value in a college instructor.

Null Hypothesis 1 ($H1_0$): Paralanguage will not be the highest-ranked nonverbal category that students value in a college instructor.

Hypothesis 2 ($H2_1$): Artifacts will be the lowest overall ranked nonverbal category.

Null Hypothesis 2 ($H2_0$): Artifacts will not be the lowest overall ranked nonverbal category.

Research Question 2: To what extent do student demographics affect which nonverbal categories they perceive most highly in instructors they feel immediacy toward?

Hypothesis 3 ($H3_1$): Community college students and public four-year university students will have different hierarchical rankings of nonverbal behaviors.

Null Hypothesis 3 ($H3_0$): Community college students and public four-year university students will not have different hierarchical rankings of nonverbal behaviors.

Hypothesis 4 ($H4_1$): Different genders will have different hierarchical rankings of nonverbal behaviors.

Null Hypothesis 4 ($H4_0$): Different genders will not have different hierarchical rankings of nonverbal behaviors.

Research Question 3: Did the COVID-19 pandemic change student's perceptions of their instructor's nonverbal behaviors?

Hypothesis 5 ($H5_1$): Students with teachers following COVID-19 protocols will rank the nonverbal categories differently than students with teachers who have no COVID-19 protocols.

Null Hypothesis 5 ($H5_0$): Students with teachers following COVID-19 protocols will not rank the nonverbal categories differently than students with teachers who have no COVID-19 protocols.

Hypothesis 6 ($H6_1$): Students with teachers who followed their regionally mandated COVID protocols will rank kinesics as the highest nonverbal category.

Null Hypothesis 6 ($H6_0$): Students with teachers who followed their regionally mandated COVID protocols will not rank kinesics as the highest nonverbal category.

Definitions

When looking at the correlation between a teacher's nonverbal behaviors and student immediacy, there are several key terms that must be understood by the reading audience. These terms will help clarify the writing that follows in this chapter and the chapters to come. These definitions are drawn from current and historical literature and serve as a guide to help the reader quickly understand concepts that will be addressed in this specific research endeavor.

Artifacts. Artifacts are defined as objects that are used for communicating functional or aesthetic purposes (Burgoon, 2016).

Chronemics. Chronemics is the nonverbal usage of time to communicate a message or meaning (Döring & Pöschl, 2017).

Haptics. Haptics are defined as any form of touch to communicate meaning between a sender and receiver of information (Pilu et al., 2019).

Immediacy principle. The immediacy principle explains that people are attracted to people that they like or feel a closeness with (Mehrabian, 1971).

Kinesics. Kinesics includes any form of movement, such as facial movement, gestures, eye movement, and head movement, to convey information to others (Sheth, 2017).

Nonverbal communication/behaviors. Nonverbal communication and nonverbal behaviors are two terms used to describe the same thing: the relaying of information through gestures, movement, eye contact, facial expressions, artifacts, and vocal expressions. This includes anything communicated without the use of verbal language (Burgoon, 2016).

Nonverbal immediacy. Nonverbal immediacy includes the nonverbal behaviors that create closeness or attraction between individuals or groups (Moody, 2019).

Paralanguage (vocalics). Paralanguage is a term that encompasses the vocal changes of a speaker, such as pitch, rate, and volume, to change the meaning of the verbal information shared (Wharton, 2017).

Proxemics. Proxemics is defined as the use of physical space or distance to convey meaning or information (Watson, 2019).

Student retention. Student retention is defined by a student's steady enrollment until the completion of their education (Burke, 2019).

Student persistence. Persistence is when a student continues in their educational endeavors through their graduation (Au et al., 2019).

Student attrition. Students who drop out and do not return to their educational endeavors (Barbé et al., 2018).

Situation to Self

As a child of two college professors, Randy and Vicky Fujishin, I grew up with a great appreciation for the academic world. Using free time to read rather than watch television was normalized in my childhood. Investing in long talks and getting to know those around us was always valued above playing video games. The family culture that I grew up in placed a high emphasis on both education and leveraging knowledge to help, encourage, and love those around us. From both my father and mother, I learned that a thirst for knowledge and learning was good, but that a thirst for knowledge must always be balanced with using that knowledge for the end goal of elevating and serving those around me. This worldview came from my parent's love of Scripture and the implantation of Paul's warning that, "knowledge puffs up, but love builds up" (English Standard Version, 2006, 1 Corinthians 8:1) and the command that, "whatever you do, do it all for the glory of God" (English Standard Version, 2006, 1 Corinthians 10:31). My mother, Vicky, showed me how to do this every day of my childhood by modeling it in every aspect of her life.

This foundational worldview of loving knowledge but always using my gained knowledge for the purpose of practically serving those around me, and glorifying God, was likely an unseen but very present influence on selecting this dissertation topic. This topic on nonverbal immediacy has personal meaning to me because through this study I not only got to further the field of education and seek knowledge and wisdom, but it is also of extreme practicality. The findings of this study not only helped me in my educational teaching endeavors but the findings also helped other educators learn how they better serve, support, and love their students as well. This research project went much further than just gathering data for the sake of gathering data. The foundational reason I was excited to embark on this in-depth study was that

the data gathered could help students, staff, and educational institutions all around glorify God more through the serving of others.

The reason that communication is the field that I chose to pursue has very much to do with my father, Randy Fujishin. My father was a college professor for 38 years, authored and shared dozens of communication books that are used around the country to this day, and truly lived out what it means to leverage communication for the purposes of encouragement, life, and love. As a young child, I remember that no matter where we went, whether it was out of state on vacation or down the road to a local restaurant, people were always drawn to my dad. Strangers and neighbors alike were attracted to the positivity and love that he shared. Although much of his knowledge was verbal and rooted in both his training as a therapist and his strong faith in Jesus, much of his love was felt through his nonverbal behaviors. I know many intelligent people who can speak with elegance, but very few others are consistently drawn toward them. For much of my life, I found myself emulating my father and finding truth in the old adage: people forget what you said and what you did but will never forget how you made them feel. In my studies, I found that much of how one makes another feel has just as much, if not more, to do with nonverbal communication than verbal communication. The influence of my father's profession and field of study formed much of my philosophy on education as well as grounded my belief in the importance of the field of communication. It is for this reason that I am excited to further this field and contribute to the academic area of study that I have learned so much from.

Coming from an unashamed theistic, Christ-centric worldview, my life's purpose boils down to loving God and loving others in every action, interaction, and endeavor. Under this guiding philosophical and theological framework, another reason for this study comes from the genuine desire to have every student in every class feel genuinely loved, valued, and accepted.

This study is personal in that I wish I had more literature that was data-driven and practically explained what I could do to build genuine immediacy with my students when I began teaching. I believe that when students feel loved and valued, they will naturally stay in an instructor's course regardless of the subject matter or amount of work that the course requires. Although I did not have access to a study like this when I began my teaching journey, I am excited to learn it now and pass my findings on to those after me. This passion for the subject is also one of the reasons I was excited to devote a season of my life to gathering the most accurate and consistent data I could. This was not just a study for the sake of another study; the findings of this study have grave importance. The importance of this study was that the findings have the potential to change the teaching habits of educators across the country and, in turn, directly enhance the lives of countless students for years to come.

Summary

Chapter one has provided the reader with an overview of the topic that this study seeks to explore, which is nonverbal communication and its correlation with student immediacy. This chapter overviewed the background of nonverbal communication, immediacy, and retention, the researcher's situation of self, the problem this research is focused on, a discussion of the educational setting, the purpose of this study, the significance of this study, the research question and hypotheses, and key definitions the reader will need to be familiar with for this research project. The eight sections of chapter one help introduce the reader to the general context of the topic that this study will explore. Chapter Two will offer a more in-depth look at the literature surrounding nonverbal communication, student retention, and student immediacy in colleges.

CHAPTER TWO: LITERATURE REVIEW

Overview

This chapter provides the reader with a review of the literature pertaining to nonverbal immediacy communication and higher education institutions. The review of literature begins by looking at nonverbal communication. While looking at nonverbal communication, the reader can expect to see the pivotal, historical framework that has laid the foundations for current research, a review of the most current coding methods of nonverbal communication, and where nonverbal communication lies within Craig's (1999) seven traditions of communication theory. Next, the literature review looks at nonverbal immediacy behaviors. In this section, readers will view the key background researchers that created the immediacy field as well as the approach-avoidance theory through the lens of kinesis, paralanguage, haptics, chronemics, and artifacts. Finally, the literature review ends by overviewing higher education retention. In this final section, the reader will be shown theories and models that have historically brought forth and illuminated attrition and retention data, as well as a review of enrollment and retention trends over the last decade in comparison to enrollment and retention data considering COVID-19.

Nonverbal Communication

Nonverbal communication encompasses the general idea of the giving or receiving of communication without the explicate use of linguistics (Burgoon, 2016; Tiferes et al., 2019; Wollslager, 2021). While many people believe that words make up most of communication, the great majority of conveyed meaning comes in nonverbal forms (Denault et al., 2020; Frymier et al., 2019). Watzlawick et al. (2014) proposed that every single nonverbal action or gesture is in some way communicative. With nonverbal behaviors encompassing things like gestures, facial expressions, tone of voice, proximity to others, use of physical objects, and time, it is clear to see

just how invasive this form of communication is in every life. To obtain a deeper and more clear understanding of nonverbal communication, this section will look at the theoretical background of nonverbal communication in the Greco-Roman era, the 18th century, the 19th century, and the 20th and 21st centuries. The literature review will then move toward looking at the widely accepted categorizations of coding nonverbal communication and where nonverbal communication best fits into Craig's (1999) Theory of Communication as a Field.

Theoretical Background

Some of the earliest formal writings of nonverbal communication can be traced back to 700 BC in the Jewish Tanakh. In the Tanakh lies the book of Proverbs, which most scholars believe to have been primarily penned by King Solomon in the early 900 B.C. (Dever, 2021; Faust et al., 2021). In this historical literature, the author alludes to the power of communicating without words and implying meaning based on facial gestures (English Standard Version Bible, 2007, Proverbs 16:30), body language (English Standard Version Bible, 2007, Proverbs 6:12), and proxemics (English Standard Version Bible, 2007, Proverbs 31:12-27). Although the term *nonverbal communication* was not yet coined, the author showed an understanding of being able to communicate in the absence of written or spoken words. Following this written account, evidence of a general understanding of nonverbal communication was later found in China around 500 B.C. in the writing of the philosopher Confucius. Confucius made the written observation that hand gestures could convey meaning (Confucius, ca. 500 BCE/1951) as well as the importance of conveying honor with one's facial expressions (Confucius, ca. 500 BCE/1951).

Roman BCE Literature

Concrete literature penned specifically about the use of communication without the use of words arises from the Roman Empire with authors such as Aristotle and Quintilian. In Aristotle's (ca. 350 BCE/1925; Khayrullaevna, 2020) formation of the five canons of thought and rhetoric, he made a clear notation that delivery is a crucial aspect of speaking. In his observations, a speaker's delivery is connected to persuasion and the three basic proofs of logos, pathos, and ethos; the latter of which deals with nonverbal traits like attire, stance, and facial nonverbals (Aristotle, ca. 350 BCE/1925; Levasseur et al., 2021). In these historical Roman pieces of literature, a foundation was laid for the importance of both using nonverbal communication as a way of supporting verbal content, as well as a stand-alone form of conveying influence. Building off the works of Aristotle, another key Roman rhetorician who helped shape the landscape and field of nonverbal communication was Quintilian. In a similar fashion to Aristotle and Confucius, Quintilian was a proponent of using nonverbal forms of communication to enhance and bolster the credibility of spoken and verbalized words (Quintilian, ca. 90 C.E./1922; Levasseur et al., 2021).

19th Century Literature

Following the Roman writings, Hubbard (2019) noted that there were minimal nonverbal writing breakthroughs until the 1800s when the term *nonverbal communication* was coined and led to the formal and academic investigation into the phenomenon. During the 19th century, there were two authors and pieces of literature that helped lay the foundation for the current field of study for nonverbal communication. The first piece of work that arose in the 19th century came from Andrea de Jorio. De Jorio (1832) began his study of the gestures by looking at everyday Naples citizens because he believed it would help archeologists better understand Greco-Roman artwork and lead to a more accurate interpretation of the artist's intent. In launching a study,

however, Andrea de Jorio ended up opening the door to Charles Darwin coining the phrase *nonverbal communication* and, by giving this observed phenomenon a name, built the foundation for an entire field of study that would take off in the 20th century. The second major researcher that is believed to have contributed to this field in the 19th century was Charles Darwin (Friedman, 2019; Freitas-Magalhães, 2020; Givens & White, 2021). Darwin's (1872) theory of nonverbal communication began with the observation that animals would display emotion nonverbally before taking predictable actions like attacking. According to Darwin (1872), animals and humans use nonverbal communication and forms of facial expressions and body movement because it was necessary for survival and then became a part of the default way human beings acted and interacted with one another. He began to research and record his findings of the similarities that exist between humans and animals and made special notes of their actions that nonverbally conveyed meaning. The emphasis in his study was on facial nonverbal communication. Although much of his work was influenced by those who came before him, Darwin is credited as one of the first researchers to formally begin researching the field of nonverbal communication, mainly because of his naming the field and giving researchers after him a common language to use when furthering the field (Freitas-Magalhães, 2020).

20th Century Literature

Following the major findings of the 19th century, the early 20th century brought about several major researchers who took the humble beginnings of this field and went on to add robust literature to confirm its value and place in the academic field. The early 1900s brought about a time when researchers began to value a more scientific approach to researching social and interpersonal issues (Hubbard & Burgoon, 2019; Manusov, 2006). Technology also changed the way research could happen in the nonverbal field. By way of example, motion picture capturing

was becoming more readily available for researchers like Boas (1932) and Efron (1941). Franz Boas (1932) utilized camera technology to record snapshots of time in which people's nonverbal communication could be captured and further analyzed. Boas specifically focused on motor habits and general gestures. David Efron (1941) continued with the use of technology and was one of the first to include data on filmed interactions, graphs and charts of movement recordings, and direct observation of dyadic and interpersonal behaviors in conversation.

By the 1950s, nonverbal communication had become a popular topic of research in the field of psychology (Camarillo-Abad et al., 2019; Danesi, 2021; Givens & White, 2021). One of the big reasons for the leap in research interest and major findings was thanks to Stanford University's interest and involvement with the nonverbal field (Danesi, 2021; Leeds-Hurwitz, 1987). This brought forth a desire to understand and expand the field more, which led to the discovery of additional facets of nonverbal communication. Moving from gestures and facial expressions, researchers developed new theories that explored things like Birdwhistell's (1952) kinesics and Hall's (1959) proxemics work. From these two researchers' works, future researchers in the field were inspired to explore nonverbal communication beyond just the two-dimensional limits of facial expressions and gestures.

In the 1970s, journalist Julius Fast (1970) decided to write a less academic book on nonverbal communication that ended up becoming a best-seller and an entry to understanding for the layperson. This widespread interest encouraged colleges to begin offering classes solely based on nonverbal communication, found in communication studies and social psychology. Many additional subfields of study were branched out from a variety of data, interests, and research on nonverbal communication began finding its home in several academic fields such as communication studies, education studies, psychology, and social science (Mehrabian, 1971 &

1972; Harrison, 1974). The psychological and social aspects of nonverbal communication also meshed with interpersonal relationships around this same time by famous works from Mehrabian (1972) and Argyle et al. (1970).

Ekman (1976) continued furthering the field with research that outlined five primary types of movements that were used to group and categorize nonverbal behaviors. The first grouping was *an emblem*. In the emblem category, there were specific and intentional gestures that signal a culturally understood meaning, like a thumbs up. The next was an *illustrator* in which one couples language with nonverbal action. One example of this is speaking about a person, place, or thing while pointing at it or them. The third is an *adapter*; this is when one releases tension nonverbally and does things like crack knuckles or tap a leg on the floor to release nervous energy. Fourth is what Ekman called a *regulator*, which involves things like direct eye contact when speaking to someone with a European culture to communicate respect and attention. Finally, *affect display* was the term used to convey emotion and categorize actions like smiling when happy and crying when sad. Although many more theorists and researchers have come up with different categories based on Ekman's (1976) initial findings, none stuck in the nonverbal world as well as the seven categories proposed by Burgoon (2002). It is noted that Burgoon (2002) based much of her work on Ekman's (1976) and DeVito's (2000) work; however, she gained great traction because of the straightforward synthesis of information she proposed (Littlejohn et al., 2017). The seven types of nonverbal behaviors that Burgoon (2002) believed to exist are classified as: "kinesics (bodily activity); vocalics or paralanguage (voice); physical appearance; haptics (touch); proxemics (space); chronemics (time); and artifacts (objects)" (p. 243). These seven categories have become a primary coding key when looking at nonverbal behaviors.

Burgoon's Nonverbal Coding Key

The benefit of categorizing nonverbal actions into subsections is that it creates a space for researchers to focus their study or translate nonverbal actions into quantitative groups of data. Although there are a variety of historically different categorizations in existence (Ekman & Friesen, 2010; Harrigan et al., 1985; Galloway, 1972), the most widely accepted and used breakdown of nonverbal coding comes from Burgoon's (2002) categorization of the seven categories "kinesics (bodily activity); vocalics or paralanguage (voice); physical appearance; haptics (touch); proxemics (space); chronemics (time); and artifacts (objects)" (p. 243). Burgoon et al. (2016) later reinforced the relevance of these categories and have had support from fellow researchers bolstering the credibility of these as primary groupings (Cherry & Susman, 2019; Vogel et al., 2018).

The first of the nonverbal coding categories is kinesics. Although many people throughout history may have studied bodily movement, it was not until Birdwhistell (1979) named the formal study of body movement as a form of communication that researchers began developing specific tools to understand what meaning is being conveyed through body movement. Burgoon (2016) labeled movements in this category as ones that pertain to facial expressions, head movements, and oculesics. Although other researchers have considered oculesics, or eye movement, as a separate category, Burgoon (2002) believed that it could fall under kinesis as an umbrella term to encompass all physical movement.

Paralanguage, also referred to as vocalics, is the second of seven categories. Paralanguage is used to code features of the voice, such as "dialect, pitch, tempo, resonance, pauses, dysfluencies, and intonation patterns" (Burgoon, 2016, p. 19). Vocalics can often be used by speakers to convey meaning with emphasis, communicate excitement or monotone boredom,

and even sarcasm (Wharton, 2017). Further research has shown that this form of nonverbal communication tends to have a large and measurable effect on the reception of content (Nepal, 2021). The way in which a word is spoken is believed to have an equal amount of importance as the verbal word itself. The way in which a word is spoken can be changed by things such as inflections, pitch, and cadence, all of which affect how a receiver may decode the auditory stimuli.

Burgoon (2016) explained that the physical body could also be used as a vehicle through which a message can be displayed. Beginning with the natural features of the human body, the physical appearance of a person can be altered based on hairstyling and color, jewelry such as earrings or necklaces, physical alterations such as tattoos, clothing and attire choices, and even fragrances such as perfume and cologne (Burgoon, 2002). By way of example, in a study titled *The Effect of Chefs' Nonverbal Communication in Open Kitchens*, Sohn and Lee (2018) demonstrated how the simple attire of a head chef in a kitchen of cooks was used to nonverbally and instantaneously command respect, attention, and communicate a chain of command. Similarly, this field of study has proven to be valuable in understanding how to leverage physical appearance to gain instant credibility with potential subordinates or superiors in both professional and educational settings (Lowman et al., 2019; Sözer, 2019).

Haptics and proxemics are two closely related nonverbal categories proposed by Burgoon. Burgoon (2016) shared that haptics refers to the use of physical touch to convey a message or communicate, whereas proxemics refers to how to use space to communicate with another. Although both items can be coded differently when measuring nonverbal communication, they are connected in that there are usually relational correlations between the two (Panda, 2018). As a case in point, if a couple wanted to communicate affection, then they

might hold hands, which would be a haptic form of touch that requires close proxemics. Similarly, if one wanted to hug a family member, which would be coded as a haptic touch, they must be near them, which would be coded as an intimate form of spatial positioning. There are instances when these two are not coded side by side, such as when coding how far a lecturer stands from the audience. This is the reason for Burgoon's (2002) separation of the two into different coding categories.

Chronemics is measured and coded by evaluating how one uses time to communicate (Burgoon, 2016). One relevant and practical study that was recently conducted that highlights the importance of chronemics focused on the duration of time that it took for professors to reply to student emails. In the study, Tatum et al. (2018) gathered data from hundreds of students and looked at their trust and rapport levels with professors who answered emails within 24 hours, 48 hours, and one week. It was concluded that the faster the professor answered an email, the stronger the rapport levels students reported with the professor (Tatum et al., 2018). This focus on time can also be useful in measuring if being punctuality, tardiness, and duration of elapsed time between communication sessions.

The final coding category of nonverbal communication is that of artifacts, also referred to in the literature as objects. This coding categorization is one that deals with physical and predominantly man-made objects that are used for "functional or aesthetic purposes, such as chairs and lamps in a home, desks, and rugs in an office, sculptures in a public park… or one's car" (Burgoon, 2016, p. 173). The study of artifacts often relates to the environments one creates to communicate themselves through physical objects. Burgoon (2016) made the case that artifacts are the extension of oneself. This helps explain why one may see a car in a parking lot

and immediately associate it with a close friend being nearby—the artifacts we own are an extension and expression of ourselves.

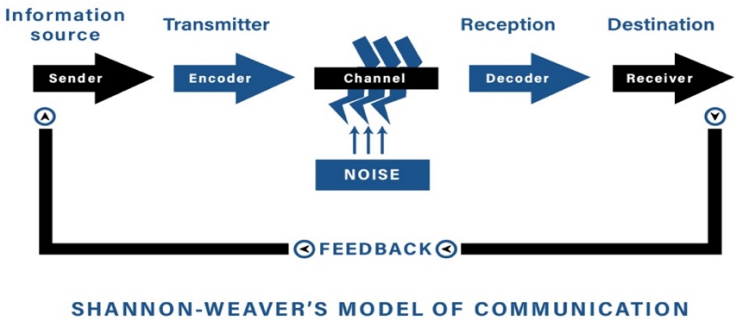
Transactional Model of Communication

Littljohn et al. (2017) acknowledge that there are a variety of different communication definitions as well as communication theories. This research project chose to view communication through the lens of Littlejohn et al.'s (2017) use of Cronkhite's (1976) definition that "communication has occurred when a human being responds to a symbol" (p. 4). This research also looked at communication through Barnlund's (1970) transactional model of communication.

Dan Barnlund (1970) developed the transactional model of communication in an attempt to show a holistic picture of communication. Barnlund's (1970) model of communication expounded upon the common existing model of Shannon and Weaver's (1948) linear model *(Kobiruzzaman, 2021)*. In the linear model of communication, communication is seen as a one-way flow.

Figure 1

Linear Model of Communication



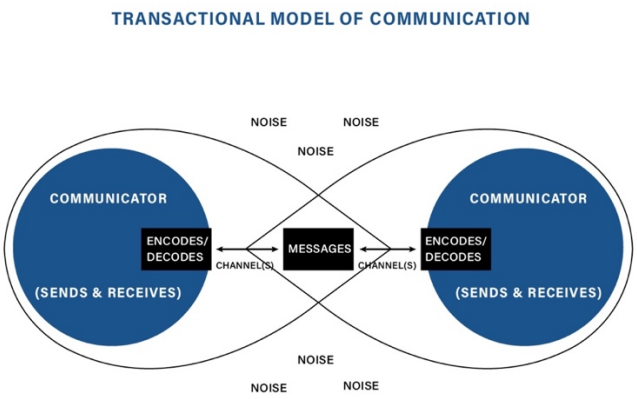
Shannon-Weaver's original model of communication is linear and explains how content can flow from one person to another in six parts: sender, encoder, channel, decoder, and receiver.

For a better understanding, one can imagine Person A calling Person B, telling them they want to meet for dinner. In this example, Person A is the sender, the encoder is a cell phone, the channel is a satellite, the reception is Person B's phone, and the receiver is Person B. Although this presents a clear understanding of a one-way flow of information, few communication interactions are one-way only flows of information. It is, for this reason, that the transactional model of communication was formed.

In the transactional model of communication, Barnlund (1970) argued that communication is too complex to simply be linear. Although a traditional linear model of communication would say that when two people speak, the speaker is the encoder, and the listener is the decoder, Barnlund's (1970) transactional model of communication shows how both individuals can simultaneously be encoders and decoders at the same time and helps to explain how someone can be speaking and while they are verbally speaking (acting as an encoder), they can also observe the nonverbal communication of the other person and actively adapt their verbal content mid-sentence to the reception of the nonverbal cues of the other person (Kobiruzzaman, 2021).

Figure 2

Transactional Model of Communication



Consider a couple on their first date at a nice dinner restaurant. Jeremy begins the dinner by sharing a vivid story of a recent root canal he had because he thought it would be an entertaining story. Although he is verbally sharing his story (as the encoder), he also sees his date wringing her hands, avoiding eye contact, and making a facial expression of discomfort. These nonverbal cues that Jeremy sees while telling his story conveys a message of discomfort to him, and he quickly changes the topic. This is an example of how one can be both an encoder and decoder at the same time. While Jeremy was verbally coding a message (his story), he was also a decoder watching and responding to his date's nonverbal communication in real-time. Examples like this give credibility to the transactional model and illustrate why this model tends to be more grounded in practicality when compared to a linear model of communication.

Craig's Communication Theory as a Field

Craig's (1999) categorization of communication theory as a field falls within a larger context of communication that he wrote about at the turn of the century. In his writings, *Communication Theory as a Field,* he worked to unite the communication field at large by giving scholars a common platform and categorization language through which researchers could communicate, debate, share ideas, and further the study of communication. Until Craig's (1999) theory of communication, many different disciplines were researching communication as a category or branch of their own field. There were psychologists studying psychology communication, business majors studying business communication, historians studying historical communication, and so on. Rather than having communication be a subset of different fields of study, Craig (1999) sought to unify researchers and form communication as its own specific branch with subsets that disciplines could fall within. In effect, this would create a common language through the literary world in which researchers could pool information and share ideas

cross-disciplinarily. The goal of the Theory of Communication was to bring unity and help offer a metatheory in which people could have academic discussions over their communication findings. The seven subsets of communication that Craig (1999) proposed were: rhetorical, semiotic, phenomenological, cybernetic, sociopsychological, sociocultural, and critical. Nonverbal communication sits squarely within the sociopsychological category. Although nonverbal communication falls within the sociopsychological branch of communication, it can be studied and discussed with researchers from all branches of communication.

Nonverbal communication, as it pertains to this study, best falls under Craig's (1999) communication tradition of sociopsychological. Craig (1999) expounded upon the definition of sociopsychological communication when he defined it as "a process of expression, interaction, and influence" (p. 143). In other words, according to Craig (1999), sociopsychological communication could be seen as the way people are influenced by the communication of others. Nonverbal communication best fits within this category because nonverbal communication behaviors are typically done for the purpose of conveying expressions or trying to share information through interaction. When an individual smiles at someone or waives to another, they are using nonverbal communication to express their positive emotions or thoughts through a nonverbal interaction. When an individual rolls their eyes or sighs heavily, this too is a form of nonverbally trying to communicate negative thoughts in an interaction with those viewing the individual.

While this paper focused on nonverbal communication through the lens of the sociopsychological tradition due to the study being done all within the United States, it is worth noting that nonverbal communication can also fall nicely within the sociotraditional categorization due to many nonverbal forms of communication being culturally based. If this

study is repeated in a different culture or on a global scale with input from various cultures, then clear explanations of specific nonverbal forms would need to be clarified as the meaning of nonverbal communication can vary from culture to culture.

Nonverbal Immediacy Behaviors

One pertinent branch within the nonverbal communication field is the specific study of nonverbal immediacy behaviors. While nonverbal communication encompasses all communication that is done in the absence of linguistics, the idea of nonverbal immediacy goes one step further. As Mehrabian (1971), the man who coined the term *immediacy* noted, nonverbal immediacy speaks to specific nonverbal behaviors that build closeness between individuals. Although the study of nonverbal communication has been shown to be in existence since 900 B.C. (Dever, 2021; Faust et al., 2021), the specific branch of nonverbal immediacy has only been around since the 1970s (Friedman, 2019). The term immediacy has been credited to psychologist Albert Mehrabian (1971). From Mehrabian's original findings, the theory of immediacy has been tested by several different disciplines due to its versatile and practical applications. This section will look more closely at the historical background surrounding the immediacy framework, current literature unpacking nonverbal immediacy and student outcomes, and the approach-avoidance theory as it pertains to nonverbal immediacy and instructor-student relationships.

Background of Nonverbal Communication

Nonverbal immediacy was coined in the 1970s by Albert Mehrabian (1971) in his seminal work, *Silent Messages*. In *Silent Messages*, Mehrabian (1971) began by sharing that "people are drawn toward persons and things they like, evaluate highly, and prefer; they avoid or move away from things they dislike, evaluate negatively, or do not prefer" (p. 1). In other words,

people move toward the things they like. The idea that people gravitate toward the things they like was the foundational bedrock upon which the definition of immediacy lies. In short, immediacy encompasses the verbal and nonverbal behaviors that create closeness between individuals and the notion that people gravitate toward those they like and distance themselves from those they dislike (Rosati-Peterson et al., 2021; Mullane, 2014). Although Mehrabian initially proposed that immediacy could be both verbal and nonverbal in his early writings, he placed a particular emphasis on the nonverbal component. Following his work, other researchers took the idea of immediacy and continued to research it but rarely delved into the verbal components and often focused on the nonverbal elements of immediacy. Manusov (2006) pointed out the reason for this as being that all the verbal forms of immediacy that were studied required a component of nonverbal communication, thus voiding the study of verbal communication only. For this reason, the last few decades of immediacy behaviors have focused predominantly on nonverbal behaviors.

Mehrabian (1971), the founder of the immediacy framework, was also quick to acknowledge that nonverbal immediacy behaviors are often very subtitle and thus require intentionality to understand, perceive, and change. By way of example, Mehrabian (1971) shared that it would be rare to see a person physically cuddle up next to someone whenever the speaker said something they liked, then run away as soon as the speaker said something they did not like. Nonverbal immediacy behaviors are often much more subtle. In the previously stated scenario, it would be much more likely that the listener would keep firm eye contact and utilize a nodding head motion when they agreed with the speaker, and display avoidance behaviors like wandering eyes or crossed arms when the speaker said something they disliked or disagreed with (Frymier

et al., 2019). These are the subtle cues that educators and teachers alike must be trained to observe to increase and enhance nonverbal immediacy with their students.

Within 20 years of the term *immediacy* being introduced to the research and psychology world, many other disciplines began to engage with the idea and further the field of immediacy within the context of their own discipline. Two of the most notable areas of study that immediacy was adapted into and researched in include the communication field and the field of education. Researchers in these two fields, often working in tandem with one another, began to research specifically how teachers could communicate nonverbally to connect with students in a meaningful way that builds rapport, connections, and trust (Rosati-Peterson et al., 2021). It was because of the apparent benefits that could arise from teachers leveraging immediacy in their classrooms that Andersen (1979) first applied the original immediacy framework to her research in education. From Andersen's (1979) original work, multiple additional benefits to the educational world and nonverbal immediacy communication were linked.

Nonverbal Immediacy and Student Outcome Trends

While the immediacy framework initially began in the psychology field, researchers in the communication and education field quickly saw the value of immediacy. One of the dominant reasons that nonverbal immediacy communication continues to be studied through the lens of education is because of the research that continues to support the premise that there is a clear correlation between a teacher's nonverbal immediacy and their students' cognitive learning (LeFebvre & Allen, 2014; Rosati-Peterson et al., 2021). Through LeBebvre's (2014) study, 20 different classes taught by 20 different teachers were surveyed to understand if there were any connections or correlations between the student's view of their instructor's immediacy and how much the student retained cognitively from the class. A strong and positive correlation was

observed and recorded by the researchers when looking at the final grade of students and their perceived immediacy with their instructor. In the author's conclusion, they noted that teachers who are scored highly concerning their nonverbal immediacy capabilities tend to produce students who have positive cognitive retention scores in their courses.

The findings of LeFebvre and Allen (2014) are just one of many studies that support the hypothesis that nonverbal immediacy competencies have a positive relationship with students' retention of information. In a recent study, Sözer (2019) confirmed the findings of a study from the 1970s to confirm that today's students' cognitive outcomes are still affected by nonverbal immediacy. By looking at over 382 middle school students, it was shown that immediacy behaviors like smiling and eye contact are still positively correlated with a student's outcome in the class and their cognitive retention. These findings were confirmed through the observation of the educator and a review of students' immediacy scale surveys.

A confirming study by Rosati-Peterson et al. (2021) showed a positive correlation between immediacy and student comprehension and a reduction in receiver apprehension (Rosati-Peterson et al., 2021). Receiver apprehension was initially defined as "the fear of misinterpreting, inadequately processing, and/or not being able to adjust psychologically to messages sent by others" (Wheeless, 1975, p. 263). Many students suffer from this fear of not being able to fully understand an instructor or teacher and can be so overcome with anxiety that they shut down altogether (Goldman et al., 2018). Clark (2021) suggested that teachers with high nonverbal immediacy skills can often leverage their immediacy to help combat students' receiver apprehension. By building immediacy bonds, students can feel a stronger trust and closeness with their instructors. This closeness that is achieved through immediacy, in turn, correlates to

students feeling more comfortable in the classroom, thus decreasing their apprehension and increasing their confidence and motivation.

Stilwell (2018) recently shared that immediacy and positive student outcomes are correlated and lend themselves to the explanation of why current-day trends are still supporting the connection between immediacy and positive student outcomes. Thompson (2018) proposed that for cognitive retention, a student must recall information from their instructor's teaching or their course. They hypothesized that the stronger a student's arousal was to stimuli, the easier they could recall the said stimuli or data. Thus, when teachers increase immediacy with their students, they create an arousal of interest that creates bonds in the brain that make it easier to recall the information that was shared by the instructor (Stilwell, 2018). As a student's attraction to a class or instructor increased, their arousal to the content also increased, creating a stronger link between the information and the ability to recall the information. Under this framework of understanding, it is clear to see why educators should desire an increase in immediacy behaviors and how immediacy practically affects student learning outcomes.

The current literature shows that there is a positive connection between a teacher's immediacy and their student's outcomes, two understudied areas from these studies remain. First, there exists a lack of current immediacy data in higher education. Many immediacy studies are conducted in lower grades with children who are under 18 years old and are in elementary school. Few studies exist within higher education looking specifically at adult students. Second, of the data that does exist for higher education, there is little research that has been done regarding the prediction of enrollment and retention of students in a class with a teacher who has high nonverbal immediacy rates by students. These two areas are understudied and create a space in the literature for further exploration.

Approach-Avoidance Theory and Student Relations

Nonverbal immediacy not only helps boost student learning outcomes; these behaviors can also significantly affect the teacher-student relationship. Anderson et al. (1979) initially proposed that the formal instruction between a teacher and their students in the classroom boils down to interpersonal interaction. Just as with any interpersonal interaction, healthy relationships are formed when there is a mutual attraction to the content shared or the person sharing (Feltman & Elliot, 2012). This furthers the theory of Approach-Avoidance that was originally proposed by Mehrabian (1972), which stated that people move toward those they like and trust and avoid or create phycological or physical distance with people and stimuli they do not like. Just as people approach and avoid people they do not like in their personal, platonic, and relational lives, the same is true of students in their response to educators and the content the educators communicate. As it logically follows, when students feel a sense of immediacy with their instructors, they will naturally engage with the taught content more than others because they are actively wanting to be around the one who is teaching the content.

The first way researchers have suggested that educators can increase their immediacy, thus increasing their students' approach toward them and their taught subject, is through approximal immediacy (Stilwell, 2018). Approximal immediacy includes behaviors like standing close to students rather than engaging them from behind a podium and trying to limit height differences when speaking to students (Williamson et al., 2021). A recent study done by Cheong et al. (2017) looked at the effects of creating immediacy and heightened approaches between students and teachers. In Cheong et al.'s (2017) study, the use of proxemics through crouching down to talk to a seated student, rather than standing over them, created more immediacy with the student. Students reported feeling more interpersonally equal when the physical height of the

instructor was equal. Cheong et al. (2017) went on to note that small changes in the physical positioning of instructors in office-hour contact with students can lead to immediacy. One prime example is the position of the desk, instructor, and student during office hours. Although many instructors may orient their office in such a way that they sit behind their desk and students come in and sit on the other side, it was noted that removing the desk as a barrier and sitting side by side with a student lead to more immediacy and approach-oriented outcomes. This use of nonverbal communication conveys a message of "us/we" versus an implication of "you" and "me" and builds both immediacy and approach.

Paralanguage also plays a pivotal role in a student's reported approach and immediacy to educators and classroom content (Ayuningsih, 2019). In a recent study, Ayuningsih (2019) examined the power of vocalics, such as changing the pitch and speed of one's speech in an academic setting. The findings further supported Andersen and Andersen's (1982) findings that changing the rate at which one speaks as well as altering the pitch of verbal communication has a perceived impact on how information is received. In furthering the findings of Anderson and Andersen (1982), however, this current study found that vocal characterizations like instructors laughing were highly linked to emotions of support and appreciation in students. The implications of laughter's link to student approach and immediacy are large and practical for all in academia, which is notorious for being a more somber arena. Educators who continue to leverage various vocal characterizers and remain intentional about variety in paralanguage often see a correlation with their students' perceived approach and immediacy (Ulrich-Verslycken, 2019).

The implication of a teacher's kinesis movement and the student's perceived levels of approach and immediacy is also well documented in the current literature available (Nuhwan,

2019; Šerić, 2021). The most recent findings of an educator's effective kinesis movement include an instructor's physical movement, arm and hand gestures, head movement, facial expressions, and oculesics or eye contact. First, teachers who demonstrate general movement around the class rather than remaining in one place while also employing hand motions like expansive gestures, thumbs up, pointing, and arm movements tend to relay information in more memorable ways than others (Šerić, 2021). Nuhwan (2019) suggested that a teacher's facial nonverbal communication was also a significant component in overall immediacy and approach predictors. Facial expressions like wide eyes and smiling tended to convey positive emotions that students responded to in an approach and immediate manner too (Litzelman, 2021). Finally, the use of oculesics is significant in creating a connection with students. Eye contact in the classroom is of great importance when building immediacy. Scanning eye contact creates interpersonal closeness (Litzelman, 2021). Rather than staring at a computer screen while lecturing or facing a whiteboard and not looking at students to whom a professor is teaching, being intentional about looking at those that one is teaching builds immediacy and creates a feeling approach rather than avoidance in the classroom atmosphere (Nuhwan, 2019).

In a 2018 study, Britto (2018) discovered that chronemics, not the actual content of an email, between professors and students, was what led to higher levels of immediacy and approach. The vast importance of this study, which is supported by a study conducted by Tatum et al. (2018), is that the speed of response is what students noted most about their correspondence with their instructors concerning nonverbal immediacy. Being timely, especially in the twenty-first century that is filled with digital devices that have trained the next generation to desire things quickly and without waiting, is of extreme importance when looking at how educators build immediacy cross-generationally. It is interesting to note from these recent studies that

students ranked the speed of response above the content of the response. From the research, a quick note that a professor saw a message and will respond to the student's questions later goes further than answering the email two days later with an in-depth, detailed response. Similarly, as one might intuitively expect, students preferred when assignments were graded and given back sooner as opposed to later (Mullins, 2018).

Another form of nonverbal immediacy that affects the approach-avoidance responses of students is the physical appearance of a professor. Over the last decade of research on the effect of attire on student impressions, there have been mixed findings. Oliver et al. (2021) set out to conduct a study to help clarify the mixed responses and determine whether formal attire helps or hinders that teacher's perception of students. Although their findings also had mixed answers, their questions were written in such a way that more clarity to this conundrum was discovered. Rather than simply ask if formal attire affected a student's view of a teacher, they specifically asked two questions: (1) does formal attire affect the perceived credibility of a teacher, and (2) does casual attire increase the perceived warmth of a teacher.

The findings from Oliver et al. (2021) were that in both cases, attire did affect the way a student viewed a teacher; however, clarity was added to this field of nonverbal immediacy study because it clarified that there is no one set answer for what a teacher should do given the data that attire effects student perception. Although a young teacher may desire to dress up to earn more credibility with students who are closer in age, an older teacher may desire to dress more casually to create a warmer and more welcoming persona with students who have decades of difference in age. These findings did not give clear instructions on which attire was best in general, simply that it is a variable when looking at immediacy and that the type of clothing that

should be used depends on each professor and how they feel they can use it to best build trust and rapport with their students (Oliver et al., 2021).

COVID-19

At the end of 2019, the world was first introduced to the new virus that would soon affect the entire world—COVID-19, which was defined by the CDC (2021) as "a respiratory disease caused by SARS-CoV-2, a new coronavirus discovered in 2019. The virus was thought to spread mainly from person to person through respiratory droplets produced when an infected person coughs, sneezes, or talks. Some people who are infected may not have symptoms" (para 1). By March 11, 2020, the World Health Organization (WHO) declared COVID-19 a global pandemic (Carvalho et al., 2021). Following this announcement, major industries such as agriculture (Poudel et al., 2020), tourism (Sigala, 2020), technology (Moss & Metcalf, 2020), and education (König et al., 2020) are some of the many industries that began to shut down or move to online-only avenues.

In addition to closures in virtually every major sector, health mandates were also put in place, which greatly altered and affected nonverbal communication during the height of the pandemic. Schlögl and Jones (2020) share that many of the nonverbal cues the world had come to know and use in everyday communication changed overnight in places where the mask mandate was put in place. With a mask covering a person's face and nose, smiling, grinning, and some facial features became impossible to see, thus changing the nonverbal way people had to communicate emotions and feelings. Furthermore, many states and countries began observing a six-foot distance rule to limit the spread of COVID-19, which changed the proxemic nonverbal way of communicating. Regardless of cultural norms for personal space, the norm for the

distance between people quickly shifted from the historical norm of a culture to a general observation of a six-foot distance (Moore et al., 2020).

COVID-19's Effect on College Instructors' Immediacy Opportunities

The rise of COVID-19 drastically affected the landscape of the educational world (Carvalho et al., 2021; Daniel, 2020; Moss & Metcalf, 2020). As classrooms moved from in-person to virtual modalities across the country in a matter of days, teachers had to drastically change the manner in which they taught, communicated, and interacted with their students (Azorin, 2020; Daniel, 2020; Zhu & Liu, 2020). Kesselring et al. (2021) made the point that the classroom setting is a highly different experience for students and teachers online versus a traditional face-to-face setting due to the modality difference. One of the most considerable differences in the classroom culture in light of COVID-19 is that there are fewer opportunities for casual interactions between students and teachers outside of class time (Rahayu, 2020; Serhan, 2020; Stefanile, 2020). One of the ways in which interactions have changed, Stefanile (2020) noted, is that because students are not walking to a classroom or having to pack up before leaving, there are fewer opportunities for teachers to talk about nonacademic material with students. In a traditional classroom, a teacher could make small talk with students and get to know them on a personal level while walking to a classroom with a student together, or while a student packed up their things after class. Serhan (2020) and Massner (2021) shared that with Zoom and other virtual learning platforms, as soon as a student is dismissed, they are free to log off. This removes a great deal of time when a teacher could build rapport with students outside of an academic culture or setting, which also leads to a potential decrease in humanizing pedagogy opportunities (Armstrong, 2021; Carter-Andrews, 2019). With fewer opportunities to build connections with students outside of the classroom where students can see a more relaxed and

casual nonverbal side of their instructors, there are also fewer opportunities for teachers to have a chance to build immediacy with their students.

Student Retention in College

While this study is only looking at one small factor in the greater college retention rate equation, it is important to first see and understand the entire retention rate equation. This larger view of retention will help to better understand how the specific piece of student–faculty interactions and immediacy may play into retention. Higher education institutions have long been focused and concerned with students finishing their degrees and persisting through to graduation. Once a student is enrolled in a higher educational institution, the institution's faculty hopes that the student will be set up for success and earn the credits necessary to complete their program at the college or university. For a student to make it to their graduation day, they must first complete all the courses necessary for their degree program. Both community colleges and traditional four-year universities have some degree of struggle with retention rates, though Hongwei (2015) noted that community colleges traditionally struggle more. This section will look at the historical background of college retention rates, key models of retention like Spady's (1970) undergraduate dropout process model, Tinto's (1993) student integration model, and Pascarella's (1980) student–faculty informal contact model, and end with a review of retention data in community colleges.

Background of Student Retention

Beginning in the 1970s, researchers became interested in understanding why students dropped out of college (Burke, 2019; Tight, 2020). Before the 1070s, Ryle (1969) believed that when a student dropped out of college, it was due to mental illness or the lack of a student's individual skill, attribute, or motivation. The focus of the student dropout was entirely on the

student's personality or ability and nothing else. It was not until the mid-1970s that researchers began to wonder whether the educational institutions played a role in whether students dropped out before they reached their desired degree or educational goal (Burke, 2019; Tight, 2020). This shift began an institutionally introspect view of how to combat the issues of student attrition and persistence trends within higher education while understanding all the pieces that lead to a student dropping out of college. To understand how to retain students in a higher education institution, researchers believe they must first understand what leads a student to drop out of college in the first place. Below is a brief overview of the evolution of the study of student attrition with a historical view of what was believed to lead a student to drop out of college, starting with Spady's (1970) undergraduate dropout process model, moving to Tinto's (1993) institutional departure model/student integration model, and concluding with Pascarella's (1980) student–faculty informal contact model.

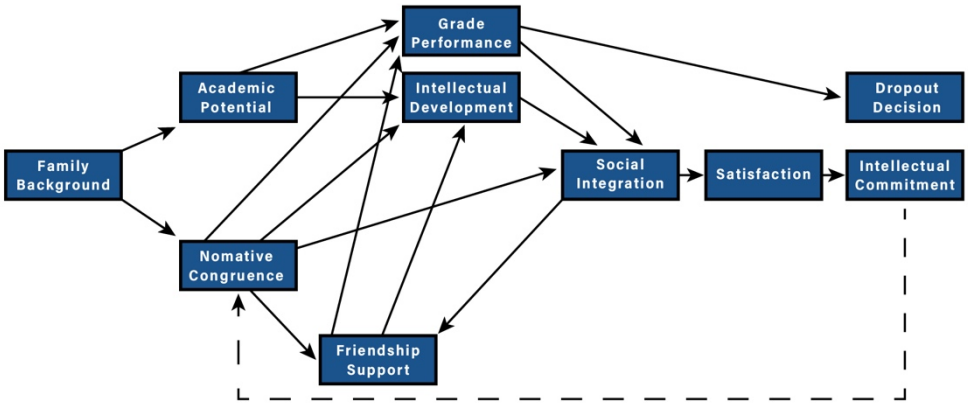
Spady's (1970) Undergraduate Dropout Process Model

Although Spady's (1970) model is no longer widely used in academia, his contributions to the research of student retention are beyond measure for the sole reason that he was among the first people to introduce the idea of looking at the link between the student and institutional integration, rather than solely focus on the student and their shortcomings when it came to student dropout research (Aljohani, 2016). In his theory, he proposed that there were two primary categories that would determine a student's attrition or persistence: the academic realm and the social realm (Spady, 1970). The first of his two categories pertained to academics. In this category, Spady (1970) theorized that grade performances in tandem with intellectual development played a prominent role in whether a student would persist through to graduation. Through his studies, he showed that when students had lower grades, their desire to persist in

college was lower as opposed to students who had higher grades and had an increased likelihood of graduating. His second category was particularly insightful in that the social element of school was introduced as part of the dropout equations. Equally as important as grades, a student's social integration and experience played a monumental role in whether a student would stay in school or not. Even with high grades, if students were not socially accepted or felt isolated, there would be an increased chance of them dropping out of school (Spady, 1970).

Figure 3

Spady's (1970) Undergraduate Dropout Process Model



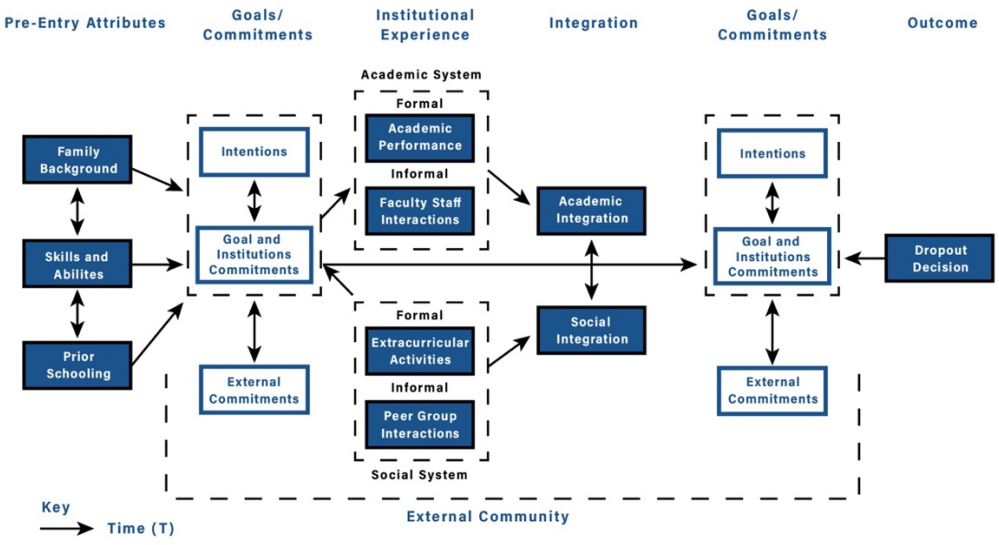
Tinto's (1993) Student Integration Model

Vincent Tinto (1993) is believed to be one of the founding fathers of education retention research not because he founded the research on retention first but because his model and framework are still most widely used today. Beginning in the 1970s, Tinto began to focus his time and research on potential institutional reasons for why a student may drop out of college before completing their degree. Up until his research, higher educational institutions were highly invested in solving the issue of retention for both honorable, virtuous reasons as well as logical financial reasons. As Tight (2020) pointed out, educational institutions exist to help students

learn, but there is also a large financial incentive to keep students on course to complete their degree because the longer they are there, the more financial compensation institutions receive. Tinto (1993) originally drafted forth the *Institutional Departure Model* in the mid-1970s, but the theory was not formally finalized until 1993 and later became known as *Tinto's Student Integration Model*. In Tinto's (1993) model, he identified primary areas that led to determining if a student would persist or drop out of college. The primary areas of interest for Tinto were *preentry attributions* such as family background, skills, and prior schooling, *Commitments* such as external commitments like work and their intentions with school, *institutional experiences* such as their academic performance, faculty interactions, and peer group interactions, leading to their *integration*, or how they acclimated into the school culture as well as social groups, which reinforces their *commitments* again, leading to whether or not they would persist through to graduation.

Figure 4

Tinto's (1993) Institutional Departure Model



Although many models and theories have been proposed to understand retention in higher education, Tinto's (2006) Institutional Departure Model has stood the test of time and has been one of the most repeated models used to study retention and persistence among college students (Braxton et al., Kerby 2015; Tight, 2020). In the decades that followed Tinto's original framework, the various types of study that have been adapted from his work have focused on the retention rates of different minority groups in the United States, including the retention of African American and Black students (Xu, 2018), American Indian students (Oseguera et al., 2009), and students with various disabilities (Iacovone, 2021). Although some studies have centered around various minority groups, other researchers have adapted Tinto's framework to understand retention in a specific field of studies like Technology and Science (Belser, 2018) and Mathematics (Woolcott, 2019).

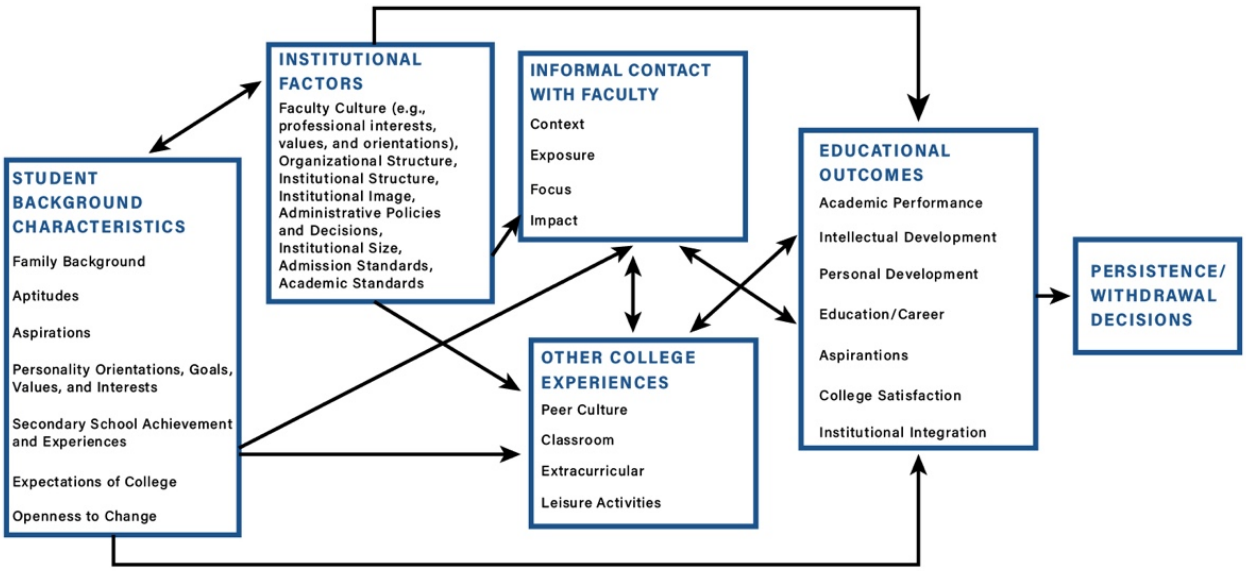
Pascarella's (1980) Student–Faculty Informal Contact Model

Pascarella's (1980) theoretical framework for understanding students' persistence or attrition zoomed in and focused on the student's background and their experience with the institution and an emphasis on their interactions with faculty within the institution. First, Pascarella (1980) began with the student's background and considered things like their aspirations, their family and upbringing, their personality, and what they are expecting college to be. From there, the framework looked at the institution's size, standards, and values. Where this model shone most in its uniqueness came from how Pascarella (1980) placed particular importance on the types of interactions the student has with their professors and instructors. In the model, he proposed that the most meaningful contact with professors are ones that happened informally and outside the context of academic conversations (Pascarella, 1980). For example, seeing a student outside of class in the cafeteria and asking about their weekend or sending a

follow-up email thanking them for something they shared in class. These interpersonal touches were found to have one of the largest impacts on the attrition rates of students in higher education.

Figure 5

Pascarella's (1980) Student–Faculty Informal Contact Model



Retention Trends in Community Colleges and Four-Year Universities

Although decades of research have been conducted on retention best practices in higher education, it is of great importance to realize that not all higher education institutions operate the same or have the same types of students. The following section will look at the similarities and differences between two-year community college retention rates and traditional four-year university retention trends through the lens of six-year retention norms. While both institutions place importance on retention due to the financial income associated with student retention, the demographics of two-year and four-year schools vary greatly and play a role in their different retention trends (Hongwei, 2015). Although four-year colleges tend to have a higher rate of traditional-aged students, community colleges typically have a higher percentage of students who

have housing and food insecurities, transportation barriers, and childcare needs which all affect retention rates (Goldrick-Rab et al., 2013; McDonnell et al., 2014). While different demographics lead to different published retention rates, similarities can still be found between the two types of colleges.

In the last two years, both two-year and four-year colleges had retention and enrollment changes due to the COVID-19 pandemic. Since the onset of the global pandemic, a decline in both community colleges and four-year universities can be seen, though recent data suggest that community colleges have taken a more considerable decline in their enrollment since 2019. The National Bureau of Economic Research uses California as an example to show how COVID-19 affected enrollment at schools across the state. Below is an example of the retention data pre-COVID-19. Bulman and Fairlie (2021) show that before the pandemic hit, the Universities of California (UC) and the California State Universities remained solid in their enrollment and retention numbers while public community colleges were already seeing a decline in numbers. When looking at the last 18 years, community colleges across the board have seen a steady decrease in enrollment over the past decade, whereas traditional four-year schools have seen an increase in enrollment (see Figure 6).

Figure 6

Trends in IPEDS Fall Enrollment

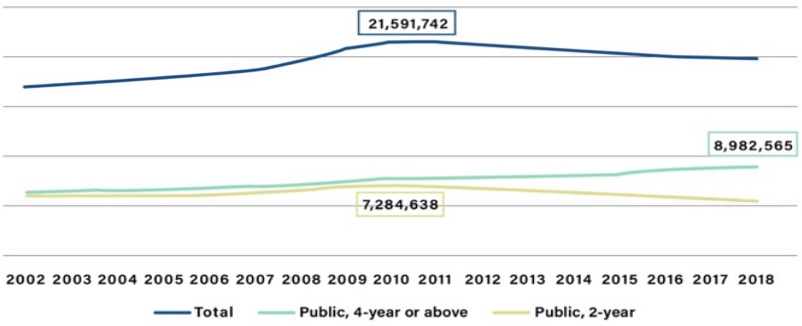
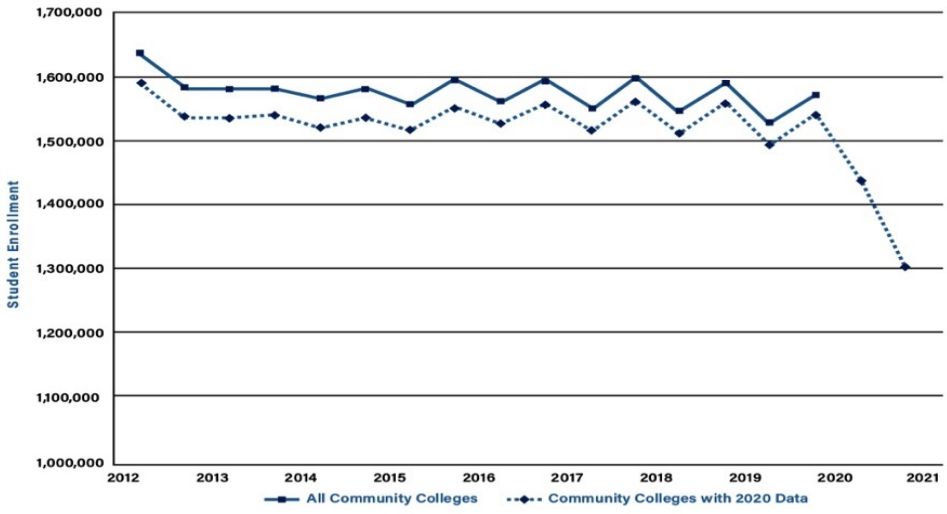


Figure 6 shows the continued trend of community colleges declining in enrollment going into the Fall of 2018, prepandemic. With the onset of the global pandemic, however, these numbers were amplified, and even traditional four-year colleges saw a reversal from a steady increase in numbers to a sharp decrease. Yuxuan (2021) reports that four-year colleges have retention and enrollment rates dropping to an average of -21.7% while two-year colleges saw a drastic 30.3% decline in their student numbers in the Fall of 2020 (Yuxuan, 2020). Figure 7 gives a visual example of how drastic a 30.3% decrease is with community colleges as their example. As seen, the reporting community colleges show one of the most dramatic declines in enrollment since the turn of the century (Bulman & Fairlie, 2021).

Figure 7

California Community College System Student Enrollment by Semester



In light of COVID-19 numbers and the pandemic's effect on higher education enrollment across the board, educational institutions were eager to reexamine and reengage, drawing on new studies and relevant literature pertaining to ways that colleges can increase their retention of students. Although the future was uncertain in terms of the pandemic and enrollment and

retention trends, many educational institutions were eager to be active agents in doing all they could to increase student retention despite the current health crisis around the world. Given the data that showed student numbers declining across the board at higher educational institutions, the time to study underexplored areas of retention, such as immediacy behaviors, is apparent.

Summary

Nonverbal communication is a driving force in how individuals communicate with one another. More than words, the constant nonverbal behaviors of people affect the perception of verbal messages of the receivers more than words. Learning how to leverage nonverbal communication to create immediacy with others is of utmost importance for people in general, but especially those in education who have been entrusted with hundreds of students each semester. As seen in the literature, the problem of college student attrition is a large and complex one, however, that should not deter researchers from looking at the retention equation piece by piece. This research project hopes to look at one specific piece of the larger retention problem of faculty-student interactions, a piece seen in Spady's (1970) undergraduate dropout process model, Tinto's (1993) institutional departure model/ student integration model, and Pascarella's (1980) student–faculty informal contact model. To narrow the study even more, this project is aimed at reviewing only the nonverbal interactions of a professor with their students in hopes of finding a correlation between an instructor's nonverbal communication and student immediacy trends. This chapter reviewed the fields of study, nonverbal communication, nonverbal immediacy behaviors, and higher education retention. Chapter three will present the methodology for this proposed study.

CHAPTER THREE: METHODOLOGY

Overview

Nonverbal communication use in the classroom has been shown to have a direct relationship with a student's positive perception of college as well as their overall success in higher education (Ayuningsih, 2019; Britto, 2018; Hongwei, 2015; Litzelman, 2021). While a relationship between nonverbal communication and student success had been studied at length, there remained an area that required further investigation, the understanding of which forms of nonverbal communication are most closely correlated to student immediacy at the college level. It was the purpose of this quantitative correlation survey study to understand the relationship between a college instructor's nonverbal behaviors and student immediacy. This chapter contains a discussion of how the researcher gathered data pertaining to the area of interest. A discussion of the methodology and design of the study, the research question and hypotheses, the participants desired, the instrument used, procedures of the study, how the data will be analyzed, the limitations of the study, and the delimitations the research has put in place will follow.

Method and Design

This study proposed the use of the quantitative methodology to understand the relationship between an instructor's nonverbal communication behaviors and college students' immediacy. This study's use of a quantitative methodology approach was consistent with the methodology chosen by numerous other researchers who have also researched nonverbal communication, immediacy, and retention (Cochran, 2020; Foutz et al., 2021; Pugh et al., 2019; Rosati-Peterson et al., 2021; Violanti et al., 2018). This notion was further supported in Moody's (2019) review of 27 of the most recent studies on nonverbal immediacy communication. In his review of the literature, Moody (2019) discovered that over 88% of the most recent studies in the

nonverbal communication field used some form of a quantitative approach, with only 12% using a differing methodology.

A quantitative methodology is often used when studying nonverbal communication because quantitative research is deemed to be the most appropriate way to test hypotheses when known variables can be numerically represented (Creswell & Creswell, 2018). The reason that a quantitative design was most appropriate for this proposed study is that the researcher's primary purpose was to explore various hypotheses that center around the correlation between teachers' nonverbal communication and college students' immediacy, all of which could be represented in numerical form.

Research Questions and Hypotheses

The following research question and subsequent hypotheses guided this quantitative research study to better understand the correlation between a college teacher's nonverbal behaviors and student immediacy.

Research Question 1: What are the primary nonverbal behaviors of college instructors that correlate with student immediacy?

Hypothesis 1 ($H1_1$): Paralanguage will be the highest-ranked nonverbal category that students value in a college instructor.

Null Hypothesis 1 ($H1_0$): Paralanguage will not be the highest-ranked nonverbal category that students value in a college instructor.

Hypothesis 2 ($H2_1$): Artifacts will be the lowest overall ranked nonverbal category.

Null Hypothesis 2 ($H2_0$): Artifacts will not be the lowest overall ranked nonverbal category.

Research Question 2: To what extent do student demographics affect which nonverbal categories they perceive most highly in instructors they feel immediacy toward?

Hypothesis 3 ($H3_1$): Community college students and public four-year university students will have different hierarchical rankings of nonverbal behaviors.

Null Hypothesis 3 ($H3_0$): Community college students and public four-year university students will not have different hierarchical rankings of nonverbal behaviors.

Hypothesis 4 ($H4_1$): Different genders will have different hierarchical rankings of nonverbal behaviors.

Null Hypothesis 4 ($H4_0$): Different genders will not have different hierarchical rankings of nonverbal behaviors.

Research Question 3: Did the COVID-19 pandemic change student's perceptions of their instructor's nonverbal behaviors?

Hypothesis 5 ($H5_1$): Students with teachers following COVID-19 protocols will rank the nonverbal categories differently than students with teachers who have no COVID-19 protocols.

Null Hypothesis 5 ($H5_0$): Students with teachers following COVID-19 protocols will not rank the nonverbal categories differently than students with teachers who have no COVID-19 protocols.

Hypothesis 6 ($H6_1$): Students with teachers who followed their regionally mandated COVID protocols will rank kinesics as the highest nonverbal category.

Null Hypothesis 6 ($H6_0$): Students with teachers who followed their regionally mandated COVID protocols will not rank kinesics as the highest nonverbal category.

Participants

College students aged 18–65 years from across the United States were invited to participate in this quantitative research study. According to the government-run National Center of Education Statistics, the U.S. college system has 19.6 million currently enrolled students (Back to school statistics, 2019). The demographics of these 19.6 million students are varied, with 12 million under the age of 25 years old and the remaining 7 million more advanced in their lives and careers. Although most college students fit into the historically normative age group of 18-25 years, there was a steadily growing population of returning, older students. For this reason, the study had no age limit, only a minimum age requirement of 18 years old. Additionally, the National Center of Education Statistics (2019) shared that 57% of college students are female and 43% are male, with 52% of college students being White, 20% being Hispanic, 13% being Black, 6% being Asian, and the remaining 9% of races being a mix of American Indian, Pacific Islander, or declining to answer. The participant's race was not a screening requirement, although the researcher's goal was to recruit from a diverse pool of participants.

When participants were screened for eligibility, they were asked whether they had completed a college course in the last three years, whether the college they attended was in the United States, and whether they could think of at least one college teacher whom they liked or had a positive experience with. Students who had not completed a college course within the last three years, who attended a college outside of the United States of America, or who could not think of a single college teacher they had a positive experience with were ineligible to participate in the research survey as their data would not have been relevant to the scope of this study. All other students who passed this screening were allowed to advance to the questionnaire and

participate in this study. The sample size of students to participate in this study was determined by a power analysis.

Brownlee (2018) shared that a power analysis uses the effect size, sample size, significance, and statistical power to understand how reliable the data that is produced is. Qualtrics (2021) offered the following formula to help determine the minimum number of participants needed given the power analysis information:

Necessary Sample Size = (Z-Score)2 x StdDev x (1-StdDev) / (Margin of error)2

Given the above formula, the minimum sample size for this study was 664 student responses. The number of 644 was derived from inputting the following information: a national college population size of 19,700,000, the desired confidence level of 99%, and a desired 0.05 margin of error. In the final study, a total of 1,806 participant surveys were collected.

Instrumentation

A Likert scale-based questionnaire was used for this quantitative study because Likert-styled questions are used when studying participant responses to psychological or behavioral factors such as values, beliefs, and perceptions. The questionnaire was created and distributed to college participants across the country using Qualtrics. Qualtrics is a Liberty University-approved, web-based survey tool. It was used because of its user-friendly interface that aided participants as well as aided the researcher through its dynamic reporting, free platform model, and its exportability to various forms such as PDF, Word, Excel, and SPSS.

The Qualtrics survey contained 29 questions and was used to better understand the relationship between a college instructor's nonverbal communication and students' immediacy. The first questions of the survey were used to filter participants and ensure that each participant met the three minimum requirement of (1) having completed a college course within the last

three years, (2) the college they attended is in the United States, and (3) that they can think of at least one college teacher whom they liked and had a positive experience with. Participants who fit the research criteria first saw a page that overviewed the study and asked if they consented to be a part of this study. When a participant did not consent to the study, the survey ended out of an ethical obligation to respect their desire not to participate. When the participant answered "no" to any of the screening questions, the survey ended as their data would not have been relevant or pertained to the scope of this study.

There were no filtering questions based on the participants' knowledge of nonverbal communication or immediacy. The reason for this was twofold. First, clarifying definitions were shared when needed for the participant. Second, the hypotheses aimed to understand what the average college student's perception was, and the average college student was not expected to have knowledge of nonverbal communication theories or definitions. The survey questionnaire was built so that a complete novice could answer the questions and still provide the reliable data necessary to address this study's hypotheses.

Following the filtering process of the survey, the questionnaire moved to a new page that instructs the participant on how to answer that page's questions. Participants were asked to

think of one college instructor whose (1) class the participant completed and (2) with whom they feel a sense of immediacy. The term immediacy was defined in layman's terms (as a "trust" or "general liking" of a person) to ensure the participant had all the information needed to answer this question accurately. The participant was then clearly instructed in bold writing to answer the following questions with that specific college in mind. A list of questions appeared on this same page for the participants. Each question used a Likert scale approach to answer with five quantitative values: (1) the instructor *always*, (2) the instructor *usually*, (3) the instructor

sometimes, (4) the instructor *rarely*, and (5) the instructor *never*. A "n/a" option was also available for every question. This Likert scale was based on Chyung et al.'s (2017) adaptation of the five-point "strongly disagree" to "strongly agree" scale. Participants were asked to answer these Likert questions based on the college instructor whose class they persisted through and felt a sense of immediacy. All of the questions were centered around nonverbal communication behaviors and organized by their nonverbal category. Finally, the questionnaire ended with a small number of questions pertaining to the demographic information of the student. The participant's age group, gender, current college structure (2-year, 4-year, public or private), and status of COVID protocols were collected.

Procedures

Following the creation of the survey questionnaire, two foundational steps were taken before the official launch of the survey took place: the researcher gained Institutional Review Board (IRB) approval, and pilot testing took place. First, the researcher gained IRB approval to use the study. The Federal Government explained that "an IRB is an appropriately constituted group that has been formally designated to review and monitor research involving human subjects" (Office of the Commissioner et al., 2021, para. 1). IRBs are vital for ensuring that human rights such as privacy, safety, and confidentiality are protected anytime research is done with human subjects. To comply with all IRB regulations, the researcher completed a CITI training on ethics and the value of the IRB and provided the IRB with the research project's recruitment materials, content materials, and survey instrument. The IRB review process could have taken up to 10 weeks to gain approval, but the researcher gained it in six weeks.
Following IRB approval, the researcher conducted a pilot test of the survey to ensure the questionnaire was running as it should and to ensure the accuracy of survey questions. This pilot

testing took place with participants the researcher knew and trusted. Participants included friends, family, and colleagues. Thirty-three surveys were collected during the pilot test phase, and the researcher ran preliminary tests to ensure the scales were reliable and no major issues arose. The researcher ran a Cronbach's Alpha and saw that each of the seven scales scored above the required 0.70 Cronbach's score. Because all the scales were reliable and scored above 0.70, the researcher felt confident to move on to a Mann–Whitney U test. The Mann–Whitney U test showed statistically significant findings, which led the researcher to believe the pilot study was ready to be launched in its final form. No data from the pilot study was used in the final qualifying numbers. Chapter four will explore the process of the pilot study in more detail.

The researcher launched the final study on February 15th, 2022, and remained open until March 9th, 2022. The researcher used the IRB-approved flyers, emails, and verbal invitations to collogues to share with their students. The researcher also utilized Amazon's Mechanical Turk to share the study virtually. In total, 1,806 surveys were collected, 1,611 of which had complete and usable data.

Data Analysis

Once the pilot testing phase of the questionnaire was completed and the Cronbach's Alpha analysis was run, the survey went live. It was posted through the avenues expressed in the previous section. Six hundred sixty-four participants were required for reliable data; however, the researcher left the study open until 1,806 participants had taken the survey. Around March 4th, the researcher noticed a lull in responses, and by March 9th, the survey was concluded due to a lack of participation and a solid number of responses.

The data analysis began with downloading the Qualtrics data and converting it into an SPSS file. Once the SPSS file was saved, the researcher cleaned the data by removing studies

that were incomplete or studies in which participants did not pass the initial filtering questions. The researcher was left with 1,611 clean surveys from which to derive data.

The researcher began by testing the reliability of the data through the use of a Cronbach's Alpha test to ensure the internal consistency of the data and scales. The researcher also ran a test of normality using Q-Q Plots and Skewness statistical equations. The findings reported that the skew levels were above the acceptable requirement for parametric testing. Due to this, the hypotheses were tested using nonparametric equations.

The research questions and hypotheses were tested using various methods, including visual inspection of data and more robust statistical equations in SPSS. The following section will show which data analysis technique the researcher believed would be most appropriate for each hypothesis, as well as clarify the variables being examined in this research project.

Research Question 1: *What are the primary nonverbal behaviors of college instructors that correlate with student immediacy?* This was explored through a visual representation of the data.

Hypothesis 1 ($H1_1$): *Paralanguage will be the highest-ranked nonverbal category that students value in a college instructor*. The researcher used SPSS calculated means of each scale to answer this hypothesis.

Hypothesis 2 ($H2_1$): *Artifacts will be the lowest overall ranked nonverbal category*. The researcher used SPSS calculated means of each scale to answer this hypothesis.

Research Question 2: *To what extent do student demographics affect which nonverbal categories they perceive most highly in instructors they feel immediacy toward?* This was explored through a visual representation of the data.

Hypothesis 3 ($H3_1$): *Community college students and public four-year university students will have different hierarchical rankings of nonverbal behaviors*. The nonparametric Mann–Whitney U and calculation of means were used to answer this hypothesis.

Hypothesis 4 ($H4_1$): *Different genders will have different hierarchical rankings of nonverbal behaviors*. The nonparametric Mann–Whitney U and calculation of means were used to answer this hypothesis.

Research Question 3*: Did the COVID-19 pandemic change student's perceptions of their instructor's nonverbal behaviors?* This was explored through a visual representation of the data.

Hypothesis 5 ($H5_1$): *Students with teachers following COVID-19 protocols will rank the nonverbal categories differently than students with teachers who have no COVID-19 protocols*. The nonparametric Mann–Whitney U and calculation of means were used to answer this hypothesis.

Hypothesis 6 ($H6_1$): *Students with teachers who followed their regionally mandated COVID protocols will rank kinesics as the highest nonverbal category*. The researcher used SPSS calculated means of each scale to answer this hypothesis.

Variables

Thomas (2020) pointed out that quantitative research often involves two variables: an independent variable and a dependent variable. The independent variable is the one that is stationary in the study and the one that is expected to influence the dependent variable. Considering the hypotheses above, the independent variables for this study included gender, Burgoon's (2016) seven categories of nonverbal behavior, COVID protocols, and two-year and four-year style educational institutions. The dependent variable was the student's immediacy.

Limitations

Two of the largest limitations in this quantitative correlation survey study were the financial constraints and participant pool size. First, the researcher received no grants or funding to conduct the proposed research project. All funding for this research project came from the researcher's own limited resources. The researcher also offered financial incentives to attract participants through a raffle of Amazon gift cards with a budget of $50. The researcher budgeted $150 to help advertise or pay for research resonance via Amazon Mechanical Turk. This limited financial backing to enlist participants led to the second limitation of this study—the participant pool size. With over 19 million college-age students currently attending school, it is not possible to survey every single student given time and financial constraints. This research project was far above the power analysis minimum requirement of participants yet was still limited in the number of participants when compared to the size of the actual student population.

Delimitations

I chose to focus the scope of this study by only examining data from college students who have completed a college course in the last three years. This delimitation of focusing solely on students served to center the study on a particular group that exists in academia rather than trying to research and understand all working parts of academia. The choice to employ a quantitative study methodology was selected to reduce contamination of the data, especially contamination via researcher bias. To this end, a Likert-based questionnaire was selected as the means of data collection so that all respondents were asked the same questions in the same format, void of any vocal inflections or suggestions from the researcher reading questions to participants.

Summary

To gain a deep understanding of which nonverbal communication behaviors of college instructors were correlated most strongly with student immediacy, this survey questionnaire was used to gather quantitative data directly from current college students. This chapter explained the method and design of the study, showed the research questions and hypotheses associated with the research question, the participants obtained, the instrument used, procedures followed, how the data was analyzed, the limitations of the study, and the delimitations. Chapter four will go into great detail on the findings and results of this study.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this quantitative study was to understand the relationship between college teachers' nonverbal communication behaviors and the influence that those behaviors have on college students' perception of immediacy. To better understand the extent to which a relationship existed, a survey questionnaire was distributed to a specific target demographic of individuals who had taken a face-to-face college course in the last three years. The participants were asked if they could think of at least one instructor whose class they passed and with whom they felt a sense of immediacy.

This chapter will walk the reader through the researcher's process of gathering and exploring the data on college teachers' nonverbal communication behaviors and college students' perception of immediacy with them. First, an explanation will be given as to how the researcher ran a pilot study and tested the questions for internal consistency and reliability. Next, a review of the data collection process, the survey participants' demographics, and the data's reliability findings will be summarized. Finally, the reader will be reminded of the hypotheses proposed and see a detailed explanation of the findings for each hypothesis.

Pilot Study

Upon receiving IRB approval for the research study on January 26th, 2022, the researcher created a Qualtrics account and created the survey to be deployed to a small number of people to find general questionnaire issues, including questions that needed to be revised. This pilot study was launched on January 30th, 2022, and was open for four days. A total of 34 questionnaires were completed. Of the 34 responses, 33 passed the filtering questions stating that they were over 18 years old, had completed a face-to-face college course in the last three years, and were

able to think of a college teacher whom I enjoyed/trusted/liked. Two SPSS tests were run on the 33 pilot responses to gain a preliminary understanding of the questionnaire's effectiveness: a Cronbach's alpha and a Mann–Whitney U test.

Pilot Study Results

Cronbach's Alpha-Pilot

It is suggested that 30 responses constitute the minimum allowable number for an accurate Cronbach's alpha test (Bujang et al., 2018; Conroy, 2015), and with 33 responses, the researcher decided to run a Cronbach's alpha test to get a preliminary view of the internal consistency of the questions. A minimum score of.70 was desired for each of the seven categories of questions: kinesics, paralanguage, physical appearance, proxemics, chronemics, and artifacts.

Table 1

Pilot Study Cronbach's Alpha

Reliability Statistics

Title of NVI Category	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Kinesics	.801	.805	3
Paralanguage	.830	.832	3
Physical Appearance	.768	.769	3
Haptics	.805	.804	3
Proxemics	.727	.734	3
Chronemics	.871	.870	3
Artifacts	.866	.872	3
All Nonverbal Questions	.966	.966	21

As seen above, all seven scales, each comprised of three questions, scored above 0.70 in this pilot study showing a high level of internal consistency among the questions. Because each category of three questions scored above 0.70 in the Cronbach's alpha test, it can be assumed that there is sufficient reliability for all seven categories of questions to be categorized as a scale (Taber, 2018; Treadwell & Davis, 2019).

Mann–Whitney U Pilot

The Mann–Whitney U test was also run on the preliminary pilot data. The Mann–Whitney U test is a nonparametric test that is used to determine if there are differences between two groups on a continuous or ordinal dependent variable. This test is the nonparametric alternative to the independent-samples t-test and should be run when there are not enough responses to get accurate results from a t-test (Beatty, 2018; Jiang, 2022). Hypothesis 2 states that community college and four-year university students will have different hierarchical rankings of nonverbal behaviors. To test this hypothesis, the Mann–Whitney U test was conducted in this pilot study to determine whether there is a significant difference in scores of nonverbal behaviors between community college students and four-year university students.

Table 2

Pilot Mann Whitney U Mean Scores

Category		N	Mean rank	Sum of ranks
Kinesics	Community college students	4	6.38	25.00
	Four-year university students	29	18.47	535.00
Paralanguage	Community college students	4	6.63	26.50
	Four-year university students	29	18.43	534.50

Physical appearance	Community college students	4	8.75	35.00
	Four-year university students	29	18.14	526.00
Haptics	Community college students	4	12.00	48.00
	Four-year university students	29	17.69	513.00
Proxemics	Community college students	4	9.13	36.50
	Four-year university students	29	18.09	524.50
Chronemics	Community college students	4	9.63	38.50
	Four-year university students	29	18.02	522.50
Artifacts	Community college students	4	4.75	19.00
	Four-year university students	29	18.69	542.00
N		33		

Table 3

Pilot Mann Whitney U and P Scores

Category	kinesics	paralanguage	Physical appearance	haptics	Proxemics	Chronemics	Artifacts
Mann–Whitney U	15.500	16.500	25.000	38.000	26.500	28.500	9.000
Wilcoxon w	25.500	26.500	35.000	48.000	36.500	38.500	19.000
Z	-2.373	-2.306	-1.833	-1.108	-1.750	-1.641	-2.725
Asymp. Sig.	.018	.021	.067	.268	.080	.101	.006

The mean rank of four-year university students was greater than the community college students for all the categories, whether significant or not significant. Upon a closer look, a statistically significant difference was observed between the groups for the kinesics category ($U = 15.5$, $p < 0.05$), paralanguage ($U = 16.5$, $p < 0.05$), and artifacts ($U = 9.0$, $p < 0.05$) while

no statistical difference was found for haptics ($U = 38.0$, $p > 0.05$), proxemics ($U = 26.5$, $p > 0.05$), physical appearance ($U = 25.0$, $p > 0.05$), and chronemics ($U = 28.5$, $p > 0.05$). This means that only the scales of kinesics, paralanguage, and artifacts were statistically different.

Primary Survey Deployment

Following the pilot study, a separate, final study was launched on February 15th, 2022, and remained open until March 9th, 2022. During this time, a total of 1,806 surveys were collected. Participants were obtained using IRB-approved social media posts, flyers, verbal invites from the researcher's professional connections with fellow instructors at schools around California, and Amazon's Mechanical Turk, which shared the survey with college students around the United States. In total, 1,806 surveys were ultimately collected. Of the 1,806 surveys collected, 1,611 of them were completed and contained valid data while 195 surveys, and their corresponding data, were removed either because the participant failed to finish the survey or the participant did not make it past the filtering questions provided.

Demographics

Demographic information was collected in the 1,611 completed surveys, including participant gender, age, school type attended, race, and whether COVID protocols were in place at the time of taking their face-to-face course. Each of these demographics are examined below.

Table 4

Gender of Participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	980	60.8	60.8	60.8
	Female	627	38.9	38.9	99.8
	Decline to Answer / Other	4	.2	.2	100.0

	Total	1,611	100.0	100.0	

For this survey, most participants were male (60.8%, *n* = 980) with the minority being female (38.9%, *n* = 627) and those declining to answer / other (0.2%, *n* = 4).

Table 5

Age of Participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-21 years old	87	5.4	5.4	5.4
	22-29 years old	600	37.2	37.2	42.6
	30-39 years old	577	35.8	35.8	78.5
	40-49 years old	235	14.6	14.6	93.0
	50-59 years old	77	4.8	4.8	97.8
	Over 60 years old	35	2.2	2.2	99.9
	Total	1,611	100.0	100.0	

The most predominant age group that participated in this survey were 22–29-year-olds (37.2%, *n* = 600) and 30–39-year-olds (35.8%, *n* = 577), but the survey also consisted of 40-49 year old's (14.6%, *n* = 235), 18–21-year-olds (5.4%, *n* = 87), 50–59-year-olds (4.8%, *n* = 77), and people over 60 years old (2.2%, *n* = 35).

Table 6

School Type of Participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Community College (2-year)	144	8.9	8.9	8.9
	Public University (4-year)	713	44.3	44.3	53.2
	Private University (4-year)	714	44.3	44.3	97.5

	Transferred from Community College to Four-Year	40	2.5	2.5	100.0
	Total	1,611	100.0	100.0	

The schools that participants attended ranged from community college to four-year and public to private. The two largest demographics were private 4-year university students (44.3%, $n = 714$) and public 4-year university students (44.3%, $n = 713$). The remaining school type demographic included those currently in a community college (8.9%, $n = 144$) and those who transferred from a community college into a 4-year university (2.5%, $n = 40$).

Table 7

COVID Protocols in Place

Were COVID-19 protocols in place during the time you took this teacher's class?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	1,194	74.1	74.1	74.1
	No	417	25.9	25.9	100.0
	Total	1,611	100.0	100.0	

This survey also took place during the COVID-19 pandemic, so data was gathered on whether the participants had COVID-19 protocols in place during their class. From the data, it was concluded that the majority of participants did indeed have COVID-19 protocols in place (74.1%, $n = 1,194$), and the minority did not have any protocols in place (25.9%, $n = 417$).

Table 8

Race of Participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Asian or Pacific Islander	249	15.5	15.5	15.5

	Black or African American	98	6.1	6.1	21.5
	Hispanic or Latino	73	4.5	4.5	26.1
	Native American or Alaskan Native	38	2.4	2.4	28.4
	Native Hawaiian or other Pacific islander	1	.1	.1	28.5
	White or Caucasian	1,134	70.4	70.4	98.9
	Multiracial or Biracial	11	.7	.7	99.6
	A race/ethnicity not listed here	7	.4	.4	100.0
	Total	1,611	100.0	100.0	

Finally, data surrounding the race of each participant was collected and showed that most participants were White (70.4%, *n* = 1,134) or Asian (15.5%, *n* = 249). The survey also collected data from Black participants (6.1%, *n* = 98), Hispanic participants (4.5%, *n* = 73), Native American or Alaskan Native participants (2.4%, *n* = 38), multiracial participants (0.7%, *n* = 11), a race not listed (0.4%, *n* = 7), and Hawaiian or Pacific Islander participants (0.1%, *n* = 1).

Reliability and Descriptive Statistics

Cronbach's Alpha

The researcher created his own survey for this study and, as such, viewed the verification of the question's internal consistency in high regard. Internal consistency is best determined by a Cronbach's alpha score (Adeniran, 2019; Heo et al., 2015; Treadwell & Davis, 2019). The survey consisted of two filtering questions, 21 Likert scale questions, and six demographic questions. The first filtering question was used to ensure that all participants were 18 years old or older, and the second ensured that the participant could think of a teacher whom they trusted or liked (immediacy) and whose class they had passed in the last three years.

The following 21 Likert scale questions relating to nonverbal communication were organized into seven scales that paralleled Burgoon's seven nonverbal categories, and students were to answer the questions while thinking of a single teacher whom they enjoyed/liked/trusted and whose class they had taken in the last three years. In the pilot study, all the questions and scales from the questionnaire were tested against their Cronbach's alpha score. A Cronbach alpha (α) score of 0.70 or greater is generally considered an acceptable score for academic research (Taber, 2018; Treadwell & Davis, 2019). Boyle and Schmierbach (2020) also noted that lower scores of 0.60 or greater can also be acceptable when there are scales comprised of fewer questions, as is the case with this study's scales made up of three questions each. When scales with larger numbers of questions have low Cronbach's alpha scores, rewriting some questions in the survey may be appropriate. For this study, all scores came back within an acceptable range so rewriting the questions was not necessary.

Table 9

Final Survey Cronbach's Alpha

Title of NVI Category	Pilot Survey (n = 33) Cronbach's Alpha	Final Survey (n = 1,611) Cronbach's Alpha	N of Items
Kinesics	.801	.778	3
Paralanguage	.830	.772	3
Physical Appearance	.768	.770	3
Haptics	.805	.839	3
Proxemics	.727	.674	3
Chronemics	.871	.827	3
Artifacts	.866	.808	3

All Nonverbal Questions	.944	.945	21

This final survey, with over one thousand six hundred responses, yielded very similar Cronbach's alpha scores, with six of the seven categories surpassing the 0.70 minimum required score for internal consistency. One category, proxemics, was within 0.026 of the required minimum score ($\alpha = 0.70$) for internal consistency and is deemed to be usable data given that only three questions were used to make up the proxemic scale, and it was above the 0.60 threshold of scales with fewer questions (Schmierbach, 2020). The overall group of 21 questions used to measure nonverbal communication showed a score of $\alpha = 0.944$, showing great internal consistency of the questions as a whole searching for nonverbal communication.

Test of Normality

The data were checked for normality because normally distributed data is an assumption that cannot be violated for many parametric tests such as an independent t-test and ANOVA tests (Hu & Plonsky, 2021; Kim & Park, 2019; Verma & Abdel-Salam, 2019). The researcher ran descriptive and exploratory SPSS tests to find the skewness or normality of the data. The two primary ways to test normality include visual inspection of graphs and numerical statistical tests. The researcher ran both and found the numbers were too skewed to meet the assumptions for parametric tests. First, the researcher reviewed Q-Q plots of the data, which yielded results that looked generally normative (see Figure 8 below).

Figure 8

Q-Q Plot of Kinesics Data for Males

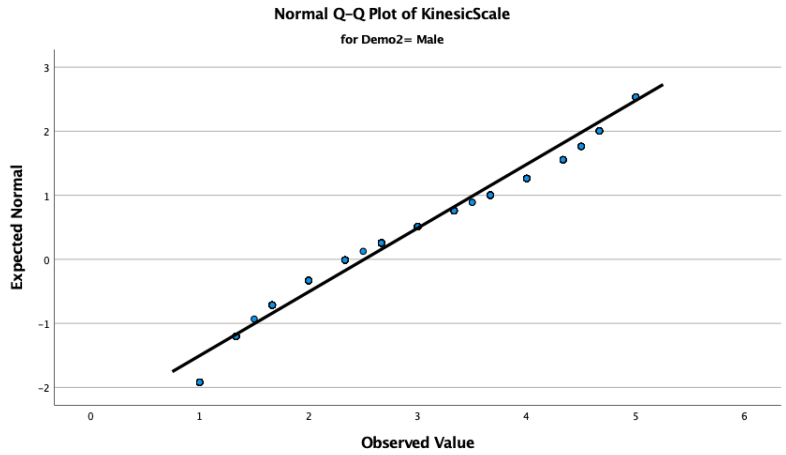
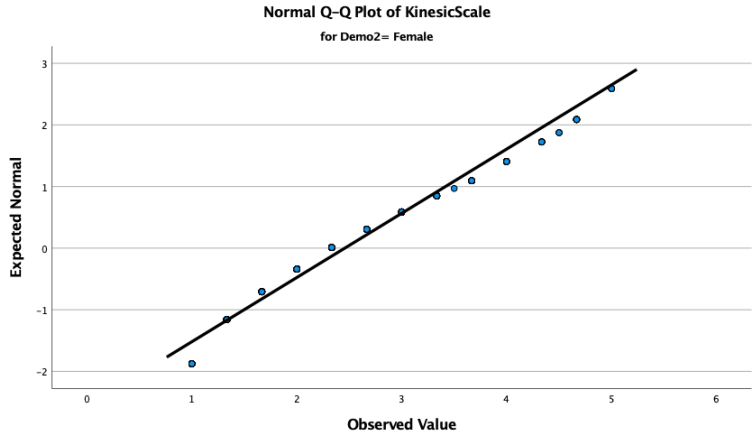


Figure 9

Q-Q Plot of Kinesics Data for Females



Although the Q-Q Plots looked somewhat normative in their distribution, the researcher verified through more robust numerical statistical tests and found that all seven scales were outside the standard level of acceptable skewness z-scores of ±2.58 (Schober et al., 2021; Trafimow, 2019). The equation $Z\ score = \frac{Skewness}{Std.Error}$ was used to determine whether the data was mathematically normative.

Table 10

Skewness and Std. Error for Kinesics Scale

	Skewness	Kurtosis	Std. Error
Male - Kinesics	.503	-.629	.078
Female - Kinesics	.507	-.487	.098

Males had a z-score of 6.45($Z\ score = \frac{.503}{.078} = 6.45$) and females had a z-score of 5.17 ($Z\ score = \frac{.507}{.098} = 5.17$). Both z-scores were above the allotted ±2.58 parameters of acceptable normality to meet the assumptions for a parametric test. This was further confirmed by the data < 0.001 Sig. score, which must be greater than 0.05 to pass the test of normality. Considering these findings, the researcher could not meet the assumptions required to run parametric tests on the data and chose to run nonparametric tests to test the hypotheses instead.

Research Questions and Hypotheses

The research questions and hypotheses for this study will be shared here as a reminder of what the researcher was seeking to better understand with the data. This section will examine the data for all six hypotheses, which are organized in pairs of two for each research question listed. The statistical findings for each hypothesis will follow.

Research Question 1: What are the primary nonverbal behaviors of college instructors that correlate with student immediacy?

Hypothesis 1 ($H1_1$): Paralanguage will be the highest-ranked nonverbal category that students value in a college instructor.

Null Hypothesis 1 ($H1_0$): Paralanguage will not be the highest-ranked nonverbal category that students value in a college instructor.

Hypothesis 2 ($H2_1$): Artifacts will be the lowest overall ranked nonverbal category.

Null Hypothesis 2 ($H2_0$): Artifacts will not be the lowest overall ranked nonverbal category.

Research Question 2: To what extent do student demographics affect which nonverbal categories they perceive most highly in instructors they feel immediacy toward?

Hypothesis 3 ($H3_1$): Community college students and public four-year university students will have different hierarchical rankings of nonverbal behaviors.

Null Hypothesis 3 ($H3_0$): Community college students and public four-year university students will not have different hierarchical rankings of nonverbal behaviors.

Hypothesis 4 ($H4_1$): Different genders will have different hierarchical rankings of nonverbal behaviors.

Null Hypothesis 4 ($H4_0$): Different genders will not have different hierarchical rankings of nonverbal behaviors.

Research Question 3: Did the COVID-19 pandemic change student's perceptions of their instructor's nonverbal behaviors?

Hypothesis 5 ($H5_1$): Students with teachers following COVID-19 protocols will rank the nonverbal categories differently than students with teachers who have no COVID-19 protocols.

Null Hypothesis 5 ($H5_0$): Students with teachers following COVID-19 protocols will not rank the nonverbal categories differently than students with teachers who have no COVID-19 protocols.

Hypothesis 6 ($H6_1$): Students with teachers who followed their regionally mandated COVID protocols will rank kinesics as the highest nonverbal category.

Null Hypothesis 6 ($H6_0$): Students with teachers who followed their regionally mandated COVID protocols will not rank kinesics as the highest nonverbal category.

Presentation of the Findings

Research Question 1

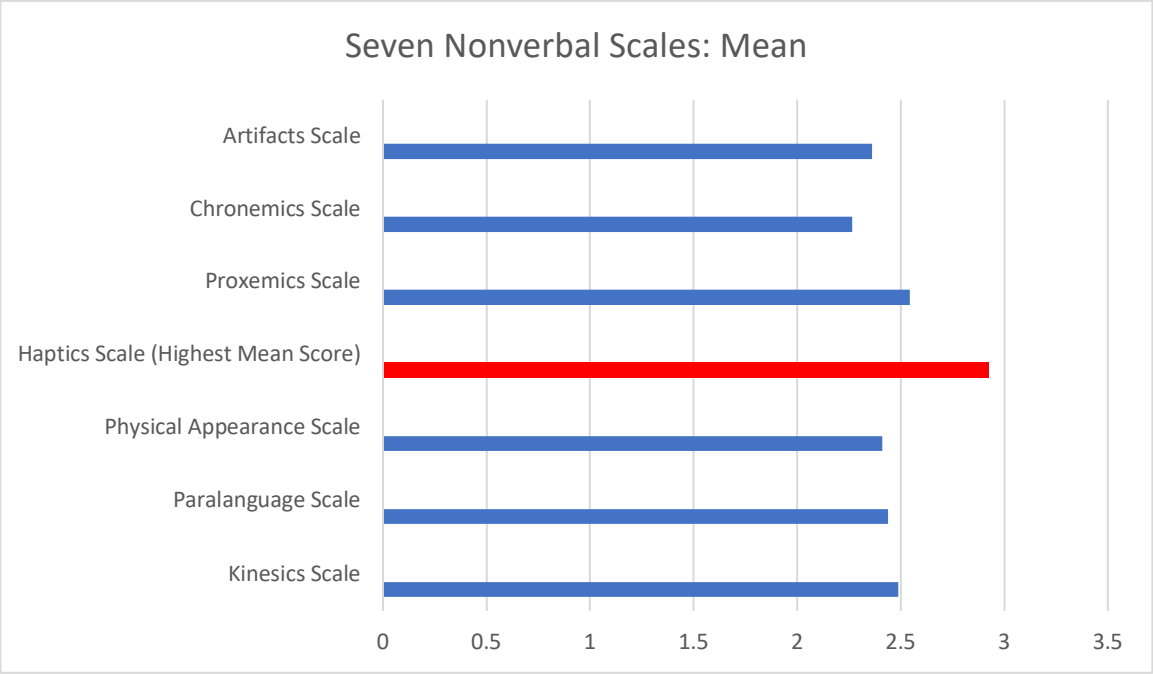
What are the primary nonverbal behaviors of college instructors that correlate with student immediacy?

Research Question 1 Findings

To answer Research Question 1, the collected data were visually and statistically analyzed. First, the visual results to this question will be displayed, followed by two supporting hypotheses that look at the data from a statistical lens.

Figure 10

Seven Nonverbal Scales: Mean



As seen in the visual representation above, the data collected shows that the nonverbal category of haptics is the most highly ranked nonverbal behavior of college instructors that correlates with student immediacy. Students were asked to think of a teacher whom they felt a sense of immediacy with, then answer seven scales of questions about these teachers based on their interactions in the class. Figure 10 is a quick visual reference of these findings and shows the mean of the seven scales. This visual display will be further supported with statistics in the following two hypotheses sections.

Hypothesis 1 ($H1_1$)

Paralanguage will be the highest-ranked nonverbal category that students value in a college instructor.

Hypothesis 1 Findings

The survey had 21 Likert scale questions which all asked the participants to rate a nonverbal trait of a teacher they trusted and enjoyed. The 21 questions were separated into seven categorical scales, with each scale consisting of three questions. The seven scales mirror Burgoon's (2016) seven categories of nonverbal communication: kinesics, paralanguage, physical appearance, haptics, proxemics, chronemics, and artifacts. The mean score of all three Likert questions for each of the seven scales was calculated, leaving the researcher with the overall mean score for each of the seven scales / nonverbal categories. Some participants chose "n/a." rather than a Likert score, and those answers were removed from the calculations. Below is a table with the mean scores for each scale.

Table 11

Mean Scores of All Seven Nonverbal Scales

	Mean Scale Scores

	N	Mean	Std. Deviation
Kinesics Scale	1,610	2.4884	.98714
Paralanguage Scale	1,610	2.4375	.98708
Physical Appearance Scale	1,609	2.4096	1.00165
Haptics Scale (Highest Mean Score)	**1,609**	**2.9219**	**1.13842**
Proxemics Scale	1,611	2.5430	.93253
Chronemics Scale	1,611	2.2666	1.01531
Artifacts Scale	1,606	2.3618	.99343

The researcher failed to reject $H1_0$. When looking at the final mean scores for each of the seven nonverbal scales, paralanguage was not the most highly ranked category in terms of the overall mean. Instead, the data shows that *haptics* (mean = 2.9219, *n* = 1,609) was the most highly ranked nonverbal category of all students, and paralanguage ranked fourth (mean = 2.4375, *n* = 1,610).

Hypothesis 2

Artifacts will be the lowest overall ranked nonverbal category.

Hypothesis 2 Findings

To better understand the relationship between nonverbal behaviors and instructors with whom students felt a sense of immediacy, the survey asked respondents to think of a teacher they felt immediacy toward, expressed in layman's terms as a teacher they liked, trusted, or felt a connection with, and answer a series of questions pertaining to that teacher. As noted above, the 21 questions respondents answered were categorized into seven scales, each of which housing three questions that mirrored Burgoon's (2017) seven nonverbal categories. Once all answers were collected, the average mean of each scale was calculated and put in order of highest mean to lowest mean. This data helped the researcher understand which of the seven nonverbal

categories had the least amount of correlation with a student's perceived immediacy with their college instructor.

Table 12

Mean Scores of All Seven Nonverbal Scales

	N	Mean	Std. Deviation
Kinesics Scale	1,610	2.4884	.98714
Paralanguage Scale	1,610	2.4375	.98708
Physical Appearance Scale	1,609	2.4096	1.00165
Haptics Scale	1,609	2.9219	1.13842
Proxemics Scale	1,611	2.5430	.93253
Chronemics Scale (Lowest Mean Score)	**1,611**	**2.2666**	**1.01531**
Artifacts Scale	1,606	2.3618	.99343

The researcher failed to reject the null hypothesis for $H2_0$. The mean score for each scale in the table above shows that chronemics had the lowest mean score among respondents (mean = 2.2666, *n*= 1,611). Although the data show that the researcher failed to reject the null hypothesis, the hypothesized scale of artifacts was second to last (mean = 2.3618, *n* = 1,606).

Research Question 2

To what extent do student demographics affect which nonverbal categories they perceive most highly in instructors they feel immediacy toward?

Research Question 2 Findings

The findings of Research Question 2 will be communicated to the reader through a visual overview of the data as well as in-depth statistics in hypothesis 3 and hypothesis 4.

Figure 11

2-Year verse 4-Year Scale Results

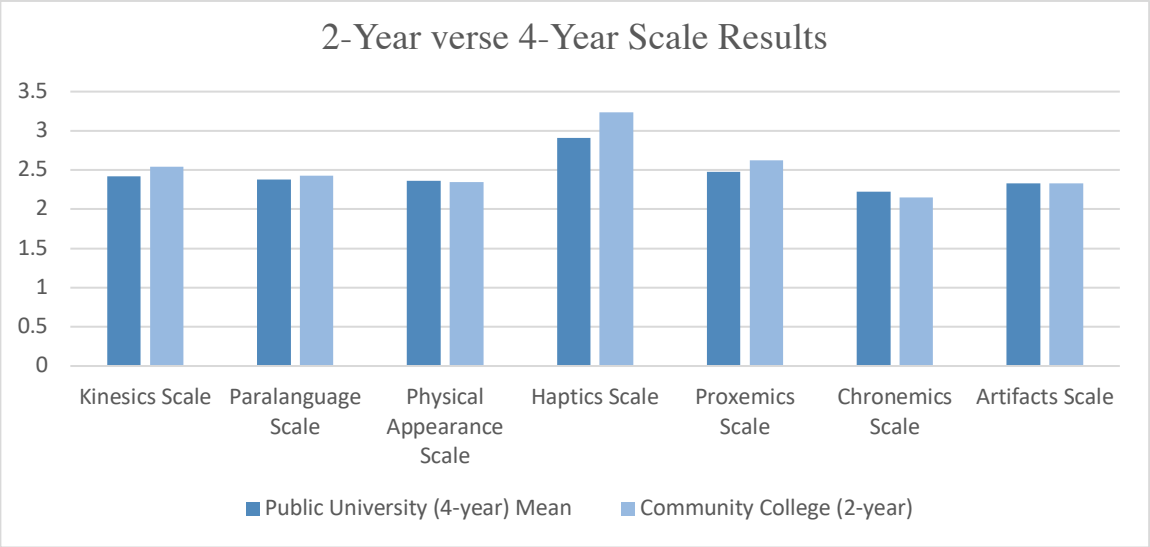
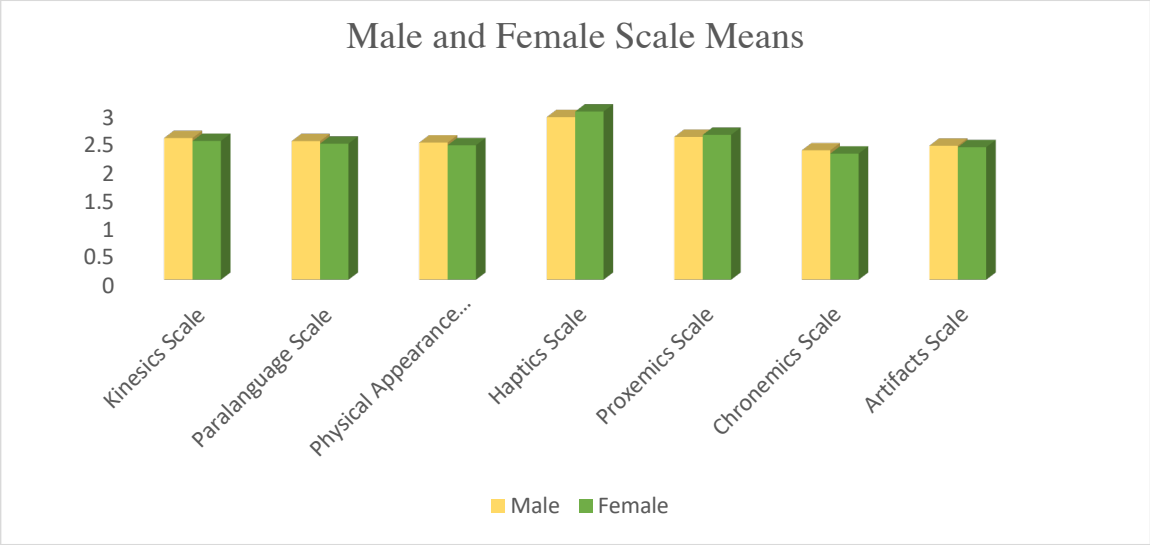


Figure 12

Male and Female Scale Results



As seen in the charts above, the demographics of school type and gender only slightly affected the numerical means of each of the seven scales. While the specific mean number was different, it is noteworthy that the mean ranking of highest to lowest shows a similarity

regardless of demographic. These findings will be explored more in hypothesis 3 and hypothesis 4.

Hypothesis 3 ($H3_1$)

Community college students and public four-year university students will have different hierarchical rankings of nonverbal behaviors.

Hypothesis 3 Finding

To understand if community college students and public four-year university students had a different hierarchical ranking of nonverbal behaviors, the researcher ran the nonparametric Mann–Whitney U test. This test was selected over a parametric t-test due to the non-normative distribution of data. As discussed in the Test of Normality section of this chapter, a normative distribution of data is a required assumption for parametric testing, and the collected data failed to satisfy this assumption. Conversely, all assumptions for the Mann–Whitney U test were met. Below are the results of the Mann–Whitney U test.

Table 13

Mean Rank of Community College and Public University Students

	School Type Attended	N	Mean Rank	Sum of Ranks
Kinesics Scale	Community College (2-year)	144	451.71	65,046.50
	Public University (4-year)	712	423.81	301,749.50
	Total	856		
Paralanguage Scale	Community College (2-year)	144	440.38	63,414.50
	Public University (4-year)	712	426.10	303,381.50
	Total	856		
	Community College (2-year)	144	425.42	61,260.50

Physical Appearance Scale	Public University (4-year)	712	429.12	305,535.50
	Total	856		
Haptics Scale	Community College (2-year)	144	486.25	70,019.50
	Public University (4-year)	711	416.20	295,920.50
	Total	855		
Proxemics Scale	Community College (2-year)	144	467.73	67,353.00
	Public University (4-year)	713	421.18	300,300.00
	Total	857		
Chronemics Scale	Community College (2-year)	144	408.38	58,806.50
	Public University (4-year)	713	433.16	308,846.50
	Total	857		
Artifacts Scale	Community College (2-year)	143	421.20	60,231.00
	Public University (4-year)	712	429.37	305,709.00
	Total	855		

The Mann–Whitney U test was run to better understand if there was a statistical difference in the hierarchical ranking of nonverbal scales between community college students and public four-year students. First, the mean rank of scales for community college students was larger than public four-year university students for kinesics, paralanguage, haptics, and proxemics while public four-year university students showed higher mean ranks for physical appearance, chronemics, and artifacts.

Table 14

Means of Community College and Public University Students

What school type do you attend?	Kinesics Scale	Paralanguage Scale	Physical Appearance Scale	Haptics Scale	Proxemics Scale	Chronemics Scale	Artifacts Scale

Community College (2-year) Mean	2.5405	2.4282	2.3472	3.2396	2.6250	2.1516	2.3298
Public University (4-year) Mean	2.4232	2.3816	2.3621	2.9072	2.4766	2.2249	2.3263

The data also showed that community college students ranked the scales in the following order: Haptics (mean rank = 3.2396), proxemics (mean rank = 2.6250), kinesics (mean rank = 2.5405), paralanguage (mean rank = 2.4282), physical appearance (mean rank = 2.3472), artifacts (mean rank = 2.3298), and chronemics (mean rank = 2.1516); and four-year university students ranked the scales in the following order: haptics (mean rank = 2.9072), proxemics (mean rank = 2.4766), kinesics (mean rank = 2.4232), paralanguage (mean rank = 2.3816), physical appearance (mean rank = 2.3621), artifacts (mean rank = 2.3263), and chronemics (mean rank = 2.2249). Although the exact mean numerical outcomes were different for community college students and public four-year university students, they both hierarchically ranked the nonverbal scales in the same mean rank order. For both categories, haptics was the highest mean, followed by proxemics, kinesics, paralanguage, physical appearance, artifacts, and finally, chronemics.

Table 15

Mann Whitney U of Community College and Public University Students

	Kinesics Scale	Paralanguage Scale	Physical Appearance Scale	Haptics Scale	Proxemics Scale	Chronemics Scale	Artifacts Scale
Mann–Whitney U	47,921.500	49,553.50	50,820.500	42,804.500	45,759.000	48,366.500	49,935.000
Wilcoxon W	301,749.50	303,381.5	61,260.500	295,920.500	300,300.000	58,806.500	60,231.000
Z	-1.242	-.636	-.165	-3.114	-2.070	-1.104	-.363

Asymp. Sig. (2-tailed)	.214	.525	.869	.002	.038	.270	.717

When examining the Mann–Whitney U results for community college students and four-year public university students, a statistically significant difference was observed between the groups for haptics ($U = 42{,}804$, $p > 0.05$) and proxemics ($U = 45{,}759$, $p > 0.05$) while no statistical difference was found for kinesics ($U = 47{,}921$, $p < 0.05$), paralanguage ($U = 49{,}553$, $p < 0.05$), physical appearance ($U = 50{,}820$, $p > 0.05$), chronemics ($U = 48{,}366$, $p > 0.05$), and artifacts ($U = 49{,}935$, $p < 0.05$].

The researcher failed to reject the null hypothesis for $H3_0$. Although community college and public four-year university students did have different mean scores for the seven scales, the seven scales were hierarchically the same when mean scores for each of the seven scales were organized from highest to lowest mean average.

Hypothesis 4

Different genders will have different hierarchical rankings of nonverbal behaviors.

Hypothesis 4 Findings

The nonparametric Mann–Whitney U test was used to explore if the genders placed differing values on nonverbal categories. This test was used over the parametric independent t-test due to the non-normative distribution of data discussed in the test of normality section of this chapter. There are four assumptions for a Mann–Whitney U test: (1) that there is one dependent variable that is measured at the continuous or ordinal level, (2) that there is one independent variable that consists of two categorical, independent, and dichotomous groups, (3) that there is no relationship between the observations in each independent variable (i.e., a participant cannot be in both of the two groups), and (4) that you do not compare the median score of the two

groups if the two groups do not have similar distributions. Because all the assumptions were met, the researcher moved forward with running the Mann–Whitney U test.

Table 16

Mean Rank of Male and Female Students

	What is your gender?	N	Mean Rank	Sum of Ranks
Kinesics Scale	Male	980	810.36	794,149.00
	Female	626	792.77	496,272.00
	Total	1,606		
Paralanguage Scale	Male	980	812.07	795,830.50
	Female	626	790.08	494,590.50
	Total	1,606		
Physical Appearance Scale	Male	978	812.38	794,511.50
	Female	627	788.36	494,303.50
	Total	1,605		
Haptics Scale	Male	979	787.87	771,323.50
	Female	626	826.66	517,491.50
	Total	1,605		
Proxemics Scale	Male	980	795.86	779,945.50
	Female	627	816.72	512,082.50
	Total	1,607		
Chronemics Scale	Male	980	816.48	800,147.50
	Female	627	784.50	491,880.50
	Total	1,607		
Artifacts Scale	Male	978	807.32	789,557.00
	Female	624	792.38	494,446.00
	Total	1,602		

The mean rank for all scales was larger for males, except for the haptic and proxemic scales in which females had the larger mean rank. Males ranked the nonverbal categories in the following order: Haptics (mean rank = 2.8803), proxemics (mean rank = 2.5293), kinesics (mean rank = 2.5099), paralanguage (mean rank = 2.4549), physical appearance (mean rank = 2.4284),

artifacts (mean rank = 2.3734), and chronemics (mean rank = 2.2912), and females ranked the scales in the following order: haptics (mean rank = 2.9776), proxemics (mean rank = 2.5649), kinesics (mean rank = 2.4574), paralanguage (mean rank = 2.4097), physical appearance (mean rank = 2.3817), artifacts (mean rank = 2.3462), and chronemics (mean rank = 2.2326).

Table 17

Mean Scores of Male and Female Students

What is your gender?	Kinesics Scale	Paralanguage Scale	Physical Appearance Scale	Haptics Scale	Proxemics Scale	Chronemics Scale	Artifacts Scale
Male	2.5099	2.4549	2.4284	2.8803	2.5293	2.2912	2.3734
Female	2.4574	2.4097	2.3817	2.9776	2.5649	2.2326	2.3462
Total	2.4884	2.4375	2.4096	2.9219	2.5430	2.2666	2.3618

Although the exact mean numerical outcomes were different for male and female students, they both hierarchically ranked the nonverbal scales in the same order, starting with haptics being the highest mean, then proxemics, kinesics, paralanguage, physical appearance, artifacts, and finally, chronemics. This ranking of means is also in line with the rankings that came from all participants.

Table 18

Mann–Whitney U of Male and Female Students

	Kinesics Scale	Paralanguage Scale	Physical Appearance Scale	Haptics Scale	Proxemics Scale	Chronemic Scale	Artifacts Scale
Mann–Whitney U	300,021.0	298,339.500	297,425.500	291,613.500	299,255.50	295,002.50	299,446.00
Wilcoxon W	496,272.0	494,590.500	494,303.500	771,323.500	779,945.50	491,880.50	494,446.00
Z	-.745	-.932	-1.019	-1.641	-.884	-1.356	-.634

Asymp. Sig. (2-tailed)	.456	.351	.308	.101	.377	.175	.526

a. Grouping Variable: What is your gender?

When examining the Mann–Whitney U results for male and female students, no statistical significance was observed for any of the seven scales: haptics (U = 291,613, $p < 0.05$) and proxemics (U = 299,255, $p < 0.05$), kinesics (U = 300,021, $p < 0.05$), paralanguage (U = 298,339, $p < 0.05$), physical appearance (U = 297,425, $p > 0.05$), chronemics (U = 295,002, $p > 0.05$), and artifacts (U = 299,446, $p < 0.05$). The researcher failed to reject the null hypothesis for $H4_0$. Although men and women did have different mean scores for the seven scales, the seven scales were hierarchically the same when mean scores for each of the seven scales were ranked from highest to lowest.

Research Question 3

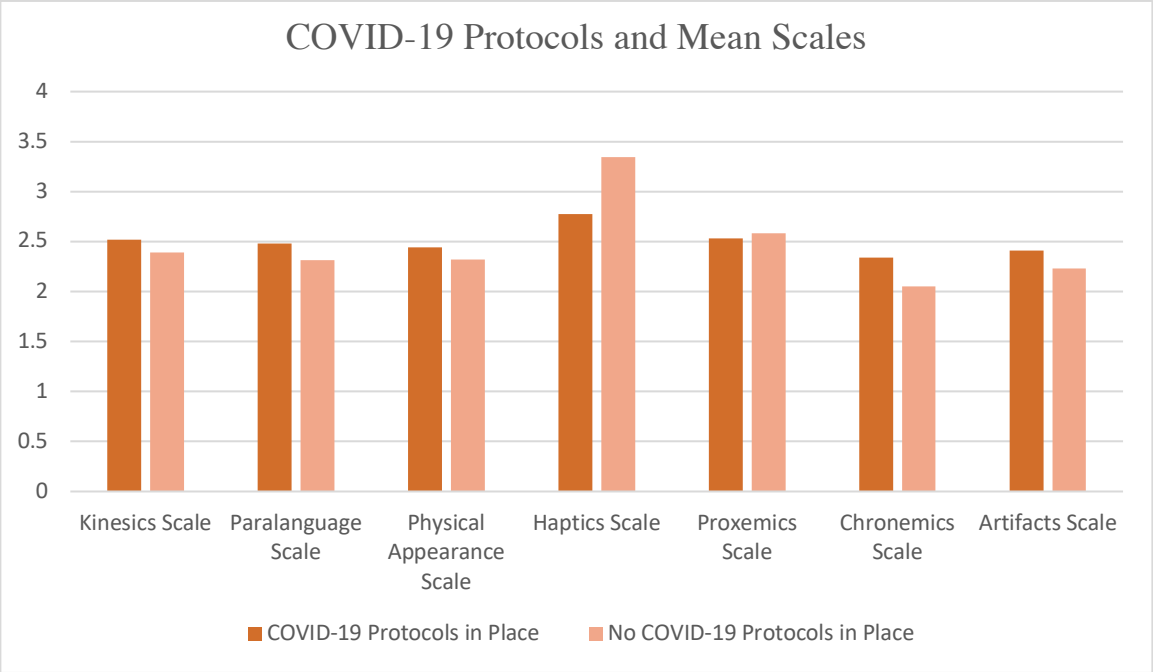
Did the COVID-19 pandemic change student's perceptions of their instructor's nonverbal behaviors?

Research Question 3 Findings

To better understand the effects that COVID-19 had on this study and the findings of which nonverbal categories are correlated with student perceived immediacy, this section will look at introductory visuals representing the collected data, then expand on these findings through statistical analysis of the data.

Figure 13

COVID-19 Protocols and Mean Scales



From the visual graph above, it is seen that the implementation of COVID-19-related protocols like masking, social distancing, and lack of casual physical content brought only slight differences to the overall mean scores of each nonverbal scale. These results will be examined more closely through statistics in $H5_1$ and $H6_1$.

Hypothesis 5 ($H5_1$)

Students with teachers who followed their regionally mandated COVID protocols will have different hierarchical rankings of nonverbal behaviors than students with teachers who did not have COVID protocols in place.

Hypothesis 5 Findings

This study was conducted during the COVID-19 pandemic. COVID-19 began affecting the ways teachers and schools operated in 2020. This study filtered participants based on them taking a college course within the last three years, which meant some participants could be

responding prepandemic or after the vaccine was released and protocols were not in place, and others were answering based on experiences during the pandemic when COVID protocols were in place. To understand whether COVID protocols such as facemasks, social distancing, and shields had a significant correlation with a student's perceived immediacy with instructors, a nonparametric Mann–Whitney U test was run.

Table 19

Mean Rank of Students with and without COVID Protocols

	Were COVID-19 protocols in place during the time you took this teacher's class?	N	Mean Rank	Sum of Ranks
Kinesics Scale	Yes	1,194	817.43	976,012.50
	No	416	771.26	320,842.50
	Total	1,610		
Paralanguage Scale	Yes	1,194	822.09	981,574.50
	No	416	757.89	315,280.50
	Total	1,610		
Physical Appearance Scale	Yes	1,193	815.48	972,869.50
	No	416	774.94	322,375.50
	Total	1,609		
Haptics Scale	Yes	1,192	746.96	890,373.00
	No	417	970.92	404,872.00
	Total	1,609		
Proxemics Scale	Yes	1,194	793.09	946,951.50
	No	417	842.96	351,514.50
	Total	1,611		
Chronemics Scale	Yes	1,194	841.19	1,004,381.00
	No	417	705.24	294,085.00
	Total	1,611		
Artifacts Scale	Yes	1,192	820.89	978,500.50

	No	414	753.43	311,920.50
	Total	1,606		

The mean rank of students with teachers who did have COVID protocols in place was larger for all scales except haptics and proxemics. The mean haptic rank for those students whose teachers had COVID protocols in place was 746.96 while the mean haptic rank for students whose teachers did not have COVID protocols in place was 970.92 showing a greater mean rank for students with teachers who did not have protocols in place. Similarly, the mean proxemic rank for those students whose teachers had COVID protocols in place was 793.09 while the mean proxemic rank for students whose teachers did not have COVID protocols in place was 842.96.

Table 20

Mean Scores of Students with and without COVID Protocols

Were COVID-19 protocols in place during the time you took this teacher's class?	Kinesics Scale	Paralanguage Scale	Physical Appearance Scale	Haptics Scale	Proxemics Scale	Chronemics Scale	Artifacts Scale
Yes	2.5219	2.4810	2.4396	2.7749	2.5285	2.3423	2.4070
No	2.3922	2.3125	2.3233	3.3421	2.5847	2.0500	2.2315
Total	2.4884	2.4375	2.4096	2.9219	2.5430	2.2666	2.3618

The students with COVID protocols ranked the nonverbal categories in the following order: Haptics (mean rank = 2.7749), proxemics (mean rank = 2.5285), kinesics (mean rank = 2.5219), paralanguage (mean rank = 2.4549), physical appearance (mean rank = 2.4396), artifacts (mean rank = 2.4070), and chronemics (mean rank = 2.3423), and students without

COVID protocols ranked the scales in the following order: haptics (mean rank = 3.3421), proxemics (mean rank = 2.5285), kinesics (mean rank = 2.5219), paralanguage (mean rank = 2.3125), physical appearance (mean rank = 2.3233), artifacts (mean rank = 2.2315), and chronemics (mean rank = 2.0500).

Table 21

Mann–Whitney U of Students with and without COVID Protocols

	Kinesics Scale	Paralanguage Scale	Physical Appearance Scale	Haptics Scale	Proxemics Scale	Chronemics Scale	Artifacts Scale
Mann–Whitney U	234,106.5	228,544.50	235,639.50	179,345.0	233,536.50	206,932.00	226,015.5
Wilcoxon W	320,842.5	315,280.50	322,375.50	890,373.0	946,951.50	294,085.00	311,920.5
Z	-1.754	-2.440	-1.541	-8.502	-1.895	-5.170	-2.564
Asymp. Sig. (2-tailed)	.079	.015	.123	< .001	.058	< .001	.010

a. Grouping Variable: Were COVID-19 protocols in place during the time you took this teacher's class?

When examining the Mann–Whitney U results for students with and without COVID protocols in place, a statistical significance was observed for paralanguage ($U = 228{,}544.50$, $p > 0.05$), haptics ($U = 179{,}345.0$, $p > 0.05$), chronemics ($U = 206{,}932.00$, $p > 0.05$), and artifacts ($U = 226{,}015.5$, $p > 0.05$) while no statistical significance was observed for proxemics ($U = 233{,}536.50$, $p < 0.05$), kinesics ($U = 234{,}106.5$, $p < 0.05$), or physical appearance ($U = 235{,}639.50$, $p > 0.05$). The researcher failed to reject the null hypothesis for $H5_0$. Although students with teachers who did have COVID protocols in place did have different mean scores for the seven scales than students with teachers who did not have COVID protocols in place, the

seven scales were hierarchically the same when mean scores for each of the seven scales were ranked from highest to lowest.

Hypothesis 6 ($H6_1$)

Students with teachers who followed their regionally mandated COVID protocols will rank kinesics as the highest nonverbal category.

Hypothesis 6 Findings

This study asked participants to answer the survey questions while thinking of a teacher with whom they felt a sense of immediacy within the last three years. Due to the potential three-year time span participants could use to answer the question, there was a given assumption that some participants would answer the questions during a time when COVID protocols were not in place, such as before COVID became a pandemic or after the vaccine was released and states began lifting mandates. Some participants also answered the questions in light of a time when stringent protocols were implemented by federal, state, or county guidelines. The previous hypothesis compared these two groups for differences. This hypothesis seeks to better understand the specific demographic of students who had protocols in place at the time of taking the class with the teacher with whom they felt a sense of immediacy. Below are the results of the average mean score of students whose teachers had protocols in place for each of the seven scales.

Table 22

Mean Scores of Students with and without COVID Protocols

Were COVID-19 protocols in place during the time you took this teacher's class?	Kinesics Scale	Paralanguage Scale	Physical Appearance Scale	Haptics Scale	Proxemics Scale	Chronemics Scale	Artifacts Scale
Yes (n = 1,194)	**2.5219**	**2.4810**	**2.4396**	**2.7749**	**2.5285**	**2.3423**	**2.4070**
Total Student Scores (n = 1,611)	2.4884	2.4375	2.4096	2.9219	2.5430	2.2666	2.3618

The researcher failed to reject the null hypothesis for $H6_0$. In reviewing the average mean scores of the participants whose teachers had protocols in place, it was apparent that haptics was the highest-ranked nonverbal scale. The hypothesized nonverbal scale of kinesics was ranked third (mean = 2.5219) among students whose teachers had COVID-19 protocols in place. The highest mean score of the seven nonverbal scales was haptics (mean = 2.7749).

Conclusion

In conclusion, three research questions and six hypotheses were tested to understand the relationship between college teachers' nonverbal communication behaviors and the influence of those behaviors on college students' perceptions of immediacy. Below is a summary of the results for each of the five hypotheses:

Research Question 1

What are the primary nonverbal behaviors of college instructors that correlate with student immediacy?

Research Question 1 Findings

A visual inspection of the data revealed that haptics is the most highly ranked nonverbal behavior of college instructors that correlates with student immediacy.

Null Hypothesis 1 ($H1_0$)

Paralanguage will not be the highest-ranked nonverbal category that students value in a college instructor.

Null Hypothesis 1 ($H1_0$) Result Summary

The data failed to reject the null hypothesis. The mean for all seven scales was calculated and showed that paralanguage was not the highest-ranked nonverbal category that students value in a college instructor. The data instead showed that the haptic scale had the highest numerical mean score of the seven scales and that paralanguage had the fourth highest mean.

Null Hypothesis 2 ($H2_0$)

Artifacts will not be the lowest overall ranked nonverbal category.

Null Hypothesis 2 ($H2_0$) Result Summary

The researcher failed to reject the null hypothesis. The mean scores of all seven scales showed that participants ranked the nonverbal scales in the following order: 1) haptics, 2) proxemics, 3) kinesics, 4) paralanguage, 5) physical appearance, 6) artifacts, and then 7) chronemics. Artifacts were second to last, not last as hypothesized.

Research Question 2

To what extent do student demographics affect which nonverbal categories they perceive most highly in instructors they feel immediacy toward?

Research Question 2 Findings

The visual representation of the data from this study shows that while the specific mean numbers were technically different when organized by demographic, the differences were minor. Furthermore, when the mean rank of the scales was organized from highest to lowest, there were no differences between demographics.

Null Hypothesis 3 ($H3_0$)

Community college students and public four-year university students will not have different hierarchical rankings of nonverbal behaviors.

Null Hypothesis 3 ($H3_0$) Result Summary

The researcher failed to reject the null hypothesis. After running a Mann–Whitney U test and comparing the mean outcome of community college students and public four-year students, the researcher found that the ranking of all seven scales appeared in the same order, failing to reject the null hypothesis. A statistically significant difference was observed for haptics ($U = 42{,}804$, $p > 0.05$) and proxemics ($U = 45{,}759$, $p > 0.05$) while no statistical difference was found for kinesics ($U = 47{,}921$, $p < 0.05$), paralanguage ($U = 49{,}553$, $p < 0.05$), physical appearance ($U = 50{,}820$, $p > 0.05$), chronemics ($U = 48{,}366$, $p > 0.05$), and artifacts ($U = 49{,}935$, $p < 0.05$).

Null Hypothesis 4 ($H4_0$)

Different genders will not have different hierarchical rankings of nonverbal behaviors.

Null Hypothesis 4 ($H4_0$) Result Summary

The researcher failed to reject the null hypothesis. Upon completion of nonparametric testing, the researcher found that while the exact mean numerical outcomes were different for male and female students, both males and females hierarchically ranked the nonverbal scales in the same order. No statistical significance was observed for any of the seven scales: haptics ($U = 291{,}613$, $p < 0.05$) and proxemics ($U = 299{,}255$, $p < 0.05$), kinesics ($U = 300{,}021$, $p < 0.05$), paralanguage ($U = 298{,}339$, $p < 0.05$), physical appearance ($U = 297{,}425$, $p > 0.05$), chronemics ($U = 295{,}002$, $p > 0.05$), and artifacts ($U = 299{,}446$, $p < 0.05$).

Research Question 3

Did the COVID-19 pandemic change student's perceptions of their instructor's nonverbal behaviors?

Research Question 3 Findings

From the visual graph produced from the data, it is seen that the implementation of COVID-19-related protocols like masking, social distancing, and lack of casual physical content brought only slight differences to the overall mean scores of each nonverbal scale.

Null Hypothesis 5 ($H5_0$)

Students with teachers following COVID-19 protocols will not rank the nonverbal categories differently than students with teachers who have no COVID-19 protocols.

Null Hypothesis 5 ($H5_0$) Result Summary

The researcher failed to reject the null hypothesis. Although students with teachers who had COVID protocols in place had different mean scores for the seven scales than students with teachers who did not have COVID protocols in place, the seven scales were hierarchically the same when the mean scores for each of the seven scales were organized from highest mean number to lowest mean number.

Null Hypothesis 6 ($H6_0$)

Students with teachers who followed their regionally mandated COVID protocols will not rank kinesics as the highest nonverbal category.

Null Hypothesis 6 ($H6_0$) Result Summary

The researcher failed to reject the null hypothesis. The haptic scale was ranked highest when the means of the scales were organized from largest to smallest, with the hypothesized kinesics scale ranking third for instructors with COVID-19 protocols in place. This chapter

walked the reader through the research process and how the researcher gathered data on college teachers' nonverbal communication behaviors. A clear understanding of how the pilot study was conducted was shared as well as how the final data were collected and cleaned. Finally, a review of each hypothesis and its statistical findings were shared. A discussion of these results and their implications will take place in the next chapter.

CHAPTER FIVE: CONCLUSION

Overview

This final chapter of the dissertation will focus on how the data collected interacts with the current literature that pertains to nonverbal communication and student-instructor immediacy, the real-world implications of the data, and how this study furthers the communication field and sets up future researchers to continue furthering the field. This chapter will begin with a summary of findings that reviews the research question and hypotheses, in addition to what the data says about both. The chapter will then discuss the data and explore how the findings support and further the current literature in the field. Next, the implication section will examine the practical implications that can be derived from the study. Finally, the researcher will share some limitations of the study and recommendations for future research.

Summary of Findings

The summary of findings includes a brief reminder of this study's research questions and hypotheses and an overview of each research question and hypotheses' statistical findings from chapter four.

Research Question 1

What are the primary nonverbal behaviors of college instructors that correlate with student immediacy?

Research Question 1: Findings Overview

The researcher began the review of this research question by converting the collected data into a visual representation of the data. Upon the conversion of data to a visual representation, it was seen that haptics and proxemics were the highest-ranked nonverbal categories among teachers whom students felt a sense of immediacy with. This was further

confirmed through the statistical testing of two hypotheses. The implication of these findings will be discussed further in this chapter.

Hypothesis 1 ($H1_1$)

Paralanguage will be the highest-ranked nonverbal category that students value in a college instructor.

Hypothesis 1 ($H1_1$): Findings Overview

The researcher ran statistical equations in SPSS to verify the findings from the visual representation of the data. Through these tests, the researcher failed to reject the null hypothesis and instead showed haptics and proxemics as the two most highly correlated nonverbal categories students observed in the educators toward whom they felt a sense of immediacy. The hypothesized category of paralanguage ranked fourth of seven.

Hypothesis 2 ($H2_1$)

Artifacts will be the lowest overall ranked nonverbal category.

Hypothesis 2 ($H2_1$): Findings Overview

The statistics failed to reject the null hypothesis. Instead of artifacts being the lowest-ranked nonverbal category when the average mean for each was calculated, the data showed chronemics as the lowest-ranked category. Artifacts, however, ranked second to last. The researcher will explore the potential implications of these findings later in this chapter.

Research Question 2

To what extent do student demographics affect which nonverbal categories they perceive most highly in instructors they feel immediacy toward?

Research Question 2: Findings Overview

The mean numerical scores for each nonverbal scale category were different when comparing demographics, such as gender, against one another. That said, although the numeric scores of different demographics differed slightly, the hierarchical order of the seven scales were the same when different demographic categories were compared. The following two research questions support this in statistical depth by looking at the ranking of nonverbal immediacy categories by gender of participants and the school type of participants.

Hypothesis 3 ($H3_1$)

Community college students and public four-year university students will have different hierarchical rankings of nonverbal behaviors.

Hypothesis 3 ($H3_1$): Findings Overview

When the researcher ran the nonparametric Mann–Whitney U test and calculated the mean value for each of the seven nonverbal categories for both community college students and public four-year university students, no hierarchical ranking difference was present. The data also showed that haptics ($U = 42{,}804$, $p > 0.05$) and proxemics ($U = 45{,}759$, $p > 0.05$) were the only two statistically significant scales of the seven. This data confirms the researcher's initial findings in the visual representation of data and shows that the hierarchical rankings of nonverbal categories were the same regardless of the type of college institution that the participant attended.

Hypothesis 4 ($H4_1$)

Different genders will have different hierarchical rankings of nonverbal behaviors.

Hypothesis 4 ($H4_1$): Findings Overview

No differences were found between men's and women's hierarchical ranking of nonverbal behaviors. This was discovered after running a Mann–Whitney U test and ranking the

calculated means of all seven scales for males and females from lowest to highest and comparing the results. No statistical differences were found for males or females for any of the seven nonverbal categories. This Mann–Whitney U test showed no hierarchical ranking differences between males and females.

Research Question 3

Did the COVID-19 pandemic change student's perceptions of their instructor's nonverbal behaviors?

Research Question 3: Findings Overview

Upon gathering the data and creating visual representations of the findings, it was seen the COVID-19 protocols such as masking, limited physical contact, and social distancing brought minimal differences to the overall mean scores for the seven nonverbal scales when compared to those who were not under COVID-19 restrictions or implemented safety protocols. The researcher will further explore the potential implications of this data in regard to how it pertains to nonverbal immediacy during a global pandemic and its implication for educators later in this chapter.

Hypothesis 5 ($H5_1$)

Students with teachers following COVID-19 protocols will rank the nonverbal categories differently than students with teachers who have no COVID-19 protocols.

Hypothesis 5 ($H5_1$): Findings Overview

When the mean score was calculated for students who had COVID-19 protocols and those who did not have COVID-19 protocols in place and ranked from highest mean score to lowest mean score, no hierarchical differences were present. Mean scores had only minor numerical differences, but not one was large enough to alter the hierarchical ranking of scales.

This means that regardless of whether or not COVID-19 protocols were in place, students still ranked the nonverbal categories in the same order in regard to the teachers they felt a sense of immediacy with.

Hypothesis 6 ($H6_1$)

Students with teachers who followed their regionally mandated COVID protocols will rank kinesics as the highest nonverbal category.

Hypothesis 6 ($H6_1$): Findings Overview

The researcher failed to reject the null hypothesis and instead found that haptics was the highest-ranked nonverbal category. When the mean scores for each of the seven nonverbal scales were calculated and placed in order from least to greatest, their order was (1) haptics, (2) proxemics, (3) kinesics, (4) paralanguage, (5) physical appearance, (6) artifacts, and then (7) chronemics. The hypothesized category of kinesics was the third-highest-ranked nonverbal category, preceded by proxemics and haptics.

Discussion

The purpose of this quantitative study was to understand the relationship between college teachers' nonverbal communication behaviors and the influence that those behaviors have on college students' perception of immediacy. A survey of seven scales that corresponded with Burgoon's (2018) seven nonverbal scales was deployed to students who had a self-reported sense of immediacy with a college teacher. The survey gathered information on how those students viewed their instructors through the lens of Burgoon's (2018) seven nonverbal categories.

Theoretical Framework

This study was situated within multiple theoretical frameworks, the primary three being Mehrabian's (1972) approach-avoidance theory, Tinto's (2006) student integration model, and

Burgoon's (2002) categorization of nonverbal behaviors. First, Mehrabian's (1972) approach-avoidance theory states that people move toward the people they trust or feel a sense of immediacy with and avoid and move away from those they do not. This study furthered this field of study by looking specifically at the immediacy and approach aspect of the theory through a teacher–student lens. Second, Tinto's (2006) student integration model gave educators a framework through which they could better understand the factors that led to a student dropping out of college. Although the reasons for someone dropping out of college are complex with multiple factors, this framework helps organize the many factors into categories. This study focused on one of the proposed categories, faculty interactions, hoping that focusing on one aspect and researching it well would ultimately help educational institutions understand the whole equation better. Third, this study used Burgoon's (2002) categorization of nonverbal behaviors as a framework for organizing and labeling nonverbal actions into seven primary categories, which are "kinesics (bodily activity); vocalics or paralanguage (voice); physical appearance; haptics (touch); proxemics (space); chronemics (time); and artifacts (objects)" (p. 243). This research project focused specifically on what nonverbal behaviors teachers who built a sense of immediacy with students displayed most often. This section will examine the data through the lens of those foundational theoretical frameworks and discuss how the findings for each of the three research questions and hypotheses support, refute, or expand upon the current literature.

Research Question 1

What are the primary nonverbal behaviors of college instructors that correlate with student immediacy?

The Literature and Research Question 1

The current literature shows a correlation between a student's success and teachers who display positive nonverbal behavior (Ayuningsih, 2019; Clark, 2021; Rosati-Peterson et al., 2021; Sözer, 2019; Ulrich-Verslycken, 2019). This current literature that shows a correlation between positive student outcomes and an instructor's nonverbal competency helped begin the study, but clear room for expansion in this field was evident to the researcher as many of the existing studies were focused on elementary school students and did not specify which specific nonverbal traits were most strongly correlated with the positive student outcomes. Compounding, there were minimal, robust studies that looked explicitly at nonverbal behaviors as they relate to student–teacher immediacy trends in higher education. Considering this, the aforementioned research question was crafted to further the academic understanding of the interplay between immediacy, education, and nonverbal behavior.

Hypotheses 1 and 2

RQ1 was further explored through two related hypotheses: $H1_1$ (i.e., that paralanguage would be the highest-ranked nonverbal category that students value in a college instructor) and $H2_1$ (i.e., which hypothesized that the category of artifacts would be the lowest overall ranked nonverbal category). $H1_1$ hypothesizing that paralanguage would have the greatest correlation with immediacy was influenced by Ayuningsih's (2019) elementary school study that spoke to the power of vocalics in the classroom and its relation to immediacy. Ayuningsih's (2019) study was rooted in Andersen and Andersen's (1982) original study, which stated that how things are said changes how that information is received by the listener or student. Wharton (2017) supported this view when speaking about how a lack of paralanguage behaviors leads to monotone speaking, which often disengages listeners. These research findings led the researcher

to hypothesize that paralanguage would be the highly correlated nonverbal category with student immediacy. The findings, however, pointed to haptics being the most highly correlated nonverbal category among all students.

This study's data further supports a claim Burgoon (2016) and Panda (2018) have made that proxemics and haptics are often connected and usually seen in tandem with one another. The findings from this study showed that haptics and proxemics were the top two nonverbal categories, once again showing that haptics and proxemics often go together when looking at nonverbal communication. Although they are usually coded separately, as was done in this study, the literature surrounding nonverbal communication often has the two categories reporting very similar results. The fact that the data from this study also shows them right next to each other when all seven categories were placed in order of greatest and least mean further supports the validity of this study's findings as it mirrors the current literature's findings (Burgood, 2016; Panda, 2018; Watson, 2019).

The researcher's $H2_1$ hypothesized that artifacts would be ranked last, but the data showed that chronemics was the last ranked nonverbal behavior to be linked to immediacy. This was surprising given the literature reviewed for this study. In Tatum et al.'s (2018) study, which included hundreds of students, they found that teachers who replied to emails sooner tended to have higher self-reported student rapport scores than instructors who took longer to reply. Researcher Mullins (2018) also reported that students preferred when grades were posted sooner rather than later in the semester. Given the digital age of today's educational landscape, which is comprised of students who are digital natives and accustomed to quick replies and responses, it was not hypothesized that chronemics would be the lowest of all seven categories. Although the findings of this study do not negate the literature in the field, it was a surprising furthering of the

field to see that while students may still have time-based preferences, chronemics is the least correlated nonverbal category when it comes to immediacy a student feels toward a teacher.

Research Question 2

To what extent do student demographics affect which nonverbal categories they perceive most highly in instructors they feel immediacy toward?

The Literature and Research Question 2

Collecting demographic data in a study is crucial as it shows whether or not a diverse population was surveyed and can also help to understand differences or similarities among different demographic groups. The American Phycological Association (2019) also pointed out that demographic information collection in a study is important because it helps contextualize the study and dispel the idea that the findings are the same across all races, religions, genders, or ages unless the data actually show this. Jones et al. (2020) further supported this stance and stated that inquiring about demographics also helps the research community better understand demographic groupings of people across time and culture.

With this in mind, the researcher wanted to gather the demographics of the participants and understand whether the nonverbal behaviors that students self-reported in teachers whom they felt a sense of immediacy with would be different based on the demographics of the respondence.

Hypotheses 3 and 4

The researcher set out to gather data to help answer RQ2 through two hypotheses: $H3_1$ (i.e., that community college students and public four-year university students would have different hierarchical rankings of nonverbal behaviors) and $H4_1$ (i.e., that different genders would

have different hierarchical rankings of nonverbal behaviors). These were created in the hopes of better understanding to what extent demographics played a role in the responses gathered.

Hypothesis 3 was crafted with the assumption that the type of school one attended would affect the types of nonverbal behaviors students reported in the instructions they felt immediacy toward. The reason for this lies in the research that showed retention trends and reasons for attrition were different at four-year universities and community colleges (Aljohani, 2016; Burke, 2019; Tight, 2020). With the understanding that there were differences in one of the core theoretical frameworks of retention, it was hypothesized that the data collected from the two different styles of schools would also yield different results. This, however, was not the case. While community colleges and four-year universities may have different attrition data and reasons for attrition (Bulman & Fairlie, 2021; Yuxuan, 2020), the nonverbal behaviors of instructors that students felt an immediacy toward were strikingly similar in their hierarchical ordering.

Gender was the second demographic variable that was looked at. In the survey, students were asked to disclose their gender, with 99.8% reporting back either male or female. Studies suggest that males and females often have different nonverbal communication styles (Knapp, 2020; Mast & Kadji, 2018; Vogel et al., 2018), which led the researcher to hypothesize that the instructors that the participants felt immediacy toward would also have different nonverbal behaviors. Although researchers have noted that males and females communicate differently (Ghilzai, 2018; Putri & Santika, 2020; Sun et al., 2020), the demographics of gender did not yield significantly different results when determining which nonverbal categories were correlated with student–teacher immediacy. This study helped to further the field of both nonverbal communication as well as immediacy in education as these respective fields work to clarify their

understanding of how these two variables relate. The results of the current study have shown that gender does not play a statistically significant role in students' responses, which helps lay the groundwork for future researchers and future studies.

Research Question 3

Did the COVID-19 pandemic change student's perceptions of their instructor's nonverbal behaviors?

The Literature and Research Question 3

The novel coronavirus (SARS-CoV-2) was declared a global pandemic on March 11, 2020, by the WHO (Carvalho et al., 2021). COVID-19 was defined by the CDC as a respiratory disease that is caused by SARS-CoV-2 (CDC, 2021). This respiratory disease was known to be highly infectious and had the potential to cause hospitalizations or even death. With the discovery of this disease and the declaration of a pandemic, industries across the country either shut down or moved to fully remote or digital modalities (Carvalho et al., 2021; Moss & Metcalf, 2020; Poudel et al., 2020, Sigala, 2020). Education, like most other sectors, was also affected. Schools were either forced to close or move to synchronous or asynchronous modalities (König et al., 2020). This study was conducted during the pandemic, and as such, it was of interest to the researcher to understand how the protocols that were put in place for in-person colleges affected the nonverbal behaviors students perceived in teachers whom they felt a sense of immediacy with.

With the nature of being a new virus, there have been limited studies on the virus as it relates to nonverbal immediacy, but the global nature of its effects did lead to many studies and research about the virus' effect on education (Daniel, 2020; Moss & Metcalf, 2020; Zhu & Liu, 2020). This study was positioned well to continue furthering the field of the intersection of

nonverbal immediacy and COVID-19 as it pertains to education. As would be expected with social distance and mask mandates, the onslaught of COVID-19 brought a rapid and drastic change to nonverbal communication (Moore et al., 2020; Schlögl & Jones, 2020). Because this study focused on in-person instruction, online and virtual nonverbal norms remain an area for further study. That said, there was still a great deal of nonverbal behavioral norms to study in light of in-person COVID-19 mandates. This exploration will be seen in the next section which looks at the findings from hypotheses 5 and 6.

Hypotheses 5 and 6

Research Question 2 was accompanied by two hypotheses: $H5_1$ (i.e., that students with teachers following COVID-19 protocols would rank the nonverbal categories differently than students with teachers who have no COVID-19 protocols) and $H6_1$ (i.e., that students with teachers who followed their regionally mandated COVID-19 protocols would rank kinesics as the highest nonverbal category). $H5_1$ was a hypothesis rooted in the literature. It was clear that social distancing, masking, and other COVID-19-related in-person protocols drastically changed the nonverbal behaviors and habits of the general population (Azorin, 2020; Daniel, 2020; Moss & Metcalf, 2020, Zhu & Liu, 2020). With nonverbal behaviors changing and the education world drastically adapting, it was hypothesized that the students who were in-person during COVID-19 times with protocols in place would place have a different hierarchy of nonverbal categories in their teachers than students who did not have protocols in place. To the researcher's great surprise, this was not the case, and the data showed that the hierarchical rankings of nonverbal categories for teachers whom students felt an immediacy with were the same regardless of COVID-19 protocols. Although the specific numerical means were different, they were similar enough that when organized from largest to smallest, the means for all seven categories in both

groups were hierarchically ranked the same. This points to the notion that the nonverbal behaviors that are most correlated with immediacy transcend social distancing, masking, and other COVID-19 protocols for in-person classes. This finding underscores for educators how important haptics and proxemics are when looking at how to enhance immediacy with students nonverbally.

Similarly, $H6_1$ believed that kinesics would be ranked most highly among students because kinesics would be largely unchanged and unaffected by social distancing or wearing a face mask. The data collected in this study suggested otherwise. When comparing the data of the students who had teachers during COVID-19 protocols and students who had their teachers at a time when no protocols were in place, kinesics ranked third both times. This study contributes to the field by providing future researchers a starting point when doing more research and additional studies surrounding nonverbal immediacy in the college classroom.

Implications

College teachers work over 50% more than their contracted 40 hours a week across the board (Flaherty, 2014; Worth & Brande, 2019) and are repaid for this hard work by making 20% less in weekly wages than their nonteacher college graduate counterparts (Allegretto & Lawrence, 2019). With this in mind, it is likely not finances or ease of occupation that draw individuals into education, but rather, a more altruistic desire to do something meaningful and help the next generation by sharing knowledge. This study and the findings that came from the study were gathered and analyzed in hopes of offering practical, helpful, and easily implementable findings to the hard-working class of educators. Two primary implications arose from this study: implications for face-to-face educators and implications for online educators.

Implications for Face-to-Face Educators

This study furthered Mehrabian's (1972) originally-proposed theory of approach-avoidance which stated that people move toward people they like and away from people they dislike. This study took that framework and applied it to college educators with the hopes of finding which specific nonverbal categories were most correlated with student-reported immediacy with an instructor. The hierarchical rankings of nonverbal communication categories were the same across gender, school type, and pandemic protocol. Students, when thinking of the teachers they feel a sense of immediacy toward, ranked the nonverbal categories in the following order: (1) haptics, (2) proxemics, (3) kinesics, (4) paralanguage, (5) physical appearance, (6) artifacts, and then (7) chronemics.

The findings from this study are noteworthy for educators as the data helps show which nonverbal categories are more highly correlated with student–faculty immediacy. Although nonverbal communication may only play a small role in the *faculty integration* section of Tinto's (2006) student departure model, the little things add up. Regarding this study, knowing that haptics is the most highly correlated nonverbal category with student immediacy may encourage teachers to find ways to appropriately greet students at the door of the classroom via handshakes or fist bumps, or go out of their way to initiate a friendly handshake and greeting when they see a student they know around campus.

Proxemics was the second-most highly correlated nonverbal category with student–faculty immediacy that arose from the data. Questions that led to this finding showed that students enjoyed faculty that stood at an appropriate distance when conversing with them and leaned in when listening to students speak. It is important to note that personal space distance norms vary by culture, so faculty must be aware of cultural differences to accomplish this

nonverbal category appropriately. To know what an appropriate distance is for each student, faculty must have not only a general knowledge of their student's demographics and cultural norms for personal space but also the emotional intellect and ability to read their student's nonverbal communication and adjust their spacing accordingly. At the heart of this nonverbal category, it is assumed that beyond just knowing how close or far to stand, students feel known, respected, and valued when professors take time to adjust their nonverbals to adapt to individual students.

As educators look at this data, it is essential for them to note that the top two categories of haptics and proxemics require that the faculty interact on a personal level with students. Although an instructor can have perfect paralanguage in their delivery, or a stylish physical appearance on a stage speaking to a large lecture hall, student immediacy is most highly correlated with the nonverbal aspects that must be done, in part, on a one-on-one basis. Handshakes, pats on the back, or knowing how close to stand to others are things that cannot be done unless instructors are interacting one-on-one with students. For in-person teaching instructors looking to increase immediacy, the largest takeaway is that the nonverbal forms of communication that are most highly correlated with immediacy require that faculty interact with students on a one-on-one basis. Another implication for instructors would be that even during and after a pandemic, this one-on-one interaction and haptic touch is still something that is highly correlated with student–teacher immediacy.

Implications for Online Educators

While this study specifically looked at nonverbal immediacy in the face-to-face classroom setting, implications from the data can also be inferred for educators who teach online. As the previous section addressed, the top two nonverbal immediacy categories for educators

were haptics and proxemics, and the implication was made that these were the two top categories because they are the only two categories that require one-on-one interactions. Although inflection (paralanguage), timeliness (chronemics), and movement on a stage (kinesics) are all important, the results of this study seemed to indicate that immediacy is most correlated with the nonverbal traits that require individualized connection and communication. While educators who teach in the virtual modality cannot incorporate physical touch with their students (haptics) or adjust the distance they stand when interacting with a student (proxemics), they can work to initiate individualized connections with students. Individualized connection with students may look like a personalized email checking in at some point in the semester or making a point to chat with students over Zoom after the official class period has ended. Although these inferences are drawn from the conclusions of the data of this study, it is recommended that another study be launched to specifically look at nonverbal immediacy trends and patterns in the online format to verify these implications.

Limitations

This study had several limitations that can be viewed within three primary groupings. The first grouping this section will look at is the collection of data and the survey used. The second section will address the limitations of the participants of the study. The final section will look at the limitation that came from focusing on Burgoon's (2002) categorization and grouping of nonverbal communication behaviors.

First, there were five limitations pertaining to the collection of data and the survey itself. The first limitation was that this survey study was conducted in an entirely digital format. This limited the participant pool to those who had access to the internet and a digital device, which could have had a socioeconomic bias on the participant pool. A second limitation of this study

lies in the fact that the seven nonverbal category scales were comprised of only three Likert style questions, which could result in the nonverbal category not fully expressing all the nuances of the category. The three questions for each scale were carefully crafted to try and include a large and robust scope of each nonverbal category, but having more questions for each scale could have yielded more accurate data. A third limitation of this study was that only quantitative data was collected. Participants were not given an opportunity to expand on their answers or add to their thoughts in a qualitative manner. The fourth limitation was that MTurk was one of the tools used to gather participants, and payment for the completion of a survey may have impacted the participant pool and data collected. In addition to these limitations, there was the very present, confounding variable of COVID-19. Creswell and Creswell (2018) shared that a confounding variable is an extraneous and unavoidable variable related to the independent or dependent variables. COVID-19 was a confounding variable because it was unavoidable during this study and possibly affected the variables of nonverbal communication as well as students' perception of immediacy.

Second, there were four limitations that pertained to the participants of the study. First, there were 1,809 participants in this study, which is almost triple the 664 students that Brown (2018) recommended for accurate power analysis results. Although these numbers were statistically reliable with a 99% level of confidence, there are over 19 million college students. If there had been additional time and resources, then a larger pool would have been desired. A second limitation was that the state in which the student attended school was not collected to better understand the geographic trends of the participants from state to state. The third limitation is that participants were students, and educators themselves were not surveyed. Surveying educators could have provided a more holistic picture of nonverbal immediacy trends in college

classrooms. Lastly, this study exclusively used Burgoon (2002) as the boundary for which nonverbal categories were included in the survey questionnaire. Although the use of a single theorist helped focus the study, it also limited the findings to the seven categories proposed by Burgoon (2002).

Recommendations for Future Research

The data from this survey of students sought to understand the relationship between college teachers' nonverbal communication behaviors and college students' perception of immediacy. The researcher deployed a survey and got a response from over 1,800 students, which illuminated the nonverbal behaviors of instructors with whom they felt immediacy. The results of the study produced a hierarchical ranking of the seven nonverbal categories in order of most correlated with immediacy to least correlated with immediacy. Below are the researcher's recommendations for future research on the topic.

Recommendation 1

The examination of immediacy through the lens of nonverbal communication in higher education is a relatively understudied area. The first recommendation for future researchers is to replicate this study using a mixed-methods or qualitative research approach to gather a more holistic view of student–faculty immediacy trends. With the preliminary quantitative findings from this study as a launching point, future research that includes verbal interviews with students and staff will offer greater insight into this area of study.

Recommendation 2

Because immediacy and student–faculty relations fit under the *faculty integration* section of Tinto's (2006) Student Departure Model, thus making it a factor in the student retention equation, it is recommended that further research be done to understand the specific role

nonverbal communication can play in retaining college students. Specifically, future research could seek to understand if there is a statistically significant correlation between an instructor's nonverbal behavior and student retention in the courses the instructors teach.

Recommendation 3

The data suggested that the most highly correlated nonverbal categories were ranked as such because haptics and proxemics require one-on-one interactions between the student and the teacher. With this in mind, further research could include a survey question to better understand if it is the actual nonverbal act that is correlated with immediacy or if it is the individualized, one-on-one nature of the act that is correlated with immediacy. This clarification would further not only the nonverbal field of study but also the immediacy and approach-avoidance areas of study.

Recommendation 4

The fourth recommendation is to specifically focus on haptics and proxemics as they relate to students' perceived immediacy. With this initial study clarifying the top two correlated nonverbal categories, furthering these findings by diving deeper into the understanding of best practices when it comes to haptics and proxemic behaviors would be beneficial to the fields of immediacy, nonverbal communication, and potentially student retention.

Recommendation 5

The final recommendation is to conduct a future study that specifically looks at culture and its effect on nonverbal behaviors in the classroom. For example, the effects of chronemics vary greatly from culture to culture. Replicating this study within a smaller geographic area, or at a specific school, could increase the normality of the data and provide a greater understanding of how a specific culture affects nonverbal norms and student immediacy.

Summary

The purpose of this quantitative correlation survey study was to understand the relationship between college teachers' nonverbal communication behaviors and the influence that those behaviors had on college students' perception of immediacy. Data pertaining to this study was collected through a 5-point Likert scale questionnaire that asked college students to think of an instructor whom they felt a sense of immediacy with and answer questions pertaining to the seven nonverbal categories regarding that instructor. The results from this study showed which nonverbal categories were correlated with student–teacher immediacy. The results, from greatest correlation to least correlation were (1) haptics, (2) proxemics, (3) kinesics, 94) paralanguage, (5) physical appearance, (6) artifacts, and (7) chronemics.

Because people are constantly communicating nonverbally, it is critical for instructors to know which forms of nonverbal communication may lead to immediacy so they can focus their time and attention on the nonverbal communication forms that correlate the most with student immediacy. The findings of this study are rooted in statistics and have practical, real-world implications for educators across the country who hope to increase their student-instructor immediacy through nonverbal communication forms. Being a relatively understudied area of research, further exploration of the top is encouraged to continue helping discover the best nonverbal practices among educators.

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APPENDIX A

IRB Approval

January 26, 2022

Jared Fujishin
Carol Hepburn

Re: IRB Exemption - IRB-FY21-22-514 The Silent Secret: College Instructors' Nonverbal Behavior and its Correlation with Student Immediacy

Dear Jared Fujishin, Carol Hepburn,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

Your stamped consent form(s) and final versions of your study documents can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. Your stamped consent form(s) should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document(s) should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

Appendix B

Student's Perception of Teacher's Nonverbal Questionnaire

Title of the Project: The Silent Secret: College Instructors' Nonverbal Behavior and its Correlation to Student Immediacy
Principal Investigator: Jared Fujishin, Ph.D. Candidate, Liberty University

Invitation to be part of a Research Study

You are invited to participate in a research study. To participate, you must be at least 18 years of age, have completed a face-to-face college course in the last three years, and be able to think of a college teacher whom you enjoyed/trusted/liked. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of the study is to understand the relationship between college teachers' nonverbal communication behaviors (what we communicate without words) and a college student's immediacy (feeling of closeness or trust) with their teacher.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following things:

1. *Complete an anonymous, 26-question survey that consists of demographic questions and Likert scale questions. The survey takes an average of 5-10 minutes to complete.*

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include increased instructional and educational knowledge on the topic.

What risks might you experience from being in this study?

The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records.

- *Participant responses will be anonymous.*

- *The researcher will be using Qualtrics to collect data, a program which utilizes Transport Layer Security encryption (also known as HTTPS) for all transmitted data. The data will also be stored on a password-locked computer and may be used in future presentations. After three years, all electronic records will be deleted.*

How will you be compensated for being part of the study?

Participants will have the option to be entered into a drawing for a $50 Amazon gift card at the end of the survey. The drawings will happen three days after the close of the survey. Email addresses will be requested for compensation purposes. To ensure anonymity, participants will have the option to share their email in a separate Google Forms document. The URL for the Google Forms document that will collect email addresses will be shared at the end of the survey and cannot be connected to any particular survey response.

Does the researcher have any conflicts of interest?

The researcher serves as a teacher at West Valley College. To limit potential or perceived conflicts, the study will be anonymous, and the researcher will not be asking/advertising/telling his college students about this study. This disclosure is made so that you can decide if this relationship will affect your willingness to participate in this study. No action will be taken against an individual based on his or her decision to participate or not participate in this study.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University or your current college. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Jared Fujishin. You may ask any questions you have now. If you have questions later, you are encouraged to contact him at ____@liberty.edu. You may also contact the researcher's faculty sponsor, Dr. Carol Hepburn, at _____@liberty.edu.

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

Before agreeing to be part of the research, please be sure that you understand what the study is about. You can print a copy of the document for your records. If you have any questions about the study later, you can contact the researcher using the information provided above.

1. I am 18 years of age or older.

- *Yes, I am 18 years of age or older*
- *I am under 18 years of age*

2. I have completed a face-to-face college course in the last three years and am able to think of a college teacher whom I enjoyed/trusted/liked.

- *Yes*
- *No*

Begin Survey Questionnaire:

Start of Block: Survey

INSTRUCTIONS: Think of a college teacher whose class you completed and whom you liked as a person. With that teacher in mind, answer the following questions about them on a scale of 1-5.

Kinesics

	Always (1)	Usually (2)	Sometimes (3)	Rarely (4)	Never (5)	N/A (6)
1. The instructor smiled while teaching (1)	○	○	○	○	○	○
2. The instructor used animated hand gestures while teaching (2)	○	○	○	○	○	○
3. The instructor maintained comfortable eye contact (3)	○	○	○	○	○	○

Paralanguage

	Always (1)	Usually (2)	Sometimes (3)	Rarely (4)	Never (5)	N/A (6)
4. The instructor was animated in their voice (i.e., not monotone) when teaching (1)	○	○	○	○	○	○
5. The instructor spoke at a speed that I enjoyed (2)	○	○	○	○	○	○
6. The instructor spoke in a manner that was pleasing to listen to (3)	○	○	○	○	○	○

Physical Appearance

	Always (1)	Usually (2)	Sometimes (3)	Rarely (4)	Never (5)	N/A (6)
7. The instructor wore appropriate attire to class (1)	○	○	○	○	○	○
8. The instructor dressed in a noticeably stylish manner (2)	○	○	○	○	○	○
9. The instructor appeared well-groomed (3)	○	○	○	○	○	○

End of Block: Survey

Start of Block: Block 3

Haptics

	Always (1)	Usually (2)	Sometimes (3)	Rarely (4)	Never (5)	N/A (6)
10. The instructor greeted me physically (e.g., handshake, high-five, hug, etc.) (1)	○	○	○	○	○	○
11. The instructor would make physical contact in our interactions (e.g., a pat on the back, a gentle touch of the arm when speaking, etc.) (2)	○	○	○	○	○	○
12. The instructor touched me on the shoulder or arm while talking with me (3)	○	○	○	○	○	○

Proxemics

	Always (1)	Usually (2)	Sometimes (3)	Rarely (4)	Never (5)	N/A (6)
13. The instructor would lean in when talking with me (1)	○	○	○	○	○	○
14. The instructor sat or stood at a comfortable distance when talking with me (2)	○	○	○	○	○	○
15. The instructor moved around the classroom while lecturing (3)	○	○	○	○	○	○

Chronemics

	Always (1)	Usually (2)	Sometimes (3)	Rarely (4)	Never (5)	N/A (6)
16. The instructor started class on time (1)	○	○	○	○	○	○
17. The instructor replied to emails in a timely manner (2)	○	○	○	○	○	○
18. The instructor was respectful of my time (3)	○	○	○	○	○	○

Artifacts

	Always (1)	Usually (2)	Sometimes (3)	Rarely (4)	Never (5)	N/A (6)
19. The instructor has a visually appealing office (1)	○	○	○	○	○	○
20. The instructor set up the classroom seating in a way that I enjoyed (2)	○	○	○	○	○	○
21. The instructor's classroom/office atmosphere was comfortable (e.g., lighting, temperature, seating, etc.) (3)	○	○	○	○	○	○

End of Block: Block 3

Start of Block: Demographics

Demo1 What is your age?

- *18-21 years old (1)*
- *22-29 years old (2)*
- *30-39 years old (3)*
- *40-49 years old (4)*
- *50-59 years old (5)*
- *Over 60 years old (6)*

Demo2 What is your gender?

- *Male (1)*
- *Female (2)*
- *Decline to Answer / Other (3)*

Demo3 What school type do you attend?

- ○ *Community College (2-year) (1)*
- ○ *Public University (4-year) (2)*
- ○ *Private University (4-year) (3)*
- ○ *Transferred from Community College to Four-Year (4)*

Demo4 25. Which of the following best describes you?

- ○ *Asian or Pacific Islander (1)*
- ○ *Black of African American (2)*
- ○ *Hispanic or Latino (3)*
- ○ *Native American or Alaskan Native (4)*
- ○ *Native Hawaiian or other Pacific islander (5)*
- ○ *White or Caucasian (6)*
- ○ *Multiracial or Biracial (7)*
- ○ *A race/ethnicity not listed here (8)*

Demo5 Were COVID-19 protocols in place during the time you took this teacher's class?

- ○ *Yes (1) (If yes, see Demo5.1, Demo5.2 and Demo 5.3)*
- ○ *No (2)*

Demo5.1 Which of the following protocols were in place at the time of taking this teacher's class? (Select all that apply)

- ☐ *Social distancing (6-foot minimum) (1)*
- ☐ *Mask mandates (2)*
- ☐ *Face-shield for teachers (3)*
- ☐ *Face-shield for students (4)*
- ☐ *Use of Plexiglas (or similar) dividers in the room (5)*
- ☐ *Use of HEPA air filters (6)*
- ☐ *Mandatory vaccination verification (7)*

Demo5.2 Do you feel that the COVID protocols affected your perception of the instructor?

- ○ *Yes, in a positive way (1)*
- ○ *Yes, in a negative way (2)*
- ○ *No, COVID protocols did not affect my perception of my instructor (3)*

Demo5.3 Rate your level of agreement with the following statement, "I felt the COVID protocols affected my relationship with my college instructor"

- *The protocols had a very negative effect on my relationship with my college instructor. (1)*
- *The protocols had a somewhat negative effect on my relationship with my college instructor. (2)*
- *The protocols had no effect on my relationship with my college instructor. (3)*
- *The protocols had a somewhat positive effect on my relationship with my college instructor. (4)*
- *The protocols had a very positive effect on my relationship with my college instructor. (5)*

End of Block: Demographics

Appendix C

Recruitment Script: Email, Letter, or Verbal Script

Dear College Student:

As a graduate student in the School of Communication & the Arts at Liberty University, I am conducting research as part of the requirements for a Ph.D. degree. The purpose of my research is to understand the relationship between college teachers' nonverbal communication behaviors (what we communicate without words) and a college student's immediacy (feeling of closeness or trust) with their teacher, and I am writing to invite eligible participants to join my study.

Participants must be 18 years of age or older, have completed a face-to-face college course in the last three years, and be able to think of a college teacher whom you enjoyed/trusted/liked. Participants, if willing, will be asked to complete an anonymous, 26-question survey that consists of demographic questions and Likert scale questions. The survey takes an average of 5-10 minutes to complete. Participation will be completely anonymous, and no personal, identifying information will be collected.

To participate, please click here *[Hyperlink URL]*

A consent document is provided as the first page of the survey. The consent document contains additional information about my research. After you have read the consent form, please click the button to proceed to the survey. Doing so will indicate that you have read the consent information and would like to take part in the survey.

Participants will have the option to be entered into a drawing for a $50 Amazon gift card at the end of the survey. If participants choose the option of enrolling in the drawing, their email address will be requested for compensation purposes; however, their email address will be collected via a separate link from their survey responses to maintain their anonymity and stored securely in an online database.

Sincerely,
Jared Fujishin
Ph.D. Candidate