2024

Online Teacher-Student Rapport in Higher Education

Joshua Fitzgerald
Illinois State University, jifitz1@ilstu.edu

ONLINE TEACHER-STUDENT RAPPORT IN HIGHER EDUCATION

JOSH FITZGERALD

132 Pages

Rapport developed between teachers and students in a typical classroom setting can provide students with a more positive school experience, an increase in learning and performance, and added feelings of social belonging (Cook, et al., 2018). Online learning is associated with many advantages like a more comfortable setting for students to participate (Majewska & Zvobgo, 2023), but also includes disadvantages like feelings of isolation (Phirangee & Malec, 2020) which can result in rapport being more difficult to develop. Established rapport during online educational settings can yield a multitude of positive outcomes for online students and teachers alike. These outcomes include but are not limited to increasing academic performance and experiences for students, as well as improving perceived job quality for teachers.

Unfortunately, due to the barriers associated with asynchronous learning specifically, like lessened nonverbal cues and other communication barriers, rapport-building becomes more difficult for educators to nurture. A mixed methods approach was utilized to explore the features and limitations of perceived rapport-building during online courses. The findings of this study determined that students' perception of rapport is similar for students participating in asynchronous and synchronous courses. Also, findings suggest asynchronous teachers could attempt to utilize a combination of teacher responsiveness (i.e. responding quickly to emails) and humor (i.e. telling funny jokes) because students perceive those concepts as most conducive to

developing teacher-student rapport during asynchronous instruction. It was also found that synchronous online instructors should address a combination of teacher responsiveness and social presence (being perceived as human in an online setting) because students perceive these concepts as most beneficial towards rapport-building during synchronous online instruction.

Results of this study provide implications for how students perceive teacher-student rapport during online settings, and findings indicate students do not perceive significant rapport developed with their online instructors. Findings related to which indicators of rapport students perceive as most effective towards developing effective rapport were also found, which can have practical implications for how online courses are developed and facilitated moving forward. The above-mentioned combination of teacher actions (asynchronous: teacher responsiveness and humor; synchronous: teacher responsiveness and social presence) can be utilized more deliberately by teachers to develop quality rapport with their online students, which should lead to the benefits associated with quality teacher-student rapport.

KEYWORDS: rapport; rapport indicators; online education; mixed methods

ONLINE TEACHER-STUDENT RAPPORT IN HIGHER EDUCATION

JOSH FITZGERALD

A Dissertation Submitted in Partial
Fulfillment of the Requirements
for the Degree of

DOCTOR OF EDUCATION

School of Teaching and Learning

ILLINOIS STATE UNIVERSITY

2024

ONLINE TEACHER-STUDENT RAPPORT IN HIGHER EDUCATION

JOSH FITZGERALD

COMMITTEE MEMBERS:

Anna Smith, Chair

John Hooker

Robyn Seglem

ACKNOWLEDGMENTS

I do not believe I have the time or adequate number of pages available to properly thank everyone who contributed to the completion of this study. Regardless of these limitations, I would still like to try. First, thank you to my co-chairs Dr. John Hooker and Dr. Anna Smith for your invaluable and extended assistance during this process. I am extremely appreciative for the time, advice, guidance, effort, and support you both provided while completing this dissertation. Also, thank you to Dr. Robin Seglem for serving as a committee member despite a multitude of additional responsibilities. Obviously, this study would not be completed without any of your support, and for that I am eternally grateful.

I would also like to thank my fellow graduate students who helped deal with the stress of completing a terminal degree. My experience developing professional relationships alongside personal friendships is something I cherish. A few of these people include Alex Kritselis, Michaela Harris, Dr. Dakota Horn, Dr. Katy Biddle, Paige Phelps, Madi Stoneman, Frankie Kimmell, Mallorie Cruse, Jillian Joyce, and the late, great Crystal Roti. There are many more people deserving of a name drop, and apologies for anyone left out. I certainly hope the "guilty" parties know who they are while reading this section.

I would also like to thank the people who acted as colleagues and mentors outside of this lengthy dissertation process. Thank you all for your advice, your willingness to let me vent, and your many words of motivation during times of doubt and frustration. I want to start by thanking the departments of communication at Western Illinois University, Illinois State University, and Bradley University. I would like to expressly thank my thesis committee at WIU, who include Dr. Averbeck, Dr. Carpenter, and Dr. Miczo. Further, thank you to Alex Kritselis (again), Dr. John Hooker (again), my running friend Dr. Keith Cornille, Dr. Dakota Horn (again), Carol

Hahn, Sarah Hill, Dr. Josh Dickhaus, Dr. Tony Adams, Shannon Sandoval, Dr. Elena Gabor, and many, many more. Apologies again if anyone was left out.

Next, thank you to every student I have ever had the opportunity to work with as an instructor or teaching assistant. My goal of enhancing the student experience was the driving force behind this study. Therefore, every student of mine who attended WIU, ISU, Bradley University, or Heartland Community College (College Now included), please accept my genuine thanks for everything you have provided me. I wish you all the best and I know you all are achieving great things.

To all my friends and family who deserves so much more than a simple shout out in an acknowledgement section, you provided a support system I only could have wished for, especially during times of uncertainty and isolation. For instance, everyone who invited me to their family Thanksgiving dinners because I was too far from my family, invited me into their homes (some even to live with temporarily), hung out with me via Zoom during a global pandemic, or simply offered me words of encouragement (sarcastic or sincere), I am grateful for each and every instance of the generosity and support you have all offered me. It is not an exaggeration to say that without your love and generosity, I would have been homeless and incapable of completing a doctoral program. I cannot stress enough how indebted I am to all of you. Some of you may read this and think, "It's really no big deal," but I assure you it means so much to me and I will forever be appreciative of everything you have done for me. So, thank you to Tony Leckonby and the entire Leckonby family, Clay and Lily Thompson and your whole family, Alan, Emily, and Charlotte Nielsen, Seth and Stephenie Gittleson, Alan Jankowski and Allison Hrasch, Brian Spencer and Kait Gilbert, James Mettler, Jake Blakey and the rest of the Blakeys, Chelsea Roehrig, Joe Vasquez, the Woods, Patrick and Emily Zaloum, Augy, Tracey,

the Stacys, and many, many more. Additionally, a quick thank you to my therapist, Jessica, for everything. Mental health is important and completing a dissertation is one of the moments I am glad I had a mental health specialist in my corner.

I also want to take a moment to acknowledge the impact music has had on my life, especially during this process. Music served as a stress reliever, a distraction, and obviously a form of entertainment, which was much appreciated during the entirety of my academic career. Admittedly, I also want an excuse to fanboy over my favorite bands and artists, but the music these people make and the shows they put on unquestionably deserve a quick shoutout. Rather than listing every single musician I admire, I will be efficient by listing the groups and individuals who appeared on my top artists on Spotify during the time it took to complete this study. So, thank you to Hayley Williams, Taylor York, and Zac Farro of Paramore for being my favorite band of all time. Thank you to the bands Fall Out Boy, Creed, the 1975, Hot Mulligan, Foo Fighters, Knuckle Puck, Real Friends, State Champs, Limp Bizkit, Smallpools, My Chemical Romance, Third Eye Blind, and many more. Thank you to the artists Carly Rae Jepsen, Kim Petras, Kylie Minogue, Taylor Swift, JoJo, Troye Sivan, Andrew McMahon, Dagny, and a plethora of others. Thank you all so much for providing me with an amazing soundtrack to my dissertation.

To my family, I love you all greatly. When thinking about you, I have so many examples of support you have given and life lessons you have taught me. I also think about how wonderfully dysfunctional and hilarious we all are. To Aunt Amy, Uncle Tommy and Michelle, Nana Lin, Tiffany and Corey, Crystal and Matt, Brad (Buddy) and Chris, Uncle Joey, Kritter, Zach, Emma, Grace, Grandpa Larry, Aunt Beverly, Aunt Debbie, Uncle Mike, Dave Pearson, Erin, Jared, Addison and Isabel, as well as the people we've lost like Laurie Pearson, Bugaba,

Grandma Nina, Uncle Anthony, Grandaddy, Great Grandmother, and Grandma Rachel. I love you all and thank you for everything you have done to make me who I am today.

To Lauryn, you were closest to this situation than anyone not actively involved as a researcher, chair, or committee member. You were with me throughout the entire process from comprehensive exams to the dissertation defense. I will never be able to fully repay you for all the support and positivity you provided me. I could not have done it without you. I love you, I am so excited for our life together, and I can't wait to marry you. Obviously, I also need to give a big "Thank you and I love you," to my wonderful, unofficial support dogs. Having a dog lay on you while writing a dissertation should be common practice because it is extremely motivating, comforting, and reassuring. So, to Chewie and Mini, I love you both more than I can explain!

To my brother and best man, Jacob, my mother, Amanda, my father, Clint, my grandmother, Patricia (Maw Maw). While there is so very much I would like to say to each of you individually in this section, and you better believe it would be mushy and tear jerky, I think it best I simply have the Foo Fighters help me convey this particular message. So, thank you for flying along with me because I couldn't quite make it alone. As I try to make this life my own, thank you so much for giving me a wonderful life, making me who I am today, and ultimately, letting me learn to fly. "Oh, and hey mom. Thanks. For everything." -Dave Grohl (2021, p. 376).

J.F.

CONTENTS

TABLES

FIGURES

CHAPTER I: INTRODUCTION

Educators and researchers have extensively studied the effects of positive and negative teacher-student relationships and how these relationships affect both parties (Claessens et al., 2016; Frisby & Martin, 2010; Sybing, 2019). A positive teacher-student relationship has been found to have a positive influence on students' behavior, their emotional wellbeing, as well as their academic performance (Lind et al., 2016). The teacher-student relationship has been described as the "most important relationship in the school context" (Ibrahim & El Zaatari, 2020, p. 384) and teacher-student rapport has been defined as an "essential quality of an effective teacher" (Chan & Aubrey, 2024, p. 180).

Since the teacher-student relationship is widely considered essential for teachers to consider, several researchers have investigated how positive teacher-student relationships can be developed through specific teacher behaviors such as verbal and nonverbal immediacy, teacher clarity, homophily, social support, teacher responsiveness, and more (Benn, 2018; Cartee, 2021; Furlich, 2016; Myers & Huebner, 2011; Walker & Hoover-Dempsey, 2015).

The potential for teachers to apply these indicators of rapport in the classes they teach to positively influence their teacher-student relationships is what led Frisby and Buckner (2017) to develop the concept of teacher-student rapport. When teachers and students successfully develop a mutually beneficial, trusting, and prosocial bond, then rapport has been established (Frisby & Buckner, 2017). Fitzgerald and Hooker (2022) have furthered this research by investigating the various indicators of rapport students perceive as most effective during rapport-building during in-person instruction and found that students generally want to feel that their teachers care about them and are willing to provide students with social support. When teachers fail to connect with their students and rapport is not properly developed, students are less likely to notice teachers

engaging in rapport-building behaviors (Muller et al., 1999), which is detrimental to the experiences of the students, as well as the teachers.

For students, the benefits of teacher-student rapport include but are not limited to a positive school experience, a positive impact on learning and performance, and feelings of social belonging (Cook, et al., 2018). For teachers, when rapport is established, they can experience greater job satisfaction and experience positive emotional responses (Waldbuesser, et al., 2020). Understanding how students perceive indicators of rapport, as well as the impact of those indicators, is essential to explore. Doing so has the potential to subsequently allow teachers to utilize rapport-building indicators in their classes in an effort to generate student-teacher rapport.

It can be argued current and future instructors may be unaware of the most influential indicators of rapport needed to successfully achieve this goal. This inexperience and unawareness may lead to teachers simply guessing how to achieve their teacher-student rapport goals most appropriately or ignoring teacher-student rapport altogether (Benn, 2018). Consequentially, neither teachers nor students will be able to experience the benefits of rapport.

Rapport is most often studied in face-to-face classrooms during interpersonal student-teacher relationships (Frisby et al., 2014). Fitzgerald and Hooker (2022) recently conducted a study attempting to provide in-person teachers attempting to develop rapport with their students endeavors by identifying the indicators of rapport contributing to student-teacher rapport. Their findings indicate that students perceive social support, humor and homophily are all contributors to teacher-student rapport-building, whereas immediacy and teacher clarity are not found to significantly contribute to rapport.

Due to the differences in teaching and learning in specific classroom environments, rapport outside of the traditional face-to-face classroom, such as in online contexts, need further

exploration to provide online students with the positive experiences associated with rapport, such as increased academic performance and feeling more positive classroom experiences. Online courses, particularly asynchronous modalities, have been shown to provide barriers such as, digital literacy barriers, technical support barriers, and feelings of not being adequately supported, (Alivo et al., 2022). The asynchronous format has been criticized due to the hampered contact and lessened direct communication between teachers and students, the lack of human touch and proximity, and technological difficulties hindering students' ability to learn and participate in the classroom (Baloran et al., 2021). Online learning includes but is not limited to technology barriers, teachers needing to provide IT assistance, teachers needing IT assistance themselves. It also has multiple accessibility barriers such as cost of equipment or language barriers, and potential copyright limitations (Al-Arimi, 2014). All the learning barriers discussed have the potential to interfere with rapport-building among teachers and students of online courses.

However, the continued growth in popularity of online courses has led to educational institutions implementing more and more online courses every year (Impey et al., 2015; Ucar, et al., 2021). Potentially, if asynchronous online educators either misunderstand or ignore teacher-student rapport due to the challenges associated with asynchronous courses, then not only could the students in these courses be negatively affected, but the teachers themselves could also experience negatives outcomes like suffering burnout at a faster rate and encountering lower feelings of job satisfaction (Frisby et al., 2014). Exploring how to positively influence rapport during asynchronous online courses will allow teachers to improve their own experiences and the experiences of their students. Therefore, the overarching research question of this study is: What do students perceive as indicators of rapport building in asynchronous courses?

Answering this specific question will lead to better understanding how students perceive rapport during online settings, and how rapport is developed through the application of rapport indicators. This study is designed to answer the above-mentioned research inquiry by uncovering the specific rapport indicators students perceive to contribute most to established teacher-student rapport, specifically in an online asynchronous setting.

But why do I care?

The desire to understand how to best establish rapport with my students is what led to my interest in this research endeavor. When I began teaching, I was fortunate and had the ability to naturally connect with my students, but I was unaware of what research suggests contributed to this connection. Additionally, I was unaware of what indicators of rapport I was or was not using were interfering with my efforts toward teacher-student rapport-building. I was simply guessing what may or may not help me connect with my students, and this lack of awareness was amplified when I began teaching online courses. I have several examples of close relationships forming with my students, which generally result in student success. However, I also have many experiences where students appear indifferent towards me and/or uninterested in the course. As an educator constantly trying to improve, I would like to know how I can potentially overcome any barriers to teacher-student rapport and positively encourage student success, especially during online courses.

My time as a student also contributed to this area of research interest because while participating in a typical face-to-face classroom, I sometimes felt disconnected from my instructors, and their use of rapport-building indicators undoubtedly altered my perception of them and ultimately their course. These feelings of disconnection and indifference are contrary to the attitudes and feelings I experienced when I felt feelings of closeness to my instructor. When I

perceived quality teacher-student rapport as a student, I retained more knowledge, and performed better in the class. When I felt my relationship with my instructor had not adequately generated rapport, I felt unengaged, uninterested, and concerned less with my performance in the class.

These negative results are counterproductive for teachers and students alike and reflect what research asserts happens when teacher-student rapport is not established (Santana, 2019). These negative feelings and outcomes I have personally experienced were intensified during my online education experiences. Personally, I have yet to perceive established rapport in any online class I have taken as a student, especially during times of asynchronous learning. This is especially alarming for me due to the fact I currently teach online courses and plan to continue teaching online courses in the future.

My personal experiences are mirrored in recent research on teaching and learning online. t has been found that students and teachers struggle in asynchronous online environments due to the differences associated with asynchronous online learning and the more traditional synchronous classroom (Dzubinski, 2014). This gap was amplified by the COVID-19 pandemic when schools globally transitioned to remote learning. Teachers, me included, struggled to connect with students and keep students engaged in content, which contributed to student-teacher disconnection that was one factor of many in lower levels of student satisfaction during the COVID-19 pandemic (Zeng & Wang, 2021).

Again, research on teacher-student rapport has generally transpired in traditional face-to-face classrooms and clear suggestions for specific teacher application of the indicators of rapport which contribute to the generation of quality teacher-student rapport (Demir et al., 2019; Fitzgerald & Hooker, 2022). Since my personal experiences as a teacher, as well as a student, have yielded both positive and negative experiences, I have invested interest in uncovering how

teacher-student rapport can be positively influenced and cultivated in online classroom settings. The results of the study can potentially improve the effectiveness of online education, in general, as well as improve the personal experiences of teachers and students participating in online education.

Statement of Problem

Despite the advantages of asynchronous online learning, such as the elimination of scheduling and distance barriers, asynchronous online courses often fail to generate a sense of community and teacher-student rapport is not established (Carr et al., 2021; Ling & Gao, 2020). Students are currently participating in online courses and experiencing feeling isolated, secluded, and unengaged (Dzubinski, 2014). Further, asynchronous courses have been called impersonal because of the specific setting and differences in communication (Cunningham, 2015). Asynchronous online courses have been further described as unpreferable when compared to face-to-face and online synchronous courses (Elfirdoussi et al., 2020). Due to the negative results associated with feelings of isolation and the impersonal nature of asynchronous courses, research suggests educators alter their usage of rapport-building indicators to better connect with their students in various ways, such as developing an effective social presence during their courses (Phirangee & Malec, 2020). As a result, investigating how students perceive rapport and what indicators they believe most effectively foster rapport during asynchronous online instruction is the primary goal of this study.

If rapport-building between teachers and students is left unaddressed, then the students and teachers alike will suffer personally, emotionally, and professionally/academically (Perry & Steck, 2019). Teachers ignoring or being unaware of how to connect with their students in online asynchronous courses explains a clear drawback for current and future online educators.

Teachers developing and facilitating asynchronous courses knowing how to positively affect rapport with their students will better equip them to best serve the academic and emotional needs of their students. Therefore, teachers require the basic understanding of which teacher indicators of rapport contribute or interfere with rapport. This study seeks to uncover the specific indicators of rapport and their impact on teacher-student rapport in asynchronous online education settings by asking students directly what indicators they perceive as most advantageous during the development of teacher-student rapport.

Definition of Terms

The current study has a variety of terms and that are sometimes defined differently by professionals in different disciplines. To guarantee mutual understanding among researchers and readers, the following terms and definitions are provided.

Rapport. When teachers and students successfully develop a mutually beneficial, trusting, and prosocial bond, then rapport has been established (Frisby & Buckner, 2017). In the simplest of terms, rapport is defined as having occurred when to people click or connect with one another (Granitz, 2009). This developed relationship explained in the definition provided is what is being referenced when rapport is used throughout this study. Rather than explaining general camaraderie among individuals, this study is discussing the successful, trusting bond formed between teachers and students.

Indicators of rapport. Therefore, moving forward various teacher behaviors that students perceive indicate instances of rapport will be referred to as indicators of rapport. For clarity, students must observe these behaviors and perceive them to be effective or ineffective during the rapport-building process.

When teachers employ specific behaviors to establish rapport with their students, they are utilizing rapport-building indicators. In the following study, the indicators of rapport being discussed are immediacy, teacher responsiveness, social support, homophily, teacher humor, and teacher clarity. All the indicators of rapport discussed above will be clearly defined and discussed at length during the review of literature. These specific indicators theoretically work in conjunction with one another when rapport is developed between teachers and students and this connection will be explained further during the review of literature.

Online Learning. Online learning will encompass many terms describing online instruction found in research. The following terms have been used to define online instruction by researchers: distance learning, computer-based learning, internet-based learning, web-based learning, and more (Anohina, 2005). Therefore, when online education, distance learning and/or remote learning are discussed in the current study, they will all be explaining online education, or teaching and learning occurring in an online setting. This study will also focus on higher education courses occurring through the use of the internet where students and teachers interact either synchronously or asynchronously.

Description of Study

This is a survey study using a descriptive research design by utilizing confirmatory mixed methods. College students who have experienced both asynchronous and synchronous online courses were the sole participants of the study. Students responded to either close-ended

quantitative survey instruments or open-ended qualitative survey questions. Participants responding to the open-ended qualitative questions had the opportunity to explain their preferences and experiences during online courses, as well as how they believe teacher-student rapport can be best established during both synchronous and asynchronous online education. While addressing and ultimately improving teacher-student rapport during asynchronous instruction is the ultimate goal of the study, students of synchronous classes are being included to provide a wider understanding of the online environment and uncover which, if any, rapport-building indicators during synchronous courses can be successfully implemented into asynchronous courses.

The results of the quantitative and qualitative methods will be collected and analyzed. The results of both data collection methods will be used together to answer the hypothesis and research questions and support the findings found in the data generated. This specific confirmatory mixed methods strategy will generate more clear and valid findings and conclusions reached as a result of those findings. The specifics of the methods are discussed further in the corresponding chapter.

Purpose and Significance of Study

Due to asynchronous courses having the potential for students feeling isolated and unengaged in the course, learning objectives are not being met and student satisfaction is suffering (Dzubinski, 2014), teacher-student rapport is being considered as a way to help educators enhance the experiences of their students in asynchronous courses. Unfortunately, asynchronous courses often do not always allow for a sense of community to develop because it is not conducive to interpersonal connections formed among teachers and students (Lin & Gao, 2020). This lack of bond materializing between teachers and students in remote settings does not

allow rapport to be established and cultivated with one another because a bond has not been formed and this disconnection among teachers and students can lead to students dropping or failing the course (Hagenauer & Volet, 2014). Teacher-student rapport can contribute to student success, as well as positive feelings like feelings of support and achievement for all parties involved during asynchronous online courses (Chumworatayee, 2021). Rapport established among teachers and students in online courses, although more difficult to foster online, especially asynchronously, but is important in both synchronous and asynchronous settings because it improves retention and student success (Glazier & Harris, 2021). Further, established teacher-student rapport can also promote an environment more beneficial to student learning (Sybing, 2019). Therefore, the potential for rapport to improve asynchronous courses results in the research and methodological choices utilized in the current study.

Unfortunately, rapport is occasionally a nonfactor in asynchronous courses because teachers of asynchronous courses may be ignorant or uninterested in which specific rapport-building indicators contribute to teacher-student rapport in asynchronous settings (Ensign, et al., 2018). For clarity, this study seeks to understand: 1) which specific rapport-building indicators students of asynchronous courses value, 2) if students experience teacher-student rapport in asynchronous settings, and 3) which indicators of rapport contribute most to rapport-building according to asynchronous students. Exploring what students experience and value during their online courses can contribute to understandings regarding which indicators of rapport are more, or less, possible to employ in an asynchronous online setting. The findings of this study can potentially improve the current landscape of asynchronous online education because educators will better understand the implications of teacher-student rapport and how to address it most appropriately and effectively through the application of specific rapport-building indicators.

Chapter Summary

The indicators of rapport in online instruction that are relevant to establishing teacher-student rapport in asynchronous online settings have not been clearly identified in research. This study attempts to explore the specific indicators of rapport contributing to and predicting online teacher-student rapport by surveying online students to gauge their perceptions of rapport and indicators or rapport. Doing so will positively affect the experiences of those involved and the quality of the online education by providing educators the tools students perceive as most effective towards developing teacher-student rapport in asynchronous settings.

While the focus of the study is improving the quality of asynchronous courses, the investigation of both asynchronous and synchronous courses will occur by using mixed methods in order to generate extensive, reliable data related to fostering teacher-student rapport in online settings in hopes to alleviate some of associated rapport barriers occurring during online education. Including an investigation of both synchronous and asynchronous courses will provide more depth in the understanding of perceived rapport in multiple online settings and which rapport-building indicators are perceived as most applicable and appropriate, which has the potential to further equip asynchronous online instructors with the necessary rapport-building tools. The following chapter explores the relevant literature related to this topic at greater length and depth.

CHAPTER II: REVIEW OF LITERATURE

Positive teacher-student relationship can lead to positive student outcomes such as increased student learning and emotional benefits (Claessens et al., 2016). Positive teacher-student relationships allow students to feel like they are more authentically involved in the classroom, which has also been linked to improved student outcomes (Hunter et al., 2023). Ultimately, the importance of a positive teacher-student relationship has been verified by showing the increased quality of the relationship directly and positively affecting students' behavior, emotional wellbeing, and academic performance (Lind et al., 2016).

When teachers connect with their students and rapport has been developed, it can promote a learning environment that is more conducive to student learning (Sybing, 2019), which is a clear objective for educators. Rapport has been defined as "an overall feeling between two people encompassing a mutual, trusting, and prosocial bond" (Frisby & Buckner, 2017, p. 127). In simplest terms, rapport occurs when two people "click" (Granitz et al., 2009, p. 1). Rapport in the classroom is a component of education that all teachers should consider because rapport is seen as a fundamental quality of an effective teacher (Chan & Aubrey, 2021). When teachers and students create a mutually beneficial, close, relationship where both parties experience enjoyable interactions, while also feeling a personal connection, numerous positive outcomes can occur as a result (Chan & Aubrey, 2021; Frisby & Buckner, 2017; Zhang, 2023). Teachers and students benefit greatly by generating rapport with one another, and teachers especially have a responsibility to nurture teacher-student rapport in the classroom.

Rapport, as a concept, transitioned into the field of education through research occurring in various fields of study. Specifically, educational rapport is an extension of a socio-educational model and was originally studied in the context of how teacher attitudes can influence student

attitudes towards their learning atmosphere (Gardner, 1985; Katz, 2021). Rapport also overlaps among other disciplines like marketing and psychology (Granitz et al., 2009). For example, in sales and marketing, rapport is often investigated between sellers and buyers and is usually associated with positively or negatively affected sales numbers; rapport is commonly studied from the perspective of sales and service relationships (Granitz et al., 2009). Rapport in education has similar principles, but teacher-student rapport occurs when teachers and students generate an interpersonal, trusting relationship with one another in a classroom setting (Frisby & Buckner, 2017). Like the sales and marketing field, rapport in the classroom important, but is sometimes an aspect of education that gets ignored by teachers and students (Horton, 2010). Rapport can be ignored due to perceived barriers such as supposed lack of autonomy in the classroom, self-efficacy worries, and time limitations (Ibrahim & El Zaatari, 2020). Nevertheless, rapport factors into the experiences of teachers and students (Benn, 2018), which suggests rapport in the classroom needs to be nurtured by teachers, in all classroom settings, to improve the experiences and outcomes of all involved.

Effects of Positive Teacher-Student Rapport for Students

The effects of teacher-student rapport have been found to predict increased student engagement and produce positive effects on student learning (Frisby & Martin, 2010). Further, it has been found that students have classified rapport as an essential characteristic of successful and effective teachers (Santana, 2019). So, since students have identified rapport between themselves and their teachers as a desired educational outcome, in addition to the fact that established rapport can positively influence student learning and engagement, educators have a responsibility to cultivate an atmosphere where teacher-student rapport can be established.

In a study conducted by Cook at al. (2018), they found that a positive teacher-student relationship can generate a positive school experience for students, lead to a positive impact on positive student learning and performance, and lead to feelings of social belonging. When teachers have established rapport in their classes, their students can perform better, retain more information, and make more friends. The positive outcomes students can experience through established rapport suggest that teachers should, at the very least, consider the impact their relationships have on their students' personal lives and academic success. When rapport is established between teachers and students, it can also lead to a more school engagement and more supportive relationships with their peers (Martin & Collie, 2019). Quality relationships in the classroom can produce valuable results even outside an educational setting.

Effects of Positive Teacher-Student Rapport for Teachers

The benefits of positive teacher-student relationships are not exclusive to students as both are rewarded when they form close connections with one another. Research has also shown that teachers consider positive interpersonal relationships with their students as a source of enjoyment and a leading reason they remain in the teaching profession (Claessens et al., 2016). In other words, teachers with positive relationships with their students have greater levels of job satisfaction. The teaching profession has been found to lead to occupational burnout, which has led to an increased turnover in schools (Schaack et al., 2020). Many of the reasons behind teachers leaving the field of education have been identified in a study conducted by Schaack et al. (2020) and they are: emotional exhaustion, lack of job control, children's behaviors that they perceive to be too challenging, and lack of meaningful relationships formed. However, it has been found that when teacher-student rapport is established, it can protect teachers against feelings of emotional exhaustion by increasing feelings of enjoyment teachers experience in the

classroom and decrease feelings of anger (Taxer et al., 2018). These implications only strengthen the argument that rapport needs to be a priority by teachers when conducting their courses and cultivating classroom atmospheres because doing so will conceivably make their professions more enjoyable.

In the field of education, rapport-building has not always been viewed as an important component of education by instructors (Benson et al., 2005). This opinion conflicts with teacher-student rapport being referred to as the "cornerstone of teaching and learning" (Benn, 2018, p. 20). Beyond simply recognizing rapport as important, teachers should also be able to identify the indicators of rapport that can contribute to the effective establishment of teacher-student rapport in their classrooms because doing so will develop and improve the quality of the teacher-student relationship (Katz, 2021). Recognizing exactly which indicators of rapport are valued most by students when developing teacher-student rapport will be valuable information for all current and future teachers to apply in their classes. Doing so will allow students to benefit academically while also providing personal and social benefits to teachers (Claessens et al., 2016).

Negative Rapport

When teachers' relationships with students are perceived as negative it can result in many undesirable outcomes such as a negative classroom atmosphere, which can result in learning objectives not being met (Arıkan, 2020). In addition to the negative effects associated with rapport being ignored in the classroom, negative relationships between teachers and students can exacerbate the previously discussed negative outcomes associated with rapport being ignored by educators. It is essential that teachers' actions are contributing to established rapport rather than engaging in actions that negatively affect rapport because negative teacher-student relationships have been found to generate student feelings of distress and/or insecurity (Spilt et al., 2012).

These negative feelings could adversely affect a student's ability to dedicate effort towards their education. Further, when negative teacher-student relationships occur, it can lead to students experiencing feelings of isolation, and ultimately, having more difficulty achieving academic success (Spilt et al., 2012).

When teachers ignore rapport-building, or negative teacher-student relationships are established, misunderstandings can occur, which can devolve into disarray in the classroom (Benn, 2018). Benn (2018) highlighted the fact that students are individuals facing personal, social, and professional issues that may spill over into the classroom. Without rapport established between the students and their teacher, these issues have the potential to cause conflict and classroom disruption, whereas teachers who have established rapport with their students can become more equipped to avoid classroom conflict. However, even though teacher-student rapport can increase student motivation, positively affect student attitudes, cultivate a more desirable classroom atmosphere, and lead to many other desirable outcomes, many instructors do not view rapport as important (Santana, 2019). Overcoming barriers to rapport is important for educators to recognize, so they and their students can experience the benefits that occur when teacher-student rapport has been successfully produced and fostered.

Barriers to Rapport

Krane et al. (2016) state that mutual respect is crucial when developing the teacher-student relationship, and the onus is usually put on teachers to nurture these relationships due to factors such as difficulty relating to students and the power dynamic between teachers and students. Further, students may feel like they cannot trust their instructor, which can lead to students responding to feedback poorly, failing to improve on assignments, and course conflict (Lee & Shallert, 2008). When students fail to connect with their instructors, it can even lead to

students also failing to connect with their university and/or field of study, which can result in students dropping out of their respective institutions (Hagenauer & Volet, 2014). Since the onus is put on the teachers to foster rapport and students can react negatively to lack of rapport, teachers must comprehend the extent their usage of rapport-building indicators contribute to rapport and how to overcome obstacles interfering with rapport-building because failing to do so may lead to extreme results, such as students dropping out of school.

Another contributing factor leading to lack of teacher-student rapport is teacher feedback. This can relate back to students not feeling respected by their teachers, but feedback on assignments can ultimately interfere with the teacher-student relationship failing to materialize. It has been found that students can perceive their instructor as defensive or unapproachable when feedback is negative (Katz, 2021). Instead, teachers should show respect to their students by maintaining a courteous attitude and genuinely caring for their students, even when giving them corrective feedback on assignments (Katz, 2021). Knowing feedback on assignments can interfere with rapport-building endeavors should allow teachers to adjust their feedback related behaviors if necessary. If feedback results in students feeling disrespected by their instructor, then clearly teacher-student rapport-building will suffer.

Another barrier to student-teacher rapport is lack of teacher awareness. It has been found that most teachers believe they are employing effective teaching methods and pedagogies (Ensign et al., 2018). Teachers may simply be unaware that they are interfering with rapport being established in their classrooms. Meaning, teachers could simply lack the skills or be oblivious to the actions related to developing teacher-student rapport. In fact, some researchers have argued that teachers should engage in professional development courses to better their small talk skills to increase opportunity for the creation of teacher-student rapport (Santana,

2019). Therefore, lack of skills and being unaware of this disconnect could contribute heavily to rapport failing to be established between teachers and students. Teachers overcoming these barriers, and potentially being unaware of how to overcome them, support the need for an investigation into rapport-building indicators current and future online educators can utilize in their classes to successfully connect with their students.

Indicators of Rapport

Research suggests the teacher indicators of rapport that contribute to rapport include many specific actions (Fitzgerald & Hooker, 2022; Frisby & Buckner, 2017; Katz, 2021). For instance, Chumworatayee (2021) found five criteria assist in defining effective teachers. The first criteria discuss how available teachers are to their students, the next criteria cover quality communication skills and the passionate delivery of course content, next is teacher fairness, then teacher credibility, and lastly is teacher organization, perceived preparation, and timely teacher feedback on assignments. The overall findings of the Chumworatayee (2021) study indicate that students value a positive learning atmosphere that can be supported by achieving quality student-teacher rapport, and a positive classroom atmosphere can help students overcome learning barriers. The teacher actions highlighted in this study appear to be straightforward and relatively easy to incorporate. While it was found teachers and students find benefits from rapport-building together, the difficulties associated with rapport-building continue to interfere with quality of teacher-student rapport, as well as the ability to foster rapport in educational settings. Clearly, there are indicators of rapport supported by research that can assist teachers when attempting to build rapport with their students. The indicators of rapport highlighted in the Chumworatayee (2021) study allow for further exploration and understanding because they overlap with other

studies related to rapport and previously supported rapport-building indicators such as immediacy, aka teachers being available to their students.

Frisby and Buckner (2017), in addition to defining rapport in their study, also identify specific teacher behaviors that aid in generating rapport. These indicators of rapport are: "attentive behaviors, common grounding behaviors, information sharing behaviors, connecting behaviors, and courteous behaviors" (p. 128). Attentive behaviors include actions like using students' names during class discussion. Common grounding behaviors occur when teachers are perceived as friendly. Information sharing behaviors are when teachers are perceived as having achieved clarity. Connecting behaviors are when teachers use interpersonal communication strategies, like humor, to generate rapport. Lastly, courteous behaviors are achieved when teachers are perceived as empathetic and supportive by their students. Again, these teacher behaviors overlap with the rapport indicators discussed. For example, information sharing behaviors and teacher clarity.

The rapport-building behaviors discussed above by Frisby and Buckner (2017), and Chumworatayee (2021) intersect with many popular teaching theories and frameworks like the previously mentioned immediacy and teacher clarity. As suggested by the numerous indicators of rapport discussed in research, established rapport is achieved by successfully applying a collection of different teaching indicators of rapport that allow teachers and students to generate quality relationships with one another. Understanding these overlapping indicators can provide clarification into the foundations of rapport and explain the specific teaching actions associated with developing rapport. Again, an example highlighting the connection between rapport and popular educational principles is immediacy. Immediacy behaviors overlap with the attentive behaviors and teacher accessibility criteria discussed above.

Immediacy. Immediacy and immediacy behaviors are often studied in the context of education, which illustrates how immediacy as a concept has evolved over time. Immediacy was originally theorized by Mehrabian (1971), and it is explained as a form of liking where people are more attracted to people they like, and immediacy reduces the distance between communicators. Later, Richmond (2002) expanded the definition of immediacy as the perception of closeness established through positive communication behaviors. Immediacy behaviors are most often linked to verbal and nonverbal actions that reduce the psychological distance between communicators.

Nonverbal immediacy behaviors include eye contact, gesturing while presenting, smiling, using facial expressions, posture, and movement (Baringer & McCroskey, 2000; Finn & Schrodt, 2012). Verbal immediacy behaviors include actions such as, using personal examples, humor, engaging in conversations with students, teachers' self-disclosure, addressing students by name, praising students' work, being available for students outside of class if they have any questions, and many more (Furlich, 2016). Researchers have found that a positive teacher-student relationship created through immediacy could contribute to increased levels of student motivation, as well as improve overall student performance (Ge et al., 2019). Immediacy, in the field of education, is generally considered a foundational concept.

However, it has also been found that students do not perceive nonverbal immediacy as a significant indicator of rapport (Fitzgerald & Hooker, 2022). This contradicts the findings of many immediacy studies (Richmond, 2002; Ge et al., 2019), and could reveal how the everchanging teacher-student dynamic has changed over time. Since discovering how instructors can cultivate rapport is the goal of this study, and if students feel differently towards teachers incorporating immediacy as a rapport-building indicator, then teachers can focus their efforts on

more beneficial indicators of rapport. This discrepancy indicates a need for further research in the context of immediacy and online education.

Immediacy has more recently been adjusted to fit newer contexts due to the advancement of technology. For instance, mediated immediacy was developed to describe immediacy in an online format. Mediated immediacy is defined as, "communicative cues in mediated channels that can shape perceptions of psychological closeness between interactants" (O'Sullivan et al., 2004, p. 471). Mediated immediacy helps explain the differences in teaching indicators of rapport when the classroom exists in an online setting. The potential for the application of certain rapport-building indicators changes and become more difficult, or more easily to applied based upon the classroom setting is what this study seeks to explore. Therefore, immediacy will be included as a variable in the current study despite recent findings suggesting immediacy not being a significant indicator of teacher-student rapport (Fitzgerald & Hooker, 2022). The online context may generate alternative findings, and educators need to be aware of these findings to most effectively foster rapport during their online classes.

Homophily. Another example explaining the overlap among popular education theories and rapport-building are common-grounding behaviors and homophily. Again, generating a friendly relationship is identified as a common grounding behavior contributing to rapport development by Frisby and Buckner (2017). Friendly interactions are a biproduct of quality interpersonal relationships, which illustrates friendly interactions are a result of rapport. So, since homophily has been described as a predecessor of rapport (Granitz et al., 2009), the key common-grounding behavior being explored in this study will be homophily.

Homophily, or perceived similarity, explains that people tend to gravitate towards others they believe are like themselves in various ways such as age, gender, interests, etc. (Voelker et

al., 2013). Homophily relates to common-grounding behaviors contributing to rapport-building because perceived similarity between teachers and students can lead to increased communication between both parties (Myers & Huebner, 2011). Obviously, students and teachers need to communicate in order to establish rapport with one another, and students appreciate when their instructors are perceived as easy to talk to or personable (Frisby & Buckner, 2017; Hudson, 2013). This is important in the context of rapport because homophily can arguably be essential to rapport-building because of its ability to establish common ground between both parties.

To successfully address homophily, teachers can attempt to establish common ground with their students in several ways. Some of these behaviors include discussing subjects that are important to students and using relevant examples (Webb & Barrett, 2014). Homophily can contribute positively towards teacher-student rapport, and it is necessary for teachers to consider it when developing and conducting their classes. It has been found that homophily is a direct predictor of rapport-building (Fitzgerald & Hooker, 2022), which further suggests that it is essential for teacher-student rapport-building. Therefore, the concept, homophily, will be used in this study to see if online teachers can establish common ground with their students to ultimately develop teacher-student rapport.

Teacher Humor. When teachers use humor in their classes, they are engaging in connecting behaviors to build rapport because humor has been found to occur frequently during interpersonal, friendly relationships (Kuo, 1994). Humor gives teachers the opportunity to showcase their personalities and make their students laugh, which has been identified as a contributing teacher characteristic towards rapport-building (Santana, 2019). Effectively incorporating jokes in class is a ways teachers can encourage a relaxed, comfortable classroom atmosphere (West & Martin, 2019). Humor being used by teachers has also been found to lower

feelings of performance anxiety for students, as well as increase feelings of enjoyment (Swanson, 2013). The effects of using humor coincide with the effects of rapport being established, which is why teacher humor is being identified as an indicator of rapport in this study.

It should be noted that humor has the potential of negatively affecting students' perceptions of their teachers. If a teacher tells a distasteful or insensitive joke, students may view their instructors as untrustworthy or lacking credibility (Frymier, et al., 2008). Therefore, teachers have a responsibility when using humor to incorporate appropriate jokes that do not interfere with teacher-student rapport. This is significant because humor was found to be an indicator of teacher-student rapport (Fitzgerald & Hooker, 2022). Therefore, eliminating the use of humor could potentially inhibit the potential for rapport, which should be avoided. Showcasing one's sense of humor is also a way that people present their personality, which is a means of developing rapport (Santana, 2019). Further investigation is needed to gauge the possible differences teachers face when attempting to use humor in online classrooms.

Social Support. Courteous behaviors overlap with teachers being perceived as sympathetic and socially supportive of their students because teachers being seen as compassionate and having an empathetic attitude have been identified as valuable qualities of teacher-student rapport, especially during times of student crisis (Cartee, 2021). The idea of social support stems from people being a resource for others during times of struggle. Social support can take the form of giving advice, offering help or assistance, caring for others, showing appreciation, and people can receive social support from a variety of places like friends, family, and educators (Sari & Fakhruddiana, 2019). It has also been found that socially supportive teachers have a positive influence on student engagement (Fischer, et al., 2013). Further, students

have deemed social support to be the biggest influence on rapport-building with their teachers when compared to the other indicators discussed above (Fitzgerald & Hooker, 2022). These findings indicate that social support as an indicator of rapport needs to be investigated further, especially in the context of online education. Since students value their instructors being socially supportive resources (Boulton, et al., 2011), more research is needed to gauge the extent of its effect on teacher-student rapport during online instruction.

Teacher Responsiveness. Another teacher behavior that has the potential to affect the teacher-student relationship is teacher responsiveness. Teacher responsiveness can be defined as a teacher's ability to support their students emotionally while meeting students' needs as learners by providing instructional and organizational support (Walker & Hoover-Dempsey, 2015). Teachers who are perceived as responsive have been found to encourage academic achievement, positive student behavior, higher levels of classroom engagement, increased student motivation, as well as students engaging in prosocial behaviors more often (Longobardi et al., 2021). Teachers being seen as responsive have been associated as being empathetic, and responsiveness has been defined as a quality of a successful motivator (Henry & Thorsen, 2019). Teacher responsiveness is essentially a way of explaining teachers' ability to appropriately respond to the needs of their students in real time (Lifshin et al., 2019).

Before a teacher can successfully respond, they must first notice, which is a responsive act occurring when teachers select, focus, interpret, then act in response to an event by using the information they have, which allows educators an understanding of how to properly respond to their students in the moment (Cowie et al., 2018). When teachers effectively and appropriately notice when to respond, they are better equipped to appropriately respond and noticing is the first step in effectively showcasing quality teacher responsiveness (Cowie et al., 2018). Appropriately

responding and knowing when to respond is a relevant teacher behavior because students have been found to appreciate highly responsive teachers by listing responsiveness as a desired teacher characteristic of their ideal instructor (Knoster et al., 2021). In fact, high levels of teacher responsiveness have been linked to being a key role in developing the teacher-student relationships and has even been found to decrease instances of bullying in schools (Longobardi, 2020). Teacher responsiveness is an important pedagogical tool and needs to be carefully cultivated by instructors to develop the relationships with their students and help encourage the achieving of the social goals for all parties in the classroom (Lehtimaja & Tainio, 2015).

Teachers can cultivate their responsiveness in many ways, such as giving their students quality, immediate feedback on assignments, as well as providing quality feedback, which can include actions like prompting reflections and discussion of student ideas both during and after class during class discussion/lecture (Kavanagh et al. 2020; Keselman & Yakovleva, 2021). In other words, quality classroom discussion facilitated by the instructor while being perceived by students as highly responsive is a teaching behavior that instructors should be fully capable of applying themselves because of the positive effects associated with high levels of teacher responsiveness (Keselman & Yakovleva, 2021). Quality teacher responsiveness is defined as, "the ability to provide students with emotional support (e.g., providing comfort, warmth) and to meet students' needs as individual learners by providing sensitive and timely instructional and organizational support" (Longobardi et al., 2020, p. 491). Therefore, teachers should be aware of what quality responsiveness is and how to cultivate these skills and be aware of the results of providing inefficient or poorly received or nonexistent responses (Bozbıyık & Daşkın, 2022).

Teachers can respond in a variety of ways to their students and their responses can be defined as high quality, low quality or lacking response (Fallon et al., 2022; Lehtimaja & Tainio,

2015). Ignoring an uninvited or unwanted answer from students may result in a teacher being perceived as unresponsive, or lacking response, whereas addressing and correcting that undesired answer will help cultivate a higher level of responsiveness (Lehtimaja & Tainio, 2015). Obviously, not showing any responsiveness as a teacher is detrimental to a positive teacher-student relationship. An illustration of high-quality responses occurs when teachers have the ability to foster sensitive, approachable and reactive interactions in the classroom with their students by showing empathy and social support to their students (Longobardi et al., 2020). Low-quality teacher responsiveness occurs when teachers are overly restrictive, perceived as insensitive to students in the classroom, cultivate classrooms that cultivate low expectations for learning, and are more likely to refer students for discipline (Fallon et al., 2022). Teacher responsiveness is an important part of the educational process that has strong implications toward the teacher-student relationship.

Teacher responsiveness also includes educators being aware of and addressing cultural responsiveness in the classroom (Karatas, 2020). When teachers are able to successfully acknowledge their students' cultural backgrounds, previous experiences, and prior knowledge levels which result from their specific backgrounds, while aiming for mutual cultural understanding, it can lead to an increase in student learning opportunities and allow teachers to adjust their practices to better serve the needs of the students (Filippou, 2020). Culturally responsive teachers have also found to experience positive class-wide behavioral outcomes and identify their students as less likely to experience social-emotional risk (Fallon et al., 2022). These findings further illustrate the impact teacher responsiveness can have on the experiences of teachers and students in the classroom, and when teachers can successfully demonstrate an understanding of their students' beliefs and values, show an awareness of linguistic diversity in

the classroom, and a share their appreciation of the way diverse cultures can influence specific teaching practices, it can yield positive academic and social outcomes for teachers and students alike (Ellis et al., 2017).

Teachers can cultivate their responsiveness during online education by using a number of strategies such as professional development, providing quality feedback, and utilizing social media (Bower, 2012; Cunha et al., 2016, Knoster et al., 2021). Social media allows teachers to appear more immediate and can increase opportunities to showcase responsiveness with their students (Cunha et al., 2016). Professional development opportunities can allow teachers to increase their awareness of the impact of teacher responsiveness while allowing educators the opportunity to develop these skills (Bower, 2012). Again, teachers who do not provide adequate responses to their students during their courses or are perceived as completely unresponsive or uncaring will not achieve the positive relational results connected to teacher responsiveness and it can negatively impact the experiences and performances from students (Lifshin et al., 2020).

Teachers may need to understand that their personal responsiveness may be lacking in certain areas and seek out teacher training and other forms of professional development (Regan et al., 2015). A gap in teacher responsiveness has been found in research, meaning that students do not believe their instructors are successfully responding to their specific needs (Saleem et al., 2017). Teachers can be unsuccessful in this endeavor by readily referring students for discipline and being viewed as unsympathetic or lacking empathy towards students' current situation (Fallon et al., 2022). Since students believe that teacher responsiveness is an important characteristic of a successful teacher and have identified this area as a gap, teachers should understand the implications of their skills towards quality responsiveness and how it can inhibit or support the development of the teacher-student relationship and rapport (Sameena, 2020).

A principle tied closely to teacher responsiveness is empathy (Phillips, 2020). Meaning, teachers viewed as empathetic are also viewed as caring and responsive (Conklin & Dikkers, 2021). Keeping in mind that educators have the ability to provide social support to their students (Sari & Fakhruddiana, 2019), being perceived as empathetic and responsive will allow teachers and students to connect more easily (Tuncel, 2016). Being seen as responsive, empathetic and caring are directly applicable to the rapport-building indicators being used in this study (Frisby & Buckner, 2017). Therefore, teacher responsiveness and its influence on teacher-student rapport will be investigated further.

Social Presence. Social presence theory is a concept originating from increased use of computer-mediated-communication because advances in technology allow users to send and receive information in ways like in-person, interpersonal and group communication, when participating in online settings (Kreijns et al., 2022). Social presence has more recently been connected to education because during online instruction, social presence allows students to recognize their teachers' humanity (Tackie, 2022). Since research suggests it is crucial for online instructors to develop their own social presence while also giving their students the ability to cultivate their own social presence during asynchronous online courses (Ley & Gannon-Cook, 2014), we must discuss the definition of social presence and the full scope of how it influences online communication and education because it allows for a more applicable understanding of the indicators rapport in an online setting. This is because social presence is exclusive to online settings and mediated communication, which is how asynchronous online courses operate. Teachers can theoretically utilize social presence to develop their courses and connect with their students, which explains the inclusion of social presence theory in the current study.

History of Social Presence Theory. Social presence theory (SPT) was developed by Short et al. (1976), and the researchers state that a person's social presence will vary based on the purpose of the communication event, as well as the communication setting. More specifically, the originators of SPT state that people perceive others' communication, as well as interpret media, as having either high or low social presence, which are influenced by the feelings of intimacy and immediacy (Short et al., 1976). Short et al. (1976) also state that the levels of intimacy and immediacy are dependent upon factors such as physical distance, verbal and nonverbal cues, and the topics being discussed.

Although SPT originated in the 1970s, it was not until the 1990s until research introduced social presence theory as an element of online learning (Gunawardena & Zittle, 1996; Kehrwald, 2008). This lack of connection between online education and SPT is due to the widespread access to education provided by the internet not appearing until this time in history (Ucar, et al., 2021). During the time of SPT's foundation, and its connection to online education approximately 20 years later, the specific definition and usages have evolved. SPT's definitions often differ because the origination of this theory precedes the widespread uptake of computer-mediated-communication and online classes (Kehrwald, 2008). Recent studies have attempted to provide a clearer and more appropriate definition of SPT online educators can apply to their online courses, and researchers have also tried to examine the full effect SPT has on online learning.

A more directed definition of social presence has been generated to connect the theory to computer-mediated-communication and virtual environments, and the definition is as follows, "an individual's ability to demonstrate their state of being in a virtual environment and so signal his/her availability for interpersonal transactions" (Kerhwald, 2008, p. 94). During online

learning, social presence has been found to be extremely significant for several reasons such as, being a key concept towards increasing learner participation and success of online cooperation, increasing student retention and student satisfaction, and decreasing students' feelings of frustration towards the course and the instructor (Oregon et al., 2018). An online instructor's social presence can also support a positive learning environment, and students who believe their instructors have achieved a quality level of social presence based on their perceptions of their interactions with their instructor have been deemed a key contributor to learner satisfaction (Ley & Gannon-Cook, 2014). Due to SPT's applicability in remote learning contexts, it can serve as an additional rapport-building indicator used while investigating relationships occurring in online settings, such as the teacher-student relationship (Huang et al., 2012).

SPT has also been used to explain the salience of another person, which means whether communication partners feel "real" despite obstacles like distance or lack of nonverbal cues, which are often barriers associated with online learning (Dunlap & Lowenthal, 2009). In other words, a person's social presence in an online setting explains whether an individual's communication partner is seen as a real-life human being. The idea of social presence is often referred to as whether a person engaging in computer-mediated-communication feels as though they are interacting with a "real" person, and instructors should consider this when conducting themselves within their online courses (Cunningham, 2015). If students feel as if their instructors are "real" and strong instructor social presence has been established, it will provide students feelings of comfort while interacting with others in the course and enhance and foster learning interactions (Wei et al., 2012). Since student-teacher rapport is the primary focus of this study, and interaction leading to an interpersonal relationship is necessary to establish rapport (Frisby &

Buckner, 2017), SPT in the context of online learning can contribute towards providing online educators a potential approach towards connecting with their students.

The current study focuses primarily on improving asynchronous online classrooms, and it has been recommended that an instructor's social presence should result in students feeling at ease (Aragon, 2003). Further, mediums of communication play a much larger role in the way people interact with others, which directly influences a person's social presence (Lowenthal, 2010). In other words, the communication medium, such as computer-mediated-communication in an asynchronous online classroom can influence the way people interact within these specific settings. Asynchronous online courses can often be perceived as impersonal due to the lack of cues, overall social presence, and lack of immediate response time when compared to traditional face-to-face learning environments (Cunningham, 2015). Investigating social presence as a rapport-building indicator should theoretically generate more opportunities for interpersonal connection needed to positively influence rapport because it can provide a deeper understanding of the proper application of the indicators online.

Social Presence Theory in Education. In a general, face-to-face educational setting, Tu (2000) proposed distinctive dimensions of social presence to explain how social presence most effectively can be achieved by teachers during online instruction. The dimensions are social context, online communication, and interactivity (Huang et al., 2012; Shen et al., 2010; Tu, 2000). Social context explains things like how people share more, or less, personal information based on the context of the conversation; online communication refers to things like using emoticons or emojis to overcome the lack of cues associated with computer-mediated-communication; interactivity is related to how often communication partners interact with one another and a high level of interactivity typically generates a higher level of social presence

(Huang et al., 2012; Tu, 2000). While these dimensions were originally associated with learner behaviors, they can also be utilized by instructors to develop their individual social presence, which could theoretically lead to student-teacher rapport being positively influenced. Also, Tu's (2000) dimensions of social presence can also provide guidance for educators when constructing their online courses once they are adapted accordingly to address rapport asynchronously, which the usage of SPT allows.

In addition to the specific dimensions of social presence being recognized in research, specific communication strategies have also been identified. Developing social presence can be achieved in a variety of ways and depends on many different factors. For example, immediacy behaviors have been used to identify methods of establishing social presence (Dixson, et al., 2017). More specifically, teachers can use technological opportunities like social media, self-disclosure, humor, positive response, and many more when developing a strong instructor social presence in an online classroom (Dunlap & Lowenthal, 2009; Sung & Mayer, 2012). These attempts to utilize rapport-building indicators suggest that teachers have the tools to generate rapport but may require the use of unfamiliar tactics like using actions associated with SPT to generate increased student engagement and satisfaction. Again, SPT is a theory more fittingly applied to online settings. So, its inclusion in this study allows for a better understanding of how best to address indicators of rapport during online courses.

Due to the nature of asynchronous online education, students often have reduced knowledge about their instructors because of fewer nonverbal cues, fewer opportunities for information sharing, and increased feelings of uncertainty that are more common during computer-mediated-communication occurring in online courses (Raza et al., 2020). These barriers can interfere with the previously discussed indicators of rapport associated with teacher-

student rapport-building, such as immediacy (Oregon et al., 2018). Because research has found that teachers with a strong social presence can lead students feeling socially and emotionally connected to their instructors (Schrum et al., 2012), it provides educators with a suitable approach to overcome the feelings of isolation and disconnection felt by students in asynchronous online courses (Phirangee & Malec, 2020). Knowing how to recognize the existence or lack of social presence will theoretically provide teachers practical tools towards establishing rapport with their online students, which is why SPT is being utilized in this study as a rapport indicator.

Further, in a study conducted by Sung and Meyer (2012), they theorized that there are five facets of social presence in any online environment. These facets help explain how individuals can establish a social presence in online classes. The first facet discussed is social respect, which could be accomplished through sending and receiving timely email responses, next is social sharing, which can be done by information sharing like expressing personal opinions, third is having an open mind, which includes actions like giving positive, constructive feedback, fourth is social identity, which is done by addressing students by their name, and lastly, is intimacy, which can be achieved by sharing personal experiences. Social presence emphasizes the experience of feeling close or connected to others interpersonally (Wombacher et al., 2016), and investigating exactly how SPT relates to, or influences rapport in asynchronous courses could result in identifying additional indicators of rapport that educators should focus on when attempting to develop rapport with their students.

Social presence has been extensively studied in the remote learning environment, and researchers make a plethora of recommendations for online educators to use when considering the social presence of themselves and their students. One of these recommendations suggests that

teachers should incorporate the use of avatars, and other technological tools, to provide students and teachers increased social presence and as a means of enhancing student engagement (Cunningham, 2015). Another suggestion would be for online educators to incorporate cooperative learning opportunities for students, which should generate increased student learning (Huang et al., 2012). Improved interaction among teachers and students in online courses, developed through course design and online instruction, has been found to increase student retention by incorporating opportunities for all parties to generate social presence (Oregon et al., 2018). Furthermore, researchers suggest that generating a strong sense of community by incorporating the ideals associated with social presence in asynchronous online courses can eliminate feelings of isolation felt by those in marginalized groups and assist teachers in ensuring no students involved feel as if they are "othered" during their time in the course (Phirangee & Malec, 2020). When social presence is not effectively established in online settings, it has been found that their online education lacks cognitive, social, and teaching presence, which has a negative effect on student retention, as well as a negative effect on the opportunity and quality of teacher-student interaction that is imperative during online education (McGuire, 2016; Phirangee & Malec, 2020). The above-mentioned recommendations overlap with some of the previously discussed indicators of rapport and examining SPT as an additional rapport indicator will allow for a clearer conceptualization of online rapport and which perceived indicators rapport are most effective for instructors to address during asynchronous online courses.

Social Presence Affecting Rapport. As previously discussed, asynchronous courses have their own specific advantages and disadvantages. When considering social presence during these courses, McGuire (2016), conducted a study which yielded five specific teacher behaviors that can increase teacher presence in asynchronous courses. The five recommended behaviors are,

teachers should create an online community that comfortable and structured, humanize the course, make feedback a priority, establish clear expectations then monitor discussions, and finally make the course relevant to learners. These recommendations were found to have the potential to yield better interaction while establishing a safe and comfortable environment for all involved. The application of SPT in asynchronous online courses can increase the quality of online education (Huang et al., 2012), while also allowing teachers more opportunities to connect with their students which will ultimately increase teacher-student rapport. These suggestions also overlap with rapport indicators and investigating how SPT and the recommendations towards effective social presence influence teacher-student rapport will help clarify findings and explain the observed phenomena.

Some may argue that alternative theories are more applicable in the context of asynchronous online learning. One alternative concept appropriate for this context is the previously discussed mediated immediacy, which explain immediacy behaviors during online communication (O'Sullivan, et al., 2004). These immediacy specific behaviors have been deemed important for instructors to consider due to the positive effect immediacy has on student cognitive learning (Chakraborty & Nafukho, 2015). Mediated immediacy suggests when teachers show more personality in computer-mediated-communication it can help suggest a level of approachability being conveyed by online instructors (O'Sullivan et al., 2004). While this concept explains relevant teacher behaviors, the ideals associated with mediated immediacy overlap with the concepts discussed during social presence. The original definition of social presence includes immediacy (Short et al., 1976), and studies on social presence include similar, but also supplementary findings related to the indicators of rapport of online instructors being used in this study (McGuire, 2016). Also, immediacy is already a rapport indicator being

explored in this study, which means that using it as another indicator of rapport could potentially limit the potential for significant findings due to recurrent data being generated. Therefore, social presence theory remains the most appropriate addition as a rapport indicator when compared against mediated immediacy.

Another potential concept considered as a rapport indicator could be electronic propinquity theory, which explains that perceived propinquity, or perceived nearness, in a mediated setting is an essential aspect of online communication that contributes to the participants' derived satisfaction (Ramirez et al., 2008). Research shows that electronic propinquity may affect students' attitudes towards learning and feelings of closeness between student and teacher generate positive student outcomes (Wombacher et al., 2016). Perceived nearness to the instructor felt by students is undeniably an aspect on online education that educators should consider, but these ideals coincide with the suggestions and findings related to instructors' focusing on social presence in their online courses (Ley & Gannon-Cook, 2014). Furthermore, electronic propinquity theory has not gained the widespread appeal in educational settings and has failed to gain traction and widespread attention, due to a lack of significant findings found in empirical research (Walther & Bazarova, 2008). So, despite the additional options included with the exploration of online education, such as electronic propinquity theory and mediated immediacy, social presence theory is the most appropriate for a study investigating teacher-student rapport in online courses due to its flexibility and its inclusion of many teaching strategies found to also be significant indicators of rapport-building.

Therefore, SPT is recognized as an indicator of rapport in the specific context of online learning because it has the potential to provide current and future educators of asynchronous courses the ability to generate rapport with their students despite the inherent obstacles

associated with asynchronous learning. Also, since participants of synchronous courses are being included in this study, teachers of synchronous courses can theoretically benefit from the findings too. So, online education, in general, and online instructors should both benefit from the findings generated by this study, which is appropriately utilizing social presence theory because of the advantages SPT provides.

Teacher Clarity. Teacher clarity is another heavily researched educational construct that potentially overlaps with rapport-building. Teacher clarity is fully dependent on how course content is presented by the instructor (Titsworth et al., 2015) and is defined as teachers having the ability to present information in a manner that students fully understand, comprehend, and retain (Rodger, et al., 2007). Teacher clarity is likely an attribute all teachers aspire to achieve in all their courses and research states that teacher clarity can generate positive outcomes such as, increased student motivation, increased self-efficacy, and decreased feelings of anxiety (Rodger, et al., 2007). However, in a study conducted by Fitzgerald and Hooker (2022), teacher clarity was found to decrease feelings of rapport. This could be due to the potential of teachers overexplaining things to their students, and this being misconstrued as disrespect. So, for clarity, due to the recent findings stating that clarity can adversely affect teacher-student rapport, investigating teacher clarity as an indicator of rapport will not be conducted in the current study despite teacher clarity being recognized as a fundamental teacher behavior like the others discussed above.

Online Education

Rapport and rapport-building indicators cover a vast collection of popular, previously established educational principles, including immediacy, teacher clarity, teacher humor, homophily, social support, and teacher responsiveness, as well as their potential influence on

rapport. These principles have been identified by research conducted in traditional, in-person classroom settings where teachers and students are interacting face-to-face in real-time. However, classes are often offered in a variety of different formats due to technological developments. Since this study is focused on rapport in online settings due to the lesser opportunity for rapport-building in online settings, we must first discuss the growth of online education, key terms, and the significant differences between face-to-face and online education.

Although many of the indicators of rapport previously discussed are considered specific to a face-to-face setting and have not been heavily researched outside of a face-to-face setting, educators can successfully establish teacher-student rapport in online classes through specific teacher practices (Sybing, 2019). There is a necessity for face-to-face principles being brought into online classes by instructors to benefit student experiences, generate positive learning outcomes, and ultimately improve the connection between students and teachers (Katz, 2018). Examining the current state of online learning in higher education settings, as well as how its evolved, will allow for a more accurate assessment of the teaching practices most applicable in the context of online courses. Online learning's growing popularity and increased accessibility explains a need for current and future online educators, hoping to generate quality rapport with their students, to fully comprehend the impact of their application of various rapport-building indicators (Mason et al., 2017).

Online Learning Defined. The internet has changed how knowledge and information can be shared, and online learning is defined as a form of distance education where teaching occurs using the internet and technology facilitates the learning process (Park & Shea, 2020). For clarity, distance learning is one of the oldest terms used to describe learning with the help of various media options, such as the internet, and is often used as a catchall term that includes

online learning; since online learning occurs at a distance and utilize media to deliver content, the terms can be used interchangeably (Alshwiah, 2021). Anohina (2005) conducted an analysis of the terminology associated with online learning and identified the nuances and relationships existing with the following terms: "computer-based learning, distance learning, internet-based learning, online learning, resource-based learning, technology-based learning, and web-based learning" (p. 100). It was found that the previously identified terms are interconnected and consistently overlap in their usages (Anohina, 2005). Therefore, in the current study, when learning is described as occurring at a distance (distance learning), or remotely (remote learning), these terms are describing online learning and the specific online learning contexts being differentiated are asynchronous and synchronous courses.

Higher education institutions consistently utilize technology and online platforms to offer online courses for students. Courses occurring online now function as a mainstream mode of education and a legitimate schooling option for learners (Ucar, et al., 2021). It has been said if students prefer to learn at their own pace, have difficulty attending in-person classes due to distance or scheduling reasons, that online learning is a suitable choice for those experiencing these barriers (Kornilov et al., 2020). The popularity for online schooling continues to grow because it provides students learning opportunities independent from a variety of learning barriers (Kaya & Akpinar, 2021). An example illustrating the growing popularity is between the years of 2002 and 2011, college students enrolled in online classes grew from 10% of students, to 32% and over the course of this time the perception of online education as a legitimate school option has been improving as well (Impey et al., 2015).

The early development of the learning management system (LMS) led to the original term, "online learning," which was used first in the year 1995 (Brown, 2021) during the early

years of accessible internet. These specific courses were attractive to a variety of students for several reasons such as, students could take classes after work in the evening, the elimination of distance and scheduling barriers, as well as the frequency and availability of online courses (Phillips, 2022). While this study hopes to overcome obstacles associated with online learning, there are many positive outcomes generated by online learning. For example, online discussions allow less-outgoing students more opportunities to participate in class, which may not have occurred in a traditional face-to-face classroom setting (Majewska & Zvobgo, 2023). Nowadays online learning has become an even more attractive option for students and teachers alike because of things like students primarily doing personal and professional research on computers, and teaching tools like videos, podcasts, and blogs (Ilin, 2021). These advantages of online learning are allowed by the fact that technology is an influential means of redefining how people learn (Ilin, 2021), which helps further explain the draw of online learning. For clarity, online learning is a terrific learning tool, and this study does not deny that, rather it simply hopes to improve online learning if possible and more specifically, teacher-student rapport in asynchronous, online, higher education settings.

The terms used to explore online learning have also changed over time, as well as the research focus in this area. In a meta-analysis conducted by Park and Shea (2020), they assessed the research focus for studies focused on online, distance, and blended learning to gauge the development and evolution of online learning. The authors found major changes in research trends, which allows for the understanding of research themes in this context. More specifically, early research on distance learning focuses on the implementation of online courses and the labeling of key terms associated with online learning, followed by a second period that focuses more on the adoption of specific online learning tools such as massive open online classes, or

MOOCs. Finally, the authors suggest that the results of their analysis suggest the current and future research should focus on the needs and characteristics of online learners, such as influences on student motivation, student learning, and self-regulation. Park and Shea's (2020) findings allow researchers to grasp the opportunities and obstacles provided by online learning, and what areas of research online educators should consider.

For clarity, there are additional terms associated with online learning such as hybrid learning, HyFlex learning, and blended learning. Blended learning refers to the learning process that combines asynchronous and face-to-face learning environments (Gunes & Alagozlu, 2021). Hybrid learning is sometimes used interchangeably with blended learning, and the definition of this learning process is described as the blending and integration of the two learning environments, online and face-to-face classroom instruction (Sanpanich, 2021). HyFlex learning is, "an extension of hybrid and blended learning, is an educational delivery method that blends online and face-to-face delivery methods (hybrid) where students choose when and how (flexible) they attend the course" (Kieper et al., 2020, p. 345). Even though blended, hybrid, and HyFlex learning environments incorporate online learning components, they are not the learning structures being explored in this study. Fully online courses without any in-person learning opportunities are the specific types of courses being explored because they have less opportunity for rapport-building than a typical synchronous classroom setting.

Asynchronous vs Synchronous. When discussing online education, the differentiation of the types of online classes is essential. As previously stated, the types of online courses being differentiated are synchronous and asynchronous. During asynchronous online learning, students can learn at their own pace, when it is convenient to them, rather than meeting with their class at a specific weekly time and/or place (Kornilov et al., 2020). Since asynchronous online learning

has no specific time or place for students and teachers to meet, instructors typically share course materials, such as readings and lecture videos, then students engage with these materials at their convenience (Gunes & Alagozlu, 2021). The asynchronous option allows students participating the opportunity to interact with course content without their teacher or other students even being online at the same time (Kornilov et al., 2020).

Synchronous learning is the more traditional style of education where students and teachers meet at a specific time, face-to-face, and synchronous learning can occur in both face-to-face and online settings. Online synchronous learning courses are organized in a way that students and teachers all communicate concurrently (Alshwiah, 2021). Despite online learning being considered a viable option for students, asynchronous and synchronous learning have both been associated with various advantages and disadvantages.

Online education, especially courses using an asynchronous format, has been criticized due to the hampered contact and lessened direct communication between teachers and students, the lack of human touch and proximity, and technological difficulties hindering students' ability to learn and participate in the classroom (Baloran et al., 2021). Synchronous online learning is referring to online courses utilizing "synchronous collaboration tools such as chat, shared whiteboards, video conferencing, and group browsing," which can allow for, "the co-creation of the learning environment by the learners and the facilitator/instructor" (vanOostveen et al., 2016, p. 7). Synchronous online learning occurs when teachers and students use technological tools to communicate and are only separated by space, rather than space and time like the asynchronous option (Gunes & Alagozlu, 2021).

When synchronous online courses are compared to asynchronous options, there appears to be a large discrepancy in perceived course effectiveness. Synchronous online learning has

been associated with an increase in student motivation while enhancing knowledge acquisition for students (Politis & Politis, 2016). Synchronous online courses have been viewed as a means of encouraging student expression, which can create a favorable classroom climate (Sugino, 2021). Further, synchronous online courses allow educators the opportunity to cultivate their online presence more easily, which can positively influence their students' perceptions of the course and their perceived connection with their instructor (Marshall & Kostka, 2020). Synchronous online courses meeting face-to-face through technology has also led to higher student performance when compared against asynchronous learning options (Bailey et al., 2020).

Synchronous online courses appear to be the more well-received online course format when compared to asynchronous options because they can more easily incorporate principles used in traditional face-to-face courses, which can generate increased student motivation, academic success, and increased feelings of learner autonomy (Gunes & Alagozlu, 2021). In fact, some researchers go as far as suggesting that asynchronous courses should simply incorporate synchronous learning components as a means of enhancing significant interactions between teachers and students (Elfirdoussi et al., 2020; Martin et al., 2021). In theory, incorporating synchronous components to asynchronous courses could overcome the learning barriers, such as feelings of isolation, experienced by students in asynchronous classroom settings.

Despite synchronous learning being the preferred option, it still comes with its drawbacks. A component of synchronous online learning interfering with student learning is students becoming distracted by their classmates, which steals the focus away from the course content (Lin & Gao, 2020). Also, synchronous online courses have been criticized for being too

large, which interfere with cultivating a classroom community, and create communication barriers during synchronous online discussions (McDaniels et al., 2016).

Regardless of the pros and cons of synchronous online learning, simply lessening asynchronous components and increasing synchronous components in an asynchronous course is not always possible for teachers and students. Asynchronous learning occurs when students and teachers do not regularly meet face-to-face, or through technology tools like Zoom, Google Teams, videochat, etc. (Kayalar, 2021). When meetings occur synchronously, the advantage of avoiding scheduling conflicts is eliminated. Asynchronous courses are an online learning option viewed as attractive to some students due to the advantages it provides such as, scheduling flexibility, lower costs, and the elimination of distance barriers (Elfirdoussi et al., 2020). In fact, researchers have found when students feel motivated by asynchronous online learning, they are more likely to enjoy their online courses and experience greater feelings of course satisfaction than those who prefer a synchronous or face-to-face model (Bailey et al., 2020). Asynchronous learning is not the preference of most learners, but these types of courses offer specific advantages and is effective in the dispersion of knowledge, like traditional face-to-face and synchronous courses (Elfirdoussi et al., 2020). Exploring how to encourage and motivate students during asynchronous learning opportunities will improve the quality of asynchronous courses, as well as the experiences of those involved.

A criticism associated with asynchronous learning is the lessened opportunities to interact with others in real time. Online learners enjoy opportunities to develop relationships with their instructors and classmates through synchronous tools like Zoom (Bailey et al., 2020). Asynchronous courses have also been found to generate feelings of isolation among learners resulting from a sense of community not materializing in asynchronous courses (Lin & Gao,

2020). Further, the lack of face-to-face communication associated with asynchronous online courses has been found to hinder learning; additionally asynchronous courses having been associated with artificial online discussion, superficial feedback, and accessibility issues interfering with the access of course content (Dzubinski, 2014). When considering these drawbacks, it is easy to see how the obstacles associated with asynchronous online learning can have on teacher-student rapport. Adding a global pandemic rife with uncertainty and fear to the situation, these drawbacks can feel overwhelming for all involved attempting to improve the perception of asynchronous online courses.

The Effect of COVID-19 on Online Learning. The general perception of online learning is in a state of flux due to the COVID-19 pandemic because students and teachers were forced to transition to an online learning format. All students and teachers in the U.S., including in-person educators and students who prefer in-person learning, were required to transition to online learning in the middle of the semester with minimal time to make the necessary adjustments associated with high quality remote learning (Drucker & Fleischhauer, 2021). Schools, administrators, students, and teachers alike were immensely affected by this major educational format change because it lessened the opportunity for students and teachers to address their individual teaching and learning differences, which was found to have a significant effect on student satisfaction (Zeng & Wang, 2021). The pandemic caused transition to remote learning also forced highly interactive classes to switch to asynchronous formats which heavily utilized technology to circumvent the barriers to asynchronous learning (Krause & Goering, 2021). In addition to the adverse effect on student satisfaction the transition to remote learning resulting from the COVID-19 pandemic had on education, there was also found to be a "learning loss" which was widely broadcasted (Severino et al., 2021). Simply put, the COVID-19 pandemic had

a major effect on education, especially on the perception of online learning. However, there are specific explanations attributed to the undesirable outcomes associated with the negative perception of asynchronous remote learning resulting from the COVID-19 pandemic. Despite the detrimental results the COVID-19 pandemic had on online education and the negative experiences of those involved, researchers and educators were able to overcome difficulties and find success during a time filled with challenges and uncertainty.

Teacher Success During COVID-19. Despite the increased and unique challenges faced by educators during the COVID-19 pandemic, educators of asynchronous courses found success by altering their teaching practices, effectively adjusting curricula, including various technology tools, incorporating a communication-based approach, and increasing activities that favorably influence students' social presence (Krause & Goering, 2021; Severino et al., 2021; Simsek et al., 2021). To reiterate, researchers have found success in improving asynchronous courses by increasing synchronous opportunities, such as requiring synchronous meetings to their courses (Zeng & Wang, 2021). However, when synchronous meetings are added to asynchronous courses, they are more appropriately described as blended learning and no longer fully asynchronous, and the focus of this study is cultivating rapport during fully asynchronous courses.

Severino et al. (2021) constructed a lesson plan specifically for asynchronous courses in response to the pandemic and found success with their alterations, which included increasing accessibility for students, providing content without requiring a student login, and finally having buy-in from all involved in the adjusted curricula. Drucker and Fleischhauer (2021) recommend to asynchronous instructors that they treat their online courses as more than simply a replication of their face-to-face courses, and instead recognize they require their own set of digital and

learning tools to be executed successfully. Another recommendation found through research would be for online instructors to use a "communication-based" approach, which will allow more opportunities for interaction for all students and teachers alike, which will create a favorable level of social presence for those involved (Krause & Goernig, 2021, p. 279). The implication of these findings supports the idea that educators can overcome learning barriers in asynchronous courses, which suggests that rapport-building barriers can also be overcome within these settings.

Simsek et al. (2021) recommends in their study that online educators include learning activities that allow students to increase their social presence, which will theoretically generate increased student learning and student satisfaction in asynchronous courses. A strong social presence can lead to students feeling socially and emotionally connected to their instructors (Schrum et al., 2012). Due to the interpersonal connection between teachers and students generated by cultivating social presence, and the recommendations related to social presence towards improving current asynchronous online courses, social presence theory will serve as an additional rapport indicator for this study. The main takeaway related to the discussion of the successes various educators experienced during COVID-19 is that overcoming barriers to rapport is possible through specific intervention, and as previously stated, developing an effective social presence can potentially contribute to the conquering of rapport-building barriers.

Chapter Summary

This chapter provides an extensive definition of rapport and the indicators contributing to teacher-student rapport, how rapport exists in an online setting, and how teacher responsiveness and social presence theory will provide the current study with more relevant findings. First, a synopsis of rapport indicators of rapport emphasized the importance of developing teacher-

student rapport in educational settings. This includes social presence as an indicated derived from the theory as it offers a potential means of overcoming the barriers to rapport in online learning environments. The specific strategies contributing to the development of instructors' and students' social presence during remote learning, which have the potential to overcome feelings of isolation from students and increase rapport between teachers and students suggest a need for educators to fully comprehend the impact their attempted usage of the indicators of rapport, as well as their development of social presence, have during asynchronous courses. The literature on online higher education and its communication barriers suggest that rapport in online settings is more difficult to develop within online classrooms. It can be concluded from this body of literature that teacher-student rapport can be developed in online settings by using various indicators of rapport, which will have positive effects on student learning, student satisfaction, and the general well-being of online learning students. This chapter provided a comprehensive analysis of research pertinent to the current study and explained the relevance of the specific key terms.

CHAPTER III: METHODS

This study aims to explore how teachers can positively influence students' perceptions of rapport during online instruction. More specifically, this study is investigating asynchronous and synchronous courses to give asynchronous online educators the knowledge of the rapport-building indicators that students believe contribute to teacher-student rapport. Therefore, it is important to recognize if perceived rapport is being generated by teachers and students of online classes and how specifically this rapport is being fostered to uncover teaching methods students perceive as valuable when developing teacher-student rapport during asynchronous courses.

Mixed methods are being utilized in this study to capitalize on the benefits offered by both quantitative and qualitative methods. Separate quantitative and qualitative data collection instruments were dispersed at different times and included different participants to collect unique data sets. During both the quantitative and qualitative portions of this study, participants were required to have experience with both asynchronous and synchronous online courses. When participants consented to participate in the study, they were assigned to either an asynchronous or synchronous condition, where they shared their experience participating in their online classroom that corresponds to their assigned condition. The observed presence of teacher-student rapport during synchronous courses in both quantitative and qualitative portions of this study was included to assist in data analysis by ensuring the validity of the findings specific to asynchronous courses.

Mixed Methods Justification

The methods being used during this study included both closed and open response prompts to allow for a complementary/confirmatory mixed methods survey approach. Previously generated quantitative surveys for identified indicators of rapport were utilized because they

allowed researchers to collect compelling statistics from a large sample size (Knaub et al., 2019). All scales used in this study have been previously published, which allow for the acquisition of valid, reliable findings.

The qualitative portion of this study consists of open-ended survey questions being sent out after the quantitative survey data has been collected. The open-ended qualitative questions used were developed for the purposes of this study. By using open-response questions alongside the quantitative surveys, it allowed for the triangulation of the internal validity of the findings generated. If this study were to use closed-response surveys by themselves, the findings would not achieve the same level of validity that a mixed methods approach offers (Frias & Popovich, 2020). Therefore, I gathered quantitative and qualitative data from former and/or current students of online courses and assessed how these students perceived their online teacher's usage of rapport-building indicators contribute to or inhibit the development of student-teacher rapport.

Since there are numerous rapport-building indicators being assessed through quantitative methods, adding the qualitative portion for complementarity purposes supported in overcoming various limitations associated with using quantitative methods alone (Frias & Popovic, 2020). More specifically, Creamer's (2018) definition of confirmatory mixed methods is being applied to this study which means, "Data are collected about the same construct in both the qualitative and quantitative strands," (p. 77). This study incorporated open-response prompts gauging students' perception of student-teacher rapport, as well as their preferences related to rapport-building with their online instructors. Once the qualitative data was collected, it was coded using the coding process discussed by Corbin and Strauss (2015). This process occurred alongside the quantitative survey instruments because this process offered a better understanding of the implications found in the responses collected by the quantitative surveys (Ismail et al., 2019).

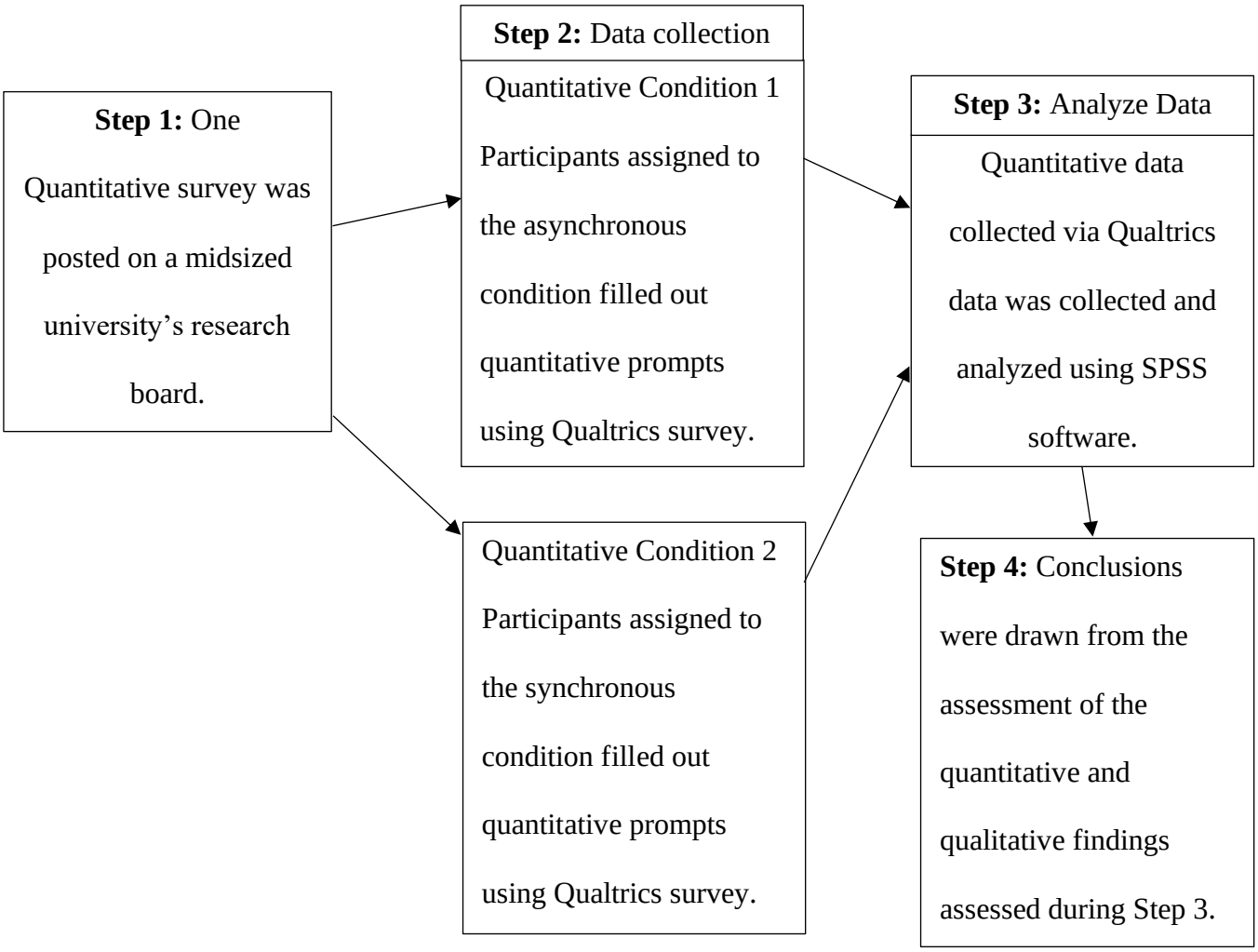
The expansion and clarification of findings generated by the qualitative data occurred by allowing participants to generate their own responses using their own voices and experiences. By using a mixed survey response and analysis approach, this study captured the advantages associated with both quantitative and qualitative data and analysis (Ismail et al., 2019). All qualitative and quantitative data collection instruments can be found in the appendix.

Mixed methods led to an increase in the reliability and validity of this study's findings and provided a broader understanding of the area of interest due to the varied data obtained. Frias and Popovich (2020) and Şahin and Öztürk (2019) identify five main reasons why mixed methods are used in their study and they are: triangulation, complementarity, development, initiation, and expansion. The confirmatory mixed methods approach used in this study applied the Şahin and Öztürk (2019) strategy of complementarity. Complementarity occurs when qualitative methods are added to a study to support the interpretation of the quantitative findings and as a means of expanding upon the implications developed. Again, this study utilized qualitative findings alongside quantitative to develop more descript and extended inferences.

Research Design

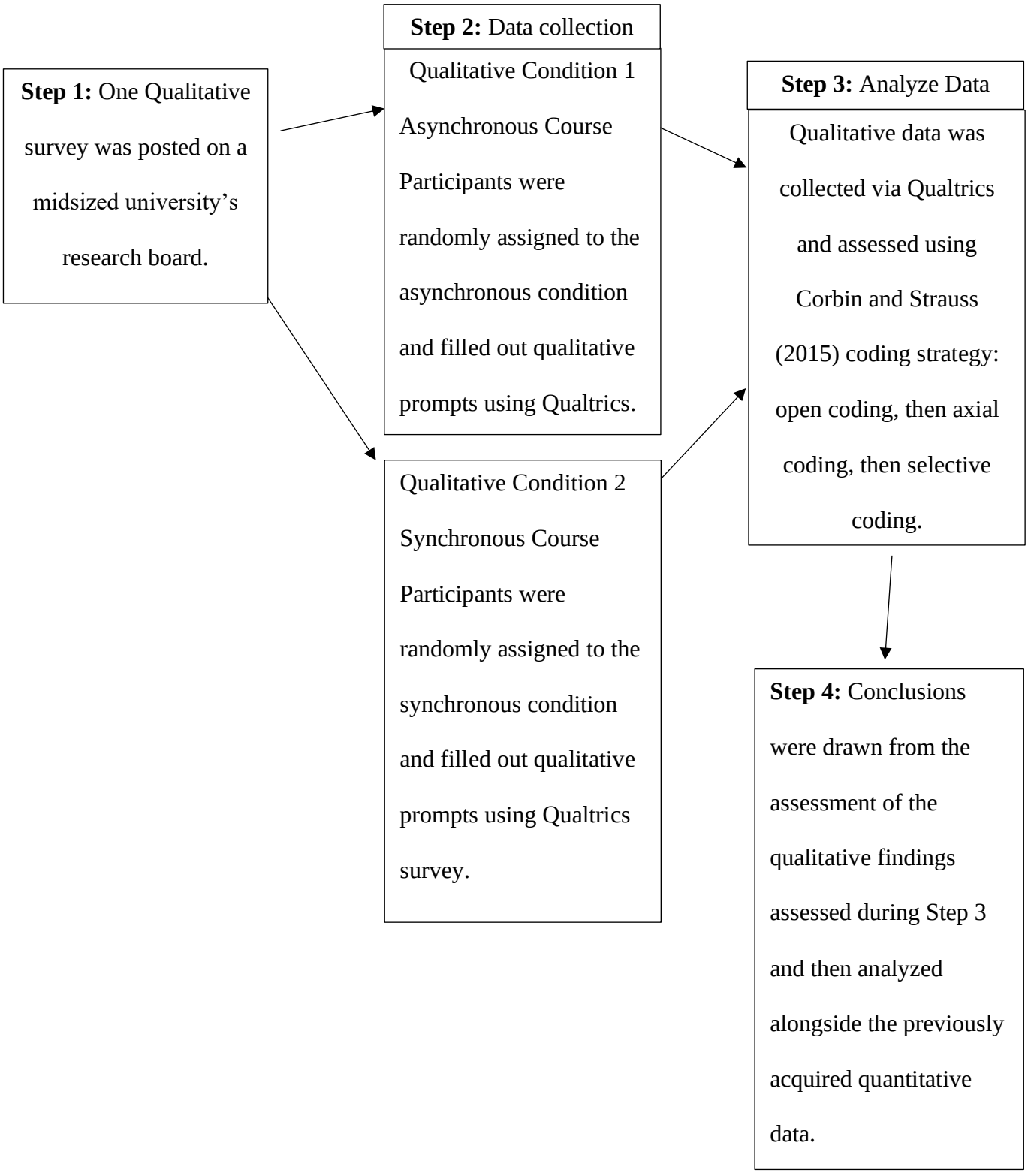
A quantitative survey was sent out with two conditions, and these conditions are specific to synchronous or asynchronous course experiences. These conditions were randomly assigned to participants where they were asked to use their last online course experience when responding to prompts. Both asynchronous and synchronous conditions were investigated in an effort to compare rapport in each classroom setting against one another. In other words, the inclusion of the two conditions allowed for the collection of more accurate, trustworthy, and valid quantitative findings. See Figure 1 for visual breakdown of the quantitative survey design.

Figure 1. Quantitative Survey Design



Qualitative prompts were sent out in a separate survey after the quantitative data was collected. Participants of the quantitative portion were not allowed to participate in the qualitative portion of this study. Participants were asked to use their last online course experience when responding to questions and were also assigned randomly to asynchronous or synchronous conditions. See Figure 2 for a diagram illustrating the survey design being utilized in the qualitative portion of this study. The specifics of this design will be discussed further in the corresponding sections.

Figure 2. Qualitative Survey Design



Survey instruments were utilized to answer the quantitative research questions, and in order to participate in the current study, eligible participants only included those who have experience being students of both synchronous and asynchronous online courses. If the participant does not have experience in both types of online course, they were not included in the study. The quantitative portion consisted of two conditions that included synchronous or asynchronous course experiences. Individual surveys specific to those two types of online courses were sent out simultaneously. Participants were randomly assigned to either the asynchronous or synchronous condition. Then, they answered survey prompts with their last asynchronous or synchronous online course instructor in mind.

The qualitative questions prompted respondents regarding their online course experience. The qualitative process followed the same process as the quantitative portion by maintaining the participation process and eligibility requirements, as well as randomly assigning participants to either the asynchronous or synchronous condition. The questions they were asked assessed their perceptions of "experienced rapport-building behaviors" and their "desired rapport-building behaviors." The former wallowed participants to share teacher practices they have experienced, and the latter allowed students to disclose what teacher actions they would appreciate in online courses that contribute to teacher-student rapport-building. Findings generated were compared alongside the quantitative findings and all findings can be found in the results section.

Procedures

All procedures were approved by the Instructional Review Board (IRB) prior to research being conducted. Further, participants reviewed an informed consent form explaining the study's approval by the IRB, that their participation is voluntary, and their contributions will remain anonymous. One quantitative survey with random assignment conditions was distributed on a

midsized Midwestern college's research board. After the appropriate number of quantitative participants were collected, the survey was taken down from the research board. Afterwards, one qualitative survey was distributed using the same research board until saturation has been achieved. College students were the participants in this study due to the popularity of online education within higher education institutions, as well as the experience college students have participating in online courses potentially due to the COVID-19 pandemic. Participants participated in either the quantitative closed-response survey, or the qualitative open-response survey, but they did not participate in both. Meaning, if a participant has completed the quantitative prompts, they were disqualified from participating in the qualitative portion of this study that followed.

When participants consented to participate in the study, they were asked to think back to the last online teacher they had, which is a research strategy developed by McCroskey et al. (2006). Again, participants who elected to participate in this study must have experience in both synchronous and asynchronous online courses. All participants were given a brief description of asynchronous and/or synchronous courses to ensure accurate data is being collected. Qualitative participants answered the open-response questions, and the quantitative survey participants answered the close-ended questions. Participants' demographic information was also collected in all the surveys distributed. Once participants completed their respective survey, their contribution to the study was concluded. It should be stated that this study is utilizing a convenience sample, which has the potential to generate limitations towards finding a representative sample.

Participants

Once IRB approval was received, participants were recruited from communication courses at a mid-sized, Midwestern university using a research pool. This study obtained informed consent from all participants, and each participant consented to take part in this study. For the quantitative portion of the study, the targeted sample size was 198, which would allow a power level of .95 to detect a large effect (Lenth, 2001). Of the 198, 17 cases were incomplete and were therefore omitted from the data analysis, resulting in a final N = 181.

The participants of this study in both qualitative and quantitative portions of the study were required to have experience in both asynchronous and synchronous online courses. Participants of the quantitative portion of this study consisted of 37.6% seniors in college, 26.5% juniors in college, 3.9% sophomores in college, 19.9% freshmen in college, 3.3% college graduate or doctoral students, 0.6% graduated from college, and 8.3% students preferred not to answer respectively. Of the 181 participants, 160 elected to provide their age, and the average age for this study was 20.75 years old. 21 participants elected to not provide their age. The ethnicities were 74% White, 10.5% Black or African American, 3.3% Asian, 3.3 % other or not specified, and 8.84% preferred not to say. The gender distribution in this study was 59.7% of the participants identifying as female, 26.0% identified as male, 1.7% identified as non-binary or third gender, 0.6% prefer to self-describe, 12.1% preferred not to say. The study utilized the method of asking students to think back to the teacher that they had most recently to complete the survey used by McCroskey et al. (2006).

The qualitative portion of this study followed the quantitative portion, and participants of the quantitative portion were not able to participate in the qualitative portion to avoid negative effects towards the trustworthiness and the validity of the data. The qualitative portion of the

study concluded when saturation had been reached. After determining the data acquired from participants were quality, omitting incomplete cases, and reaching saturation, the final participant count included 22 participants for the asynchronous condition and 21 participants for the synchronous condition, or 43 total respectively. The ethnicities of the qualitative participants were 2.3% Asian, 1.2% Black or African American, 2.3% Other, and 83.7% White or Caucasian. The genders of the participants were 68.8% female and 30.2% male. The year in school of the qualitative participants were 18.6% freshmen, 18.6% sophomores, 32.6% juniors, 20.9% seniors, and 9.3% graduate students. The average age of the qualitative participants was 21.3.

Survey Design

Closed Response Survey Design. All questions were tailored to both asynchronous and synchronous settings and were adjusted to fit the specific context of the study when necessary. If participants consented to participate in the quantitative portion of this study, they were then randomly assigned to either the asynchronous or synchronous condition. When participants were assigned a condition, they were then asked to use their most recent online course experiences with either an asynchronous or synchronous format when responding to prompts (McCroskey et al., 2006) and gave their input related to their perception of teacher-student rapport and their instructor's utilization of rapport building indicators. Feelings of perceived rapport for each condition was assessed first, then indicators of rapport were evaluated which include, homophily, teacher humor, immediacy, and social support.

Measures

Several previously generated scales were used to gauge how teachers and students generate rapport with one another in both asynchronous and synchronous classrooms and the

target variable was rapport, which was measured using the modified rapport scale developed by Frisby and Myers (2008) and produced a reliability coefficient of .95.

The rapport indicator variables were measured by the following scales. McCroskey et al.'s (1975) homophily scale was used and the 8-item scale yielded an alpha coefficient reliability of .72, which indicates an acceptable level of reliability. Wilson and Locker's (2008) 23-item nonverbal immediacy scale yielded an alpha coefficient reliability of .91, which indicates a very good level of reliability. Booth-Butterfield and Booth-Butterfield's (1991) 17-item humor orientation scale yielded an alpha coefficient reliability of .89. Malecki and Demary's (2001) 10-item social support scale yielded an alpha coefficient reliability of .94. Teacher Responsiveness was assessed using a scale developed by Zhang et al. (2022) and developed a reliability coefficient of .85. Kang et al. (2007) developed a social support scale, which was used in this study and yielded a reliability coefficient of .94. All scale reliabilities ranged from acceptable to excellent.

All quantitative scales used in this study have been previously developed to afford reliable data collection and analysis (Queirós et al., 2017). This study did not develop new quantitative scales, therefore no factor loading analysis took place. Reliability for each scale was reported in the results section and all scales must have achieved a reported Cronbach's Alpha of .7 or higher to be included in the findings.

Both qualitative and quantitative surveys also asked participants for their demographic information. These questions included requests for the age of the participants, their genders, year in school, and their ethnicities. The demographic information of the participants was reported above. The full surveys distributed, including the demographic questions, can be found in the appendix.

Open Response Survey Design. In the qualitative portion of this study, which was sent out as a separate survey on Qualtrics, students responded to open-ended questions. This approach allowed participants to explain in their own words how they believe *rapport* between themselves, and their instructor influenced their experience participating in their online course (see Appendix). Quantitative surveys used on their own would not allow for this outcome, which is why qualitative methods were incorporated alongside the quantitative surveys. In short, including qualitative methods provided a richer understanding of the observed phenomena. Similar to the quantitative surveys, participants also referred back to their instructor of the last online course they participated in when responding to prompts (McCroskey et al., 2006). They also had a chance to explain and identify which indicators of rapport they value during their specific online courses, which rapport-building indicators their instructors might be using, as well as which indicators they believe would have contributed to teacher-student rapport in online courses. Answers to the open-ended questions were analyzed qualitatively by coding the responses (Corbin & Strauss, 2015). The open-ended questions being used were developed for the purposes of this study.

Open-Response Analysis. During the qualitative data analysis, open-ended survey questions were generated for the purposes of this study. Participants then provided answers to these prompts while recalling their last experience in an online course that corresponded with their randomly assigned condition. Responses were coded to classify and categorize themes found in the data. To generate reliable qualitative findings, the process of coding data was used. The specific process of coding being used consists of the steps: open coding, then axial coding, and finally, selective coding (Corbin & Strauss, 2015).

During the open coding process, sections of the qualitative text were labeled by using the words generated by the participants and codes were attached to the data to capture the components relevant to answering the research questions. For example, a response found in the raw data reads, “My last asynchronous professor was really good at *staying in touch* with the students.” Since the comment is related to an online student perceiving their teacher communicating with them effectively and responding to their specific needs through timely interaction, the code “teacher responsiveness” was generated. Another example pulled from the data says, “If I had any questions, *we would meet on Zoom and talk face-to-face* to solve the issue.” This specific example also generated the code “teacher responsiveness” because the teacher and the student solved issues by communicating together in a timely manner, but also generated a memo that reads, “Properly utilized tech tools.” The memo was used to generate the code, “tech tools.” The actions shared by the participants in these examples illustrate the perceived success associated with developing the teacher-student relationship through teacher responsiveness and the appropriate use of technology, which is why the codes “teacher responsiveness” and “tech tools” were attached to these examples.

After open coding, specific categories were generated during the axial coding process. Connections between the codes were generated and the frequency of those codes were evaluated. The above-mentioned examples, which both generated the “teacher responsiveness” code, were evaluated alongside one another to generate categories as a means of constructing links among all the codes. The examples presented showcase how various comments were attached to one another during the axial coding process.

Finally, selective coding was conducted by identifying core themes within the categories, which addressed the relationship between different indicators of rapport and how they influence

rapport. Once again referencing the examples above, which both generated the code "teacher responsiveness," we can see how themes were produced from the qualitative data. The literature review identifies teacher responsiveness as a teacher action that can influence teacher-student rapport, which suggests that observing "teacher responsiveness" as a theme generated by the data is relevant towards answering research questions. Teacher responsiveness is simply one example of a theme generated by the data and is simply being used to explain the specific coding process used during this study. It should be stated that not all the codes found in the data fit as seamlessly as the concept of teacher responsiveness, which had the ability to shift from an initial code to a significant theme, but all qualitative findings followed the specific coding process explained above. The extent of the themes found, and their relevance towards answering research questions will be discussed at length in the findings.

The coding process utilized allowed for an ability to relate rapport indicator codes to one another and find patterns among responses. This coding process produced participant-generated data with practical and theoretical implications relevant to understanding perceived rapport in teaching. The tables below provide examples of how the coding process was used during this study and how codes were found among the data for both asynchronous and synchronous conditions.

Table 1: *Asynchronous Qualitative Coding Table Examples*

Question	Response Quotation	Codes	Research Memos
Describe a time when your online instructor attempted to connect with you during your online course	1. My last asynchronous professor was really good at *staying in touch* with the students. He *posted a video each week* for us to watch to know what the week's materials were going to be about. It *was good*	1. Responsiveness 1. Social presence 1. Tech Tools 2. Responsiveness	-Being perceived as human (social presence) -Properly utilized tech tools.

(Table Continues)

(Table Continued)

	seeing a face and hearing a voice in the videos. I think this helped the students feel more engaged in a remote class. 2. My professor connected with me through Canvas Messaging. I sent my completed assignments through there so she could grade them. If I had any questions, we would meet on Zoom and talk face-to-face to solve the issue.		
Explain whether your instructor's attempts to connect were effective and why you feel that way.	1. From my personal experience, instructors made an effort to connect with students, but in general, having a class not in-person makes it more difficult to feel connected because students have to make more of an effort to communicate, which can be intimidating sometimes. But overall, my professor tried their best and *responded quickly to emails.* 2. My asynchronous instructor's attempts to connect were effective because although she is not teaching in-person, I am well aware that she *only wishes the best for our class.* I know this because she provides *timely feedback* with everything she submits back to us after she grades assignments.	1. Responsiveness 2. Responsiveness 2. Social Support	-Asynchronous barriers intimidating but mutually understood -Teacher effort is noticed and appreciated
List specific actions online instructors can take to connect with your during online courses	1. Weekly reminders of assignments and also *let us know that we can ask any questions* is helpful. Also, *making lecture videos with themselves in it make it more personal*.	1. Responsiveness 1. Social Presence 2. Social Presence 2. Tech Tools	-Appropriate use of tech tools -Positive comments are noticed and appreciated

(Table Continues)

(Table Continued)

	2. The best way for me is when they are doing *lecture videos* instead of having us read the textbook or articles. It makes the *class feel more persona*ble. I also really appreciate weekly messages that start with *positive wishes for the students*. I feel like it is hard to connect when you haven't met face-to-face and little actions, like the ones I have listed, make an online class *feel more personable*.		

Table 2: *Synchronous Qualitative Coding Table Examples*

Question	Response Quotation	Codes	Research Memos
Describe a time when your online instructor attempted to connect with you during your online course	1. My instructor attempted to connect with us by attempted to connect with us by *setting up individual check-ins*, *asking how we were doing*, and *if we needed support.* 2. My instructor *was available through email*, so any questions that needed answered could be *answered very quickly.*	1. Sync Opportunities 1. Social Support 1. Responsiveness 2. Responsiveness 2. Tech Tools	-Using tech tools like email and Zoom meetings
Explain whether your instructor's attempts to connect were effective and why you feel that way.	1. My instructor made *no direct attempts* to reach me as a student, but I *did not hesitate to communicate* with my instructor if I ran into an issue. 2. My instructor *never personally contacted me* but was *available within 24 hours* when responding to my questions.	1. No rapport felt 1. Responsiveness 2. Responsiveness	-Teacher failed to reach out to students
List specific actions online instructors can take to connect with your during online courses	1. They can send out *personal reminders*, *do things that give them more personality* and sharing things about yourself *helps me personify you*.	1. Social Presence 2. Responsiveness 2. Tech Tools	-Using tech tools like reminders, email. -Students desire to feel connection

(Table Continues)

(Table Continued)

	2. Connecting with students through *communication, email*, *responding on time*, making students feel connected is really key.		

Admittedly, the closed-response prompts derived from validated survey instruments allowed for valid and significant findings on their own. However, quantitative methods on their own limit participants' ability to provide in-depth contributions, which is why mixed methods are being utilized in the current study and qualitative components have been included.

Mixed Methods Analysis. The process of collecting and coding open-response, qualitative data and comparing that data alongside reliable quantitative findings provides an opportunity to further understand the findings revealed during this study, which illustrates the need and application of for the use of mixed methods. The qualitative results provided are discussed alongside the quantitative findings in the results section to provide a better understanding of the usage indicators of rapport have on the students' perception of rapport and other potential influences on teacher-student rapport-building. Since confirmatory mixed methods were utilized, the qualitative findings support and provide clarity to the quantitative findings in this study and allow for further insight to the specific indicators of rapport students value when developing rapport with their instructors. In the few cases where the qualitative findings do not confirm or support the quantitative findings, the conclusions reached during the analysis process of comparing the overall findings generated by the successful application of the mixed methods approach are still included in the results and discussion of the data. For clarity, the table below clearly identifies the hypothesis and the research questions alongside the survey sources being used to answer the areas of research identified. Finally, the specific analysis being conducted to accurately examine the data collected for each area of inquiry is listed as well.

Table 3: *Research, survey sources, and analysis*

Research Question	Data Sources	Data Analysis
H1: Students in synchronous courses perceive rapport being generated with their teachers during online education more than students participating in asynchronous courses.	Rapport Scale (Frisby & Myers, 2008)	*t*-test
RQ1: Which, if any, of homophily, social presence, humor, social support, teacher responsiveness, and mediated immediacy predict rapport in asynchronous online instruction?	Rapport Scale (Frisby & Myers, 2008) Homophily Scale (McCroskey et al., 1975) Humor Orientation Scale (Booth-Butterfield & Booth-Butterfield, 1991) Measuring Social Support (Malecki & Demary, 2001) Immediacy Scale (Wilson & Locker, 2008) Social Presence Scale (Kang et al., 2007)	Multiple Regression
RQ2: Which, if any, of homophily, social presence, humor, social support, teacher responsiveness and mediated immediacy predict rapport in synchronous courses?	Rapport Scale (Frisby & Myers, 2008) Homophily Scale (McCroskey et al., 1975) Humor Orientation Scale (Booth-Butterfield & Booth-Butterfield, 1991) Measuring Social Support (Malecki & Demary, 2001) Immediacy Scale (Wilson & Locker, 2008) Social Presence Scale (Kang et al., 2007)	Multiple Regression
RQ3: Is there a difference between asynchronous and synchronous online classes in social presence?	Social Presence Scale (Kang et al., 2007)	MANOVA
RQ4: Is there a difference between asynchronous and synchronous online classes in perceived teacher humor?	Humor Orientation Scale (Booth-Butterfield & Booth-Butterfield, 1991)	MANOVA

(Table Continues)

(Table Continued)

RQ5: Is there a difference between asynchronous and synchronous online classes in immediacy?	Immediacy Scale (Wilson & Locker, 2008)	MANOVA
RQ6: Is there a difference between asynchronous and synchronous online classes in homophily?	Attitude Homophily Scale (McCroskey et al., 1975)	MANOVA
RQ7: Is there a difference between asynchronous and synchronous online classes in feelings of social support?	Measuring Social Support (Malecki & Demary, 2001)	MANOVA
RQ8: Is there a difference between asynchronous and synchronous online classes in perception of teacher responsiveness?	Teacher Responsiveness Scale (Zhang et al., 2022).	MANOVA
RQ9: How specifically was/is rapport generated between teachers and students during online instruction?	Open-ended survey questions All close-ended survey questions	Significant findings found in both qualitative and quantitative methods compared against and alongside one another. Qualitative findings will confirm or compliment the quantitative findings.
RQ10: What teacher indicators are important while establishing teacher-student rapport during online instruction?	Open-ended survey questions All close-ended survey questions	Significant findings found in both qualitative and quantitative methods compared against and alongside one another. Qualitative findings will confirm or compliment the quantitative findings.

Mixed Methods Survey Rationale and Limitations. The proposed study utilized mixed methods to overcome the various limitations associated with using quantitative and qualitative methods by themselves. More specifically, the quantitative methods being utilized in this study had the potential to generate a large amount of data, which can fall into the “quantity of quality” limitation of quantitative studies (Daniel, 2016). This study also seeks to show the significance

of the phenomenon being observed, which has been stated as a limitation of using quantitative methods on their own (Atieno, 2009). Again, mixed methods were used in this study to avoid the aforementioned limitations of using quantitative methods alone.

Additionally, using qualitative methods by themselves are also associated with certain limitations. In the current study, qualitative methods on their own had the potential for researchers overidentifying with participants (Schonfeld & Mazzola, 2013) due to experience teaching online courses. More specifically, the primary researcher of this study is a working educator. This could potentially have had an influence on the interpretation of the students' experiences, which might have generated more critical or biased findings, especially when compared to a completely objective observer without experience teaching online courses (Schonfeld & Mazzola, 2013). The lack of complete objectivity creates a clear limitation of using qualitative methods alone within this context because humans have a natural bias that can interfere with the analysis and interpretation of data (Schonfeld & Mazzola, 2013). Utilizing mixed methods overcame any researcher bias or overidentification with participants while analyzing the qualitative data generated by this study.

Ultimately, a mixed methods approach allowed for a lesser number of limitations in this study. Researchers typically classify themselves as either a quantitative or qualitative researchers, which often suggests they are more accustomed to using one approach over the other (Cameron, 2018). Obviously, when more than one methodology is utilized, researchers must assess more than one type of data set, which requires more knowledge, time, and resources (Cameron, 2018). These limitations were considered and did not lead to procedural errors from the primary researcher.

Despite the potential limitations, this study utilized mixed methods to provide practical means of advancing the understanding of perceived rapport-building during online instruction. Using mixed methods generated reliable, valid findings that will be recognized within the primary field of study (Frias & Popovich, 2020), in this case the field of education.

Chapter Summary

The methods discussed above helped contribute to the understanding of if/how rapport can be established between teachers and students in an online setting. Multiple, previously developed scales were used to measure the indicators and potential obstacles of teacher-student rapport in both synchronous and asynchronous online courses. Also, qualitative prompts were distributed to uncover additional findings participants found relevant during the development of perceived teacher-student rapport. The methodological design used during this study is sound and provided a significant amount of quality data that contributes to the field of study. The next chapter will discuss the results and findings generated by this methodology.

CHAPTER IV: RESULTS

The previous chapter explaining the methodology used in this study led to the results discussed in chapter IV. Significant results emerged from the methodological approach, which are discussed further below in detail. Again, the quantitative tests used to analyze the data accurately included MANOVAs, t-tests, and regressions; whereas the qualitative analysis used a coding process that moved from open coding to axial coding to selective coding. The previously discussed methods utilized in the current study work together to produce noteworthy results, all of which are explained at length below.

Perception of Rapport in Synchronous and Asynchronous Courses

Hypothesis 1 hypothesized if students in synchronous course perceive teacher-student rapport more during online than students of asynchronous courses. An independent samples *t*-test was conducted to determine if type of online course (asynchronous or synchronous) affected students' perceived student-teacher rapport. The Levene's test for variance was not significant ($F = .97$, $p = .326$), so equality of variance can be assumed. Non-significant results emerged, $t(177.16) = -1.55$, $p = .122$, 95% CI [-4.90, .59]. Perceptions of rapport in asynchronous courses ($M = 35.49$, $SD = 9.88$) did not statistically significantly differ from synchronous courses ($M = 37.66$, $SD = 8.82$).

Predictors of Rapport in Asynchronous Courses. RQ1 asked if perceived homophily, social presence, humor, social support, teacher responsiveness, and mediated immediacy predict rapport in asynchronous online instruction. A multiple regression was run, which investigated if perceived teacher-student rapport during asynchronous online courses could be predicted by the linear combination of the rapport indicators homophily, social presence, humor, social support, immediacy, and teacher responsiveness. The indicators, homophily, social presence, social

support and immediacy were not found to predict perceived teacher-student rapport significantly during online asynchronous instruction. Missing cases were excluded pairwise.

The indicators, teacher responsiveness and humor, were found to predict teacher-student rapport significantly. Results of the regression analysis indicated that 24.6% of the variance in rapport could be predicted by teacher responsiveness by itself, $R^2adj = .23$, $F(1, 44) = 14.39$, $p < .001$, and 32.5% of perceived rapport during asynchronous online instruction could be predicted by teacher responsiveness and humor, $R^2adj = .29$, $F(2, 43) = 10.35$, $p < .001$. Results of the regression indicated that predictor variables were able to account for a significant amount of variance in the outcome variable. Beta weights for teacher responsiveness and the combination of teacher responsiveness and humor are located on the table below.

Table 4

Beta Weights for Asynchronous Teacher Responsiveness and Humor

Variable	B	SE B	β
Teacher Responsiveness	.878	.232	.496*
Teacher Responsiveness	.670	.241	.379**
Humor	.296	.133	.304***

*$p < .001$; **$p < .05$; $N = 46$

Students' responses to open response questions confirm this finding. Teacher responsiveness was found to be a common theme generated by students of asynchronous courses. Participants made statements such as, "My professor tried their best and responded quickly to emails," and, "My professor's attempts at rapport were not effective, as the professor would never respond to emails." These responses led to the codes "quick correspondence" and "no response" being generated. These codes work together to imply that students value timely

correspondence and perceive a lack of response as detrimental to the development of the teacher-student relationship. The connection between these codes led to the major theme of teacher responsiveness being supported among the data due to how often this concept was referenced, as well as the depth in which it was referenced and discussed by participants. These examples support the notion that students of online courses value a responsive teacher because of how students perceive responsiveness to affect their experience in the course and teacher-student rapport.

Similarly, asynchronous participants taking the qualitative survey condition were asked to state what they defined as their most important indicator of rapport and humor was a common theme found. Statements like, "Teachers using humor in class makes the class less boring," and, "My professor made the course fun with jokes!" led to the codes "engaging course" and "jokes" being found among the data. Obviously, telling funny jokes are related to humor, but students being engaged in the course was also connected to humor because of the entertainment quality of humorous messages, which can maintain and engross an audience. Teachers can utilize humorous messages through delivering jokes themselves or utilizing humorous messages in other ways, such as YouTube videos and other multimedia tools. Therefore, students perceiving their online course as engaging can be connected to the main theme of humor because of the likelihood of humorous messages being utilized. This finding implies that teachers should consider student engagement during their online courses more deliberately by keeping students engaged in the materials through the intentional use of humor and humorous messages.

Predictors of Rapport in Synchronous Courses

RQ2 asked if perceived homophily, social presence, humor, social support, teacher responsiveness, and mediated immediacy predict rapport in synchronous online instruction. A

multiple regression procedure investigated if perceived teacher-student rapport during synchronous online courses could be predicted by the linear combination of the rapport indicators homophily, social presence, humor, social support, immediacy, and teacher responsiveness. The indicators, homophily, humor, social support and immediacy were not found to predict perceived teacher-student rapport significantly during online synchronous instruction. Missing cases were excluded pairwise.

The indicators, teacher responsiveness and social presence were found to predict teacher-student rapport significantly. Results of the regression analysis indicated that 47.7% of the variance in teacher-student rapport could be predicted by teacher responsiveness, $R^2adj = .47$, $F(1, 50) = 45.6$, $p < .001$. Results of the regression indicated that predictor variable, teacher responsiveness, was able to account for a significant amount of variance in the outcome variable by itself.

Results of the regression analysis also indicated that 55.7% of the variance in teacher-student rapport could be predicted by the combination of teacher responsiveness and social presence, $R^2adj = .54$, $F(1, 49) = 30.78$, $p < .001$. Results of the regression indicated that predictor variables, teacher responsiveness and social presence, together were able to account for a significant amount of variance in the outcome variable. Beta weights for teacher responsiveness as a predictor of rapport alone and the rapport predictors teacher responsiveness and social presence together are located on the table below, and the descriptive statistics for both regression analyses (synchronous and asynchronous courses) can also be found in the tables below.

Table 5

Beta Weights for Synchronous Teacher Responsiveness and Social Presence

Variable	B	SE B	β
Teacher Responsiveness	1.04	.154	.691*
Teacher Responsiveness	.634	.197	.423**
Social Presence	.267	.090	.389***

*$p < .001$; **$p < .05$; $N = 52$

Table 6

Descriptive Statistics for Asynchronous Rapport Indicators

Variable	*M*	*SD*
Rapport	37.65	8.93
Homophily	22.65	4.68
Immediacy	83.37	11.18
Humor	56.11	9.16
Social Support	36.74	7.70
Teacher Responsiveness	17.83	5.05
Social Presence	66.09	12.54

Table 7

Descriptive Statistics for Synchronous Rapport Indicators

Variable	*M*	*SD*
Rapport	39.08	8.57
Homophily	22.77	3.70
Immediacy	83.58	12.98
Humor	57.13	9.95f
Social Support	38.19	6.35
Teacher Responsiveness	18.35	5.71
Social Presence	65.73	12.49

Qualitative analysis supports the significant quantitative findings discussed above. Like the asynchronous condition, teacher responsiveness remained a highly valued indicator of rapport during synchronous courses. Phrases like, “Communicate with your students,” and, “Availability is important because I need feedback in a timely manner,” were made by participants of the synchronous condition, which led to codes of teacher responsiveness and flexible schedule being generated. More specifically, correspondence being shared in a “timely manner” fits into the scope of quality teacher responsiveness, which is what led to the discovery of this particular code. The entirety of the coding process led to the discovery of codes among the data, and those codes were then associated with similar codes. This process led to connections being found, and these connections among codes were used to generate themes among the qualitative data. The above examples led to the theme of teacher responsiveness emerging from the data, which was a variable being explored by the study. In short, teacher responsiveness was a significant theme generated by the data because online students perceive responsiveness as a significant indicator of rapport-building between teachers and students, which supports the findings generated during the quantitative portion of this study. Teacher responsiveness emerging as a perceived indicator of rapport during the qualitative and quantitative portions of this study imply that online instructors utilize responsiveness to their advantage by responding quickly to communication and providing timely feedback.

During the qualitative portion of the study, students of synchronous courses appear to desire an opportunity to develop their social presence during their online courses. Many participants voiced a desire from their instructors to, “Ask questions and encourage us to participate and encourage us to have our cameras on.” Participants also want to devote class time towards giving students the opportunity to share and connect with the rest of the class. This is

illustrated through recommendations like, “Take the time for introductions because it allows us to share our hobbies and interests amongst the class.” Thus, the quantitative findings suggesting that students value teacher responsiveness and social presence during synchronous courses is supported by the qualitative findings generated by the study.

Asynchronous and Synchronous Differences in Rapport Indicators

Research questions, 3, 4, 5, 6, 7, and 8 asked if differences between students’ perception of *social presence, humor, immediacy, homophily, social support,* and *teacher responsiveness* in synchronous and asynchronous courses exist. Therefore, a MANOVA was run to protect against Type I error. Box’s M was used to test for homoscedasticity at $p < .05$. The Box’s test (Box’s M = 48.80) indicated that equal variances cannot be assumed. Results of the MANOVA suggested that there was not a statistically significant difference between the asynchronous and synchronous groups on the combined dependent variables, Wilks' $\Lambda = .97$, $F(7, 90) = .37$, $p = .915$, partial $\eta 2 = .03$.

Above results suggest students of synchronous and asynchronous courses do not significantly differ in how they perceive their online instructors’ *social presence, humor, immediacy, homophily, social support,* and *responsiveness* ($p = .915$). Table 8 shows the descriptive statistics of the *MANOVA* computed to compare the averages of the rapport indicators for asynchronous and synchronous courses further indicating a lack of significant differences per dependent variable.

Table 8

Descriptive Statistics Rapport Indicators MANOVA

	Asynchronous (n = 46)		Synchronous (n = 52)	
	Mean	SD	Mean	SD
Social Presence	66.09	12.53	65.90	12.49
Humor	56.11	9.16	57.13	9.95
Immediacy	83.37	11.18	83.58	12.98
Homophily	22.65	4.68	22.77	3.70
Social Support	36.74	7.70	38.19	6.35
Teacher Responsiveness	17.83	5.39	18.35	5.71

Note. Higher scores on means indicate higher levels of perceived rapport indicators felt by participants.

More specifically, RQ3 investigated the perceived difference in instructor social presence in asynchronous and synchronous courses and the results suggest there is no significant perceived difference in social presence between online course format, $F(1, 96) = 0.02$, $p = .888$, partial eta squared = 0.00. RQ4 asked if the perceived difference in teacher humor in asynchronous and synchronous courses and no significant effect was found, $F(1, 96) = 0.28$, $p = 0.598$, partial eta squared = 0.03. RQ5 asked if the perceived difference in instructor immediacy in asynchronous and synchronous courses and significant effect was found, $F(1, 96) = 0.01$, $p = 0.933$, partial eta squared = 0.00. RQ6 asked if the perceived difference in homophily in asynchronous and synchronous courses and no significant effect was found, $F(1, 96) = 0.02$, $p =$

0.891, partial eta squared = 0.00. RQ7 asked if the perceived difference in social support in asynchronous and synchronous courses and no effect was found, $F(1, 96) = 1.05$, $p = 0.309$, partial eta squared = 0.11. RQ8 asked if the perceived difference in teacher responsiveness in asynchronous and synchronous courses and no significant effect was found, $F(1, 96) = 0.23$, $p = 0.636$, partial eta squared = 0.02.

How is Rapport Generated?

RQ9 asked how specifically was/is rapport generated between teachers and students during online instruction. Student responses demonstrated a similar perception of teachers and their usage of rapport-building indicators by students in asynchronous and synchronous courses. For example, when asked to describe a time when their online instructor tried to connect with them during online instructions, multiple asynchronous and synchronous students disclosed they did not feel they had developed rapport with their teachers. More specifically, synchronous participants said things like, “I felt extremely unattached,” “Zero direct attempt to connect was made” and, “My instructor never tried to connect.” Asynchronous participants had similar responses such as, “I have never had an asynchronous instructor try to connect with me,” “There is not much connection through asynchronous courses,” and, “I did not have direct contact during the semester.” A lack of rapport appeared to be felt by many of the online students who participated in this study, and these feelings were consistent among asynchronous and synchronous courses.

However, students of asynchronous and synchronous courses also perceived teacher attempts to connect by using LMS (Canvas, Google Classroom, Sakai) and technological tools. Participants in both conditions stated with high regularity that their online instructors did things like make announcements through their LMS, send out class-wide emails, use discussion boards,

have virtual office hours through Zoom. A major theme found in both conditions stated many similar statements all resembling the following, “My instructor attempted to connect via email and posting announcements on Canvas.” This finding and perceived usage of rapport-building indicators was highly consistent among participants of both conditions. However, students observed the effort, but the quality of responses did not suggest these interventions led to the perception of increased levels of rapport.

Despite students noticing the effort from their teachers through LMS announcements or email, when asked if they felt these efforts were effective, a high frequency of responses overwhelming illustrated a lack of rapport perceived by students in both asynchronous and synchronous conditions. More specifically, students said of their asynchronous courses, “While I appreciated the initiative from the instructor, the attempt at connection was not effective,” and, “attempts were non-existent and poor,” due to, “the barrier technology creates, which limited opportunities for follow-up.” These quotes led to the codes of “no rapport” and “effort noticed” emerging from the data and these codes, as well as others, worked alongside each other to uncover the major theme of “no rapport experienced” appearing among the data. This finding illustrates the need for instructors to be more intentional and focused during their rapport-building endeavors because effort does not equal effectiveness.

Students of synchronous courses had similar responses such as, “Not very effective,” “my instructor never personally contacted me,” “the professor would never respond to emails,” and, “they were not that effective because it is hard to connect.” These findings ultimately supported the theme of “no rapport experienced” but speak to another consequence of the lack of rapport during online courses educators should consider. Participants of the study would oftentimes reference their lack of rapport experienced with visible frustration in their responses. This

implies that students notice the effort online instructors make towards connecting with their students, but they also notice when a lack of effort exists. A perceived lack of effort towards connection was associated with negative rapport, which can produce negative outcomes for students and teachers alike. Understanding the differences between observed effort from online teachers and the extent of the influence perceived effort has on the development of rapport should be studied further.

While the findings are consistent among conditions in both qualitative and quantitative portions of this study, and the above-mentioned findings appear to uncover negative experiences of online students, many participants disclosed they appreciated the effort their instructors displayed when trying to connect even though it was unsuccessful towards establishing teacher-student rapport. Many of the participants in both conditions stated they appreciated the reminders via LMS announcements or emails, even when the actions did not lead to perceived teacher-student rapport, these actions still improved the student experience during the course despite not improving the teacher-student relationship. Statements like, “Emailing me catches my attention and reminding me on Canvas were effective,” and their instructors showed a “willingness to connect virtually,” and, “I was very pleased with their commitment.” This finding suggests an awareness of teachers’ rapport-building efforts, which are noticed and appreciated, even if they do not necessarily contribute directly towards the development of quality student-teacher rapport.

The idea of appreciated effort despite its failures around rapport-building is supported when attempting to answer the final research question. RQ10 attempted to explain what indicators of rapport specifically are deemed most important while establishing teacher-student rapport during online instruction by students. Again, no significant differences were found among the different conditions and students mostly felt similar about the rapport-building

indicators displayed by teachers, but the themes found during this process suggest students appreciate the usage of rapport-building indicators from their online teachers. The specific themes participants stated they valued during online courses were, the personalization of the course, teacher clarity, and opportunities to develop social presence.

Personalization of the course as a theme found among the data, which is supported by statements indicating that students appreciate being addressed personally and treated like individuals and want their teachers to develop their course experience to address their personal needs. Students made suggestions for future online teachers attempting to generate rapport which include but are not limited to, “reach out personally,” “give personal reminders,” “take the time to speak with us through email or Zoom,” and, “provide individual, meaningful feedback,” were consistent among conditions. These statements led to various codes being generated like, “tailor to my needs” and “personalized course experience,” which suggest that students want to be treated as unique individuals. Students appear to believe rapport-building efforts can be shown clearly in various ways, such as personalized communication like email and individualized feedback given by their instructors.

Further, it appears that students have an expectation that online courses adjust to their personal wants and needs. For example, in the synchronous condition a participant stated how they did not enjoy having their camera on or participate in course discussion aloud, but still yearned to be included in class discussion. This led to the code of “individualized effort opportunities” being generated. This code, when assessed alongside the codes listed above, work together to uncover the theme of “personalization of the course” being found because there were several similar experiences/recommendations shared by participants, and the quality of those discussions were substantial. Many additional sentiments were shared by participants who also

wanted their teachers to perform different actions and personalize their online courses to address their personal needs as students, further supporting the theme of "personalization of course" being found among the data. This is a noteworthy finding because it showcases the desire for teacher-student connection among students and exposes a significant obstacle towards establishing teacher-student rapport. This obstacle could extend beyond the capabilities of online instructors due to a variety of things, such as limited resources and time limitations. Regardless, students appear to connect the deliberate personalization of an online course as a beneficial means of encouraging the development of teacher-student rapport.

Next, clarity was found to be something students value during online courses. Several participants stated the necessity for clear directions and expectations from their teachers during their online classes. Some went as far as saying things like, "Clear directions is the best way to communicate to the students and make them feel more connected to you and they will probably like you more in turn." That said, most respondents did not generally attach clarity to their relationships with their instructors, but rather set clarity as an expectation for their online courses. For clarity, the responses advocating for clarity during online courses rarely attached this to teachers as a rapport indicator, but rather something they expect from an online course. This is an illuminating finding because teacher clarity has been found to directly inhibit and negatively affect teacher-student rapport (Fitzgerald & Hooker, 2022), and it appears that a lack of clarity in an online course could also negatively impact rapport, as well as the students' experiences participating in online courses. Also, this finding further explains the individual needs and wants of online students, in this case they express their desire for clear directions, which is beneficial for teachers to recognize when developing and facilitating their online courses.

Lastly, students showed an eagerness to showcase their personalities in their online courses by voicing a desire to develop the social presences of everyone involved in the course, teachers included. Much of the input provided by participants of both conditions supported this desire by saying things like, “Give us something to talk about/interact with,” and, “Encourage us to participate and try to get to know everyone.” Participants disclosed their belief that when students and teachers are all seen as people during online courses, it can yield positive results for all parties, which was a major theme found in the qualitative data by both asynchronous and synchronous students.

Student responses indicated an understanding of the limitations associated with online classrooms, and the reality of taking an online course in general, which can directly inhibit people’s ability to connect with others, such as teachers and students. Despite the limitations associated with online classes and the barriers to teacher-student rapport building, online students appear optimistic in the capability to connect with their students and establish rapport despite the obstacles involved. Again, students of asynchronous and synchronous courses appear to observe similar experiences during their online courses, which suggest a lack of significant differences that support the quantitative findings discussed above. Participants also revealed indicators of rapport they have either experienced firsthand or wish they had experienced firsthand that they perceive as effective rapport-building indicators.

In addition to the statistical significance found in teacher responsiveness and humor during asynchronous courses, as well as teacher responsiveness and social presence during synchronous courses, participants disclosed an overwhelming desire for teachers to show they “care for” their students. For example, statements like, “I really appreciate weekly messages that start with positive wishes,” “send out announcements of encouragement,” teachers should show

they care," and "teachers should show they care about me," all worked together to generate similar codes which led to the major theme of care being found. Teachers showing that they care about their students as individuals was a major theme found in both asynchronous and synchronous conditions, which suggests students desire to be treated as individuals and receive social support from their online instructors when applicable. This finding supports the notion that social support is a desired rapport indicator during online instruction, but not widely experienced by students of online education.

Chapter Summary

In summary, the methodology used in this study led to the significant the results and findings discussed in this chapter. More specifically, the survey instruments proved reliable means of acquiring data, which was complimented by the qualitative data analysis. The quantitative tests used to analyze the data accurately included MANOVAs, t-tests, and regressions; whereas the qualitative analysis used a coding process that moved from open coding to axial coding to selective coding. The methods utilized in the current study worked in conjunction with one another to produce trustworthy, valid findings, and the implications of the results produced will be discussed at length in the following chapter.

CHAPTER V: DISCUSSION

This study explored the perception of teacher-student rapport among students participating in online courses. More specifically, asynchronous courses were the focus of the exploration in an effort to improve the experiences of online teachers and students through the development of quality rapport. The perception of students of asynchronous online courses were assessed alongside students of synchronous online courses to better understand the differences between these two types of online course and utilize the theoretically more positive experiences of synchronous students to improve rapport in asynchronous courses. Through this examination this study found that students do not perceive rapport differently during synchronous and asynchronous online courses.

For example, asynchronous students associate teacher responsiveness as most important when considering teacher-student rapport. Further, the combination of teacher responsiveness and humor work in conjunction with one another as a means of developing rapport according to this study's findings. These findings warrant considerations be taken by current and future asynchronous course instructors when developing and facilitating their courses because it can theoretically help establish rapport, which can have a positive effect on student performance, as well as the experiences of student's and teacher alike. This study also determined that synchronous students appreciate teacher responsiveness as well. More specifically, synchronous students appreciate teacher responsiveness alongside social presence. These findings contain implications for online instructors and further support the importance of teacher responsiveness in an online setting. The same can be said for social presence. Many of the participants voiced a desire to be "treated like a human being," or, "viewed as an actual person," during their online courses. These statements are included in the definition of social presence discussed in the

review of literature. So, despite not being found as a significant indicator of rapport in asynchronous courses during the quantitative portion of this study, social presence being found as significant during synchronous courses together with the analyzed qualitative data, social presence is a factor that should not be ignored by asynchronous online instructors.

This study also explains important student expectations during online courses. For example, despite clarity being found to affect teacher-student rapport negatively previously (Fitzgerald & Hooker, 2022), students voiced an overwhelming desire for clear direction and instruction during their online courses during the qualitative exploration of this study. Clarity was not necessarily discussed as an indicator of rapport by students but stated more as an essential component of online courses. Therefore, online instructors should ensure their course materials, assignments, lecture videos, etc., are easily understood by students of online courses because online students are learning at their own pace on their own time (Kornilov et al., 2020). So, while this study was exploring rapport in the context of online learning, significant implications for the future of online courses were also found.

Theoretical Implications

The results on this study can be further explained, and therefore understood, through a thorough discussion of the theoretical lens of social presence utilized in the study, as well as the research previously cited. The literature review discussed individual rapport indicators performed by teachers that can theoretically work together to cultivate student-teacher rapport. However, the results of this study suggest that the use of the indicators do not predict or influence teacher-student rapport in online settings as they can during traditional face-to-face courses. However, indicators of rapport were identified during this exploration that are perceived as effective in generating rapport between teachers and students in online courses.

Also, results suggest that students of online education do not typically perceive rapport to have been establish with their online instructors. Since rapport is defined as a trusting relationship with one another in a classroom setting (Frisby & Buckner, 2017), which has been deemed an essential characteristic of successful and effective teachers (Santana, 2019), it remains essential for online educators to adjust accordingly to the needs of the students and utilize specific indicators of rapport advantageously. For example, asynchronous students perceive teacher-student rapport can be established with a responsive and humorous instructor, whereas synchronous students appreciate a responsive teacher with a social presence. These findings highlight the importance of responsiveness while teaching online courses, but also suggests that different course formats require different approaches. This suggests the definition and application of rapport indicators change depending on the type of classroom they are being applied because they are perceived differently by students in different settings. This may appear obvious, but in theory, rapport indicators should work together towards establishing rapport, but students stated that they do not perceive this happening. Therefore, adjusting the indicators of rapport to be more easily applicable by teachers, which allow students to perceive them more easily has major implications for current and future educators and researchers.

An example illustrating this point is teacher clarity. After being found to decrease teacher-student rapport (Fitzgerald and Hooker, 2022), it was not included as an indicator of rapport in the quantitative portion of this study. However, previously teacher clarity is fully dependent on how course content is presented by the instructor (Titsworth et al., 2015) and is defined as teachers having the ability to present information in a manner that students fully understand, comprehend, and retain (Rodger, et al., 2007). This study found that although this may decrease rapport between students and teachers, during online courses, students define

teacher clarity as a necessity. This finding supports the suggestion that indicators of rapport like clarity, immediacy, humor, and social support, should be revised or tailored to the specific settings they are being performed/observed. More research is needed to fully understand how students perceive the potential differences of rapport indicators performed by teachers across educational settings.

Mediated immediacy is an example of how a foundational teacher behavior, immediacy, can be adjusted to fit a specific setting. In this case, the setting is online computer-mediated-communication where "communicative cues can shape perceptions of psychological closeness between interactants" (O'Sullivan et al., 2004, p. 471). Despite the fact mediated immediacy was not found to be a significant contributor to rapport in online classrooms, it shows how researchers have the ability to tailor certain theories and concepts to be more applicable to specific educational contexts. So, an update or redefinition of rapport-building should be realized to be more applicable for current and future online educators.

For instance, students have deemed social support to be the biggest influence on rapport-building with their teachers when compared to the other indicators discussed above (Fitzgerald & Hooker, 2022), but was not found to predict rapport in either synchronous or asynchronous online classes. However, this study also found that students also desire to be treated like humans by their online instructors. This suggests that social support, as it is currently and generally understood in a face-to-face setting, should be retooled and tailored to be more applicable to online classes. Findings suggest that social support is not currently perceived as a rapport indicator by online students, but they also voice a desire to receive social support when appropriate, therefore teachers and researchers should develop an updated definition and application of this concept to yield the positive results teacher-student rapport can generate

during courses. This suggestion can be argued for all the rapport indicators discussed in this study because the differences in classroom settings are relevant and important to factor into course development, lesson planning, teacher behaviors, and assessment. This is also supported by participants indicating they appreciate a humorous teacher, or a teacher who showcases their personalities and makes their students laugh (Santana, 2019), during asynchronous courses, but not during synchronous courses. Or synchronous students stating importance of social presence, or students viewing their teachers as a "real" person Cunningham, 2015), while asynchronous students did not share a similar viewpoint. This particular finding is unexpected because synchronous students meet with their instructors in real time, but still feel the desire for the online instructors to appear human, whereas asynchronous students do not meet with their instructors in real time and would rather have their instructors make them laugh.

While the necessity to update to foundational rapport-building concepts was found, teacher responsiveness was found to be perceived as a highly important rapport indicator during online education in the context of teacher-student rapport. Teacher responsiveness has already been found to be a quality of a successful motivator (Henry & Thorsen, 2019) and is defined as a way of explaining teachers' ability to appropriately respond to the needs of their students in real time (Lifshin et al., 2019) and the results of this study highlight the importance students attach to this concept, especially during online classes.

In theory, teacher responsiveness should be included in all future explorations related to relationship building in online formats. Specific to education, it cannot be overstated how damaging a failure to appear responsive can be to online educators. Teacher responsiveness is also easily and directly applicable to the online format because teachers can directly and virtually respond to student needs quickly and directly. However, understanding how students and

teachers view responsiveness differently will be helpful for instructors attempting to build rapport with their online students. For example, do students perceive rapport as simply responding to correspondence quickly? If so, teachers and researchers should explore the implications of teacher responsiveness and how it may differ in various settings and classroom contexts and how they can most effectively appear responsive. Again, teacher responsiveness was found to predicted teacher-student rapport significantly during asynchronous online courses, especially when combined with humor. Doing so will further equip educators with the specific skills needed to bond with their students and establish quality rapport with their online students.

Overall and Specific Practical Implications

Considering the findings of the present study, this section will outline best practices for teachers to adopt when developing and facilitating their asynchronous online courses. When assessing the practical implications of this study, many findings can assist current and future online educators in their attempts to establish rapport with their online students. Since online students currently participating in online courses and experiencing feeling isolated, secluded, and unengaged (Dzubinski, 2014), and the effects of teacher-student rapport have been found to predict increased student engagement and produce positive effects on student learning (Frisby & Martin, 2010), it cannot be understated how rapport-building in online settings should be understood and facilitated by teachers.

Previous research suggests asynchronous online instructors should simply include more synchronous components into their classes because face-to-face principles being brought into online classes by instructors benefit student experiences, generate positive learning outcomes, and ultimately improve the connection between students and teachers (Katz, 2018). However, this study found students in asynchronous and synchronous courses share similar experiences.

No significant difference was found among asynchronous and synchronous students during this study in the context of perceived teacher-student rapport. Therefore, instructors simply approaching asynchronous courses with the intention of simply imitating a synchronous class simply because they have experienced success connecting with students during synchronous courses is not recommended. Like Drucker and Fleischhauer (2021), the results of this study lead to a recommendation that asynchronous instructors treat their online courses as more than simply a replication of their face-to-face courses, and instead recognize they require a different set of teaching tools to be implemented successfully. One of the tools which can lead to success for educators would be to develop habits that lead to a quality level of teacher responsiveness.

For example, an obvious way for teachers to be seen as responsive communicators would be to respond to correspondence from their students. As results suggest, some online students did not receive any responses from their online educators, which is not an advisable practice. Some practical recommendations for teachers trying to accomplish this would be to turn on LMS and email notifications on their personal cellphones, providing additional contact information to students, and responding to students in a timely manner. This can eliminate the rapport barrier felt by students and teachers due to the lessening of the distance between both parties.

Another recommendation found through research would be for online instructors to use a "communication-based" approach, which will allow more opportunities for interaction for all students and teachers alike, which will create a favorable level of social presence for those involved (Krause & Goernig, 2021, p. 279). Social presence emphasizes the experience of feeling close or connected to others interpersonally (Wombacher et al., 2016), which was deemed important by students of synchronous courses. While asynchronous students did not define social presence as a predictor of rapport alongside teacher responsiveness in the quantitative portion of

this study, qualitative findings indicate a desire for both asynchronous and synchronous students to be seen as individuals during their online classes, which can be achieved by a developed social presence. Therefore, teachers should incorporate opportunities for their students, as well as themselves, to share personal information and develop a social presence to better connect with others involved in the course interpersonally. This can potentially be achieved through virtual discussions, group projects, video responses, icebreakers, etc. More research is needed to better understand how students and teachers can most effectively establish a social presence during an online class through their institution's LMS.

Another practical implication developed from this study's findings is giving quality, personal, and timely feedback. Arguably, a quick grading turnaround from instructors could be perceived as a timely response to student correspondence. Accompany that with positive, motivational, and personalized feedback that students do not perceive as negative, and the potential for rapport is increased because the instructor is being timely and personalizing the course experience for the individual student. Students can perceive their instructor as defensive or unapproachable when feedback is negative (Katz, 2021), so it is very important that teachers take this into account when developing feedback. Feedback can also be defined as one of the main ways instructors communicate with their students, so feedback, in general, can be used in a way that is more conducive to relationship building in online settings. This may require more time and attention from teachers, but if this strategy assists in the development of quality teacher-student rapport, then the positives will outweigh the negatives because successfully cultivated teacher-student rapport also positively impacts the experiences of educators.

The findings suggest that asynchronous teachers should focus on what is effective and within their control within their respective online settings when attempting to develop and

cultivate rapport with their students. Teachers should do what they can and be efficient with their time. In other words, focus on what students perceive as important, which this study suggests is teacher responsiveness, and a combined used of teacher responsiveness and humor. Asynchronous students appear to want to be engaged, and desire immediate satisfaction from the facilitators of their course. Teachers should focus on these specific actions, which can lead to rapport. More specifically, an asynchronous online instructor could understandably want to showcase their desire to be a socially supportive teacher as a means of developing their teacher-student rapport. Unfortunately, students did not perceive social support as a significant contributing factor towards rapport development. Therefore, this instructor should focus their energy more towards being responsive and keeping their asynchronous students engaged in the course by being humorous. In short, emphasize the areas students deem important to be a more efficient and effective asynchronous instructor.

Lastly, teachers of asynchronous online courses should take the most practical approach when developing and facilitating their online courses. The results of this study show it is essential to clarify course expectations and have clear directions and course materials. Furthermore, a mutual understanding between teachers and students during the online courses is essential. Findings suggest that students do not necessarily perceive rapport developed with their instructors during asynchronous online courses. This lack of perceived rapport may have led to students not viewing teacher-student rapport as a course expectation. This is supported by participants voicing their desire for teacher clarity despite the negative effects it may have towards teacher-student rapport. If the students view their asynchronous classes as a series of tasks they need to complete and do not view their instructor as anything more than an online facilitator, obviously the ability for two human beings to connect with one another is limited.

This potential limited expectation can impede an asynchronous instructor's ability to overcome rapport-building barriers and cultivate quality teacher-student rapport despite their best efforts. Therefore, a recommendation for future asynchronous instructors would be to directly ask their students to communicate their desired expectations of their online instructor. This can be done by asking directly via individual Zoom sessions, or by using LMS tools like online surveys. The key is to allow students to voice their preferences and disclose to their instructor whether teacher-student rapport is important to them or a desired outcome of the course.

Although rapport between students and teachers can lead to so many benefits, if a student states they have no desire to connect with their teacher and simply want to complete the necessary course requirements and receive credit for the course, educators should acknowledge this position and be more efficient with their time and apply it towards connecting with the students who have a genuine interest in developing rapport. This is recommended so teachers are not misplacing their efforts by being most efficient with their time and energy. The findings of this study indicating a need for responsiveness, clarity, and engagement during online courses could arguably suggest the teacher-student relationship is unique and distinct when observed outside a general face-to-face setting. Future researchers and educators should understand these perceived differences through specific interventions to most effectively overcome any stigma surrounding the teacher-student relationship during online education, which hopefully lead to the positive outcomes associated with quality teacher-student rapport-building.

Limitations

While the findings of this study contribute to the field of study and make significant contributions to the literature, like all studies, there are various limitations in need of disclosure. For example, the study did not occur in an active online classroom, in real time, with

experimental intervention. Instead, it asked participants to think back to their most recent online class and instructor. Asking students to recall their experiences can result in misremembering or forgetting the rapport-building indicators their instructors utilized in their courses, which can possibly influence the data generated by this study. Self-reporting is gauging the perception of rapport felt by and remembered by the participants. Experiential manipulations could theoretically overcome this limitation, but despite this potential shortcoming, the study yielded reliable data and valid findings.

Further, the study did not ask participants to disclose when they experienced their most recent online course, or what the exact course was. It stands to reason participants may have been referring to online courses they were forced to take during the COVID-19 pandemic. This could limit this study because educators were not guaranteed time and resources to fully cultivate their courses during this time. These online courses during the pandemic may not be an accurate reflection of the effectiveness of the online educators being evaluated by participants in the study. In fairness, the school shutdowns caused by the pandemic happened years ago and since that said time, these instructors could have theoretically improved their teacher-student rapport-building strategies in their current online courses through professional development and experience. Regardless, students were reporting their experiences, and those experiences are valid.

Additionally, the study was posted to a research board used by the department of communication, which resulted in students currently taking communication courses participating in the study. Since this study did not ask participants to disclose the courses they were referring to during their recall, it stands to reason participants were self-reporting their experiences taking online communication courses, which can result in findings being focusing on one area of higher

education instead of a wide array of rapport indicators across disciplines. Luckily, the study's findings are directly applicable to a variety of educators because the focus of the study is primarily on online teacher rapport indicators rather than subject matter.

Similarly, the current study is unaware of the specific course the students are recalling. The participants could potentially be referring back to online courses they experienced during the COVID-19 pandemic. As discussed previously, the COVID-19 pandemic resulted in mixed experiences for all involved due to a variety of reasons. Educators being forced to transition online without adequate time or training could certainly result in shortcomings associated with their courses. Since this moment in history was complicated, unprecedented, and unique, participants could have had experiences during this time that do not reflect the norm of online education, which could have an impact on the results of this study. These courses could also include high school courses, which would interfere with the current study's focus on online courses occurring in higher education institutions.

Next, limitations also occurred in the study's design. More specifically, the participants were limited to one higher education institution, which can negatively affect the generalizability of the findings. One could argue that the study uncovered the findings related to online, rapport-building teacher strategies exclusive to this specific institution. Moreover, the majority of participants identified as White/Caucasian and female. One could argue that male students, for example, may perceive rapport differently and this study did not account for these types of differences specifically.

Lastly, while the quantitative scales utilized were adjusted to pertain directly to online courses, some of the scales are arguably more relevant when assessing face-to-face courses. The surveys used were developed using a face-to-face classroom setting rather than an online setting,

which has the potential to confuse participants and skew data. Specifically, the homophily scale used could, in theory, be further developed to assess the perceived similarity more accurately between teachers and students in an online classroom setting. While this limitation has the potential to skew data, reliabilities of the scales all yielded at least an acceptable reliability, with most scales yielding a very good level of reliability or better.

Directions for Future Research

Future studies exploring classroom rapport should focus on studying the implementation of rapport-building indicators executed by teachers through specific intervention and gauge the changes in student perception following those interventions. Online instructors and researchers should construct specific interventions in their courses that address the significant rapport-building indicators students perceive as valuable and find whether those actions are possible and/or successful in building rapport during asynchronous and synchronous online courses. This suggestion can be approached in a variety of ways and in many different areas of an online course. Researchers can alter their course development processes and apply the findings of this study to better understand the process of rapport building in an online setting through teaching videos, communication strategies, assessment, and so on. In other words, future research should focus on and measure the specific rapport-building interventions educators can include in their online courses in real time in an active classroom and measure the effectiveness of those interventions in real time.

Future research should also explore the idea of care given to students from online teachers. Components of the qualitative research suggests students view their instructors as caregivers and expect to be cared for throughout the course. Investigating the extent of care and

how it compares to the concept of rapport. Understanding the distinction between these concepts and how these affect the teacher-student relationship should be considered.

Similarly, while the current study explored the successful application of rapport indicators, exploring the effort teachers expend towards establishing rapport, even when unsuccessful, should be fully understood. Observing the distinction between rapport indicators applied successfully and simply making the effort can lead to a better understanding of how far effort goes in the eyes of students. Simply put, seeing how far perceived effort from instructors towards developing the relationship with their students go towards enhancing the student experience can be beneficial for current and future educators. This future direction is suggested because certain qualitative data generated by this study suggests that students notice effort from their instructors and appreciate the intention, which could lead to various positive outcomes for students. Again, understanding how students value rapport-building effort from their teachers could provide educators with more motivation to address rapport in their classes, even if they lack the skills or confidence to successfully apply the indicators highlighted in this study.

Further, future research should conduct longitudinal studies in an active classroom to track the effectiveness and long-lasting effects of rapport-building instructor indicators. This strategy would provide a more comprehensive understanding of teacher-student rapport building in an online classroom setting. This approach would also eliminate the limitation of having participants recall their online experiences by asking them to evaluate their current, active experiences in their online class. Researchers could also apply this strategy when focusing on individual rapport-building indicators, which could assist in developing a guide for the specific rapport indicators teachers could use when attempting to foster teacher-student rapport. If certain strategies are effective, knowing these specific tactics can give current and future teachers more

tools to apply when overcoming the rapport barriers present in online classrooms. It would be beneficial to know what students perceive as effective towards rapport-building in real time, so essential and timely changes can be made. If a longitudinal study occurred in a specific classroom, student perception of rapport could also be viewed alongside student performance, which can provide a deeper understanding of the effects of rapport on the student classroom experience, as well as their academic performance.

Future research should also study a more diverse sample to deepen the findings of this study. Understanding how certain groups majoring in varied disciplines can provide a greater understanding of the differences potentially affecting teacher-student rapport in online classrooms. For example, a non-traditional student in their 40s taking an online course at a community college would theoretically react differently to a rapport-building teacher indicators than an 18-year-old freshman at a four-year higher education institution. Understanding these potential differences in student perception of teacher indicators will further equip current and future educators to overcome rapport-building barriers when and where they occur.

Teachers' perceptions of rapport should also be investigated. Teachers may have differing opinions towards how they are applying rapport-building indicators than their students. Gauging the individual efforts from educators alongside student perceptions could provide an understanding of a potential disconnect occurring between teachers and students. These disconnects can present educators with potential barriers to rapport, and understanding those barriers is essential when attempting to overcome them. Therefore, future research should evaluate and explore the current rapport-building strategies actively being used by current online instructors to see how those findings operate alongside the students' perceptions of their instructors' rapport-building efforts.

Further study should also include how students are contributing towards rapport-building in online classrooms. To successfully establish rapport, two parties need to connect with one another. Therefore, if students are not contributing towards developing their relationships with their instructors in online settings, then is rapport-building even possible? Regardless of what teachers may or may not be doing, the input and effort of the students cannot be discounted. So, future research should investigate the specific student actions that develop or inhibit teacher-student rapport in online settings.

Face-to-face classrooms and how rapport influences those settings should also be explored further too. While the focus of this study examined on asynchronous and synchronous online classrooms, students and teachers in traditional face-to-face classrooms can also experience the benefits of teacher-student rapport, which suggests a need for in-person teachers to adjust their indicators as needed to benefit their students. So, future research should replicate the study design used during this study while focusing on face-to-face classrooms settings, or conduct a longitudinal study, preferably investigating a diverse student population, in a variety of face-to-face classrooms to see how perceptions of effective rapport-building differ across various types of classroom settings.

Future research could also include a clearer investigation into understanding the specifics of the online classes that participants are referencing. For example, including questions specific to the types of courses students took, how much effort they perceive to have applied to these courses, and what grade they earned could help explain more of their experiences. Addressing these questions could help explain why participants feel the way they do towards their online courses and instructors. An example illustrating how these considerations may affect the data gathered is if a student received a failing grade in their online class. Then, they participate in a

study and have negative opinions related to their online course experience and online teacher. Another example can be explained by participants referring to online courses specific to general education or major/minor requirements. Understanding the how a poor grade received or whether the course is related to the students' area of interest affects their course experiences, as well as their perception of their teachers would be beneficial.

Another beneficial route for future research to take would be to include a more deliberate investigation into the specifics of certain rapport indicators. For example, exploring lines of research addressing intercultural factors related to homophily or how students define clarity would be provide valuable insight for current and future educators. The current study addresses homophily as an indicator of rapport, and attempting to understand the impact things like representation, linguistic biases, and perceived cultural similarities/dissimilarities have on rapport-building is an important consideration to make in the future.

Given previous findings regarding teacher clarity as a negative indicator of rapport in Fitzgerald and Hooker's (2022) study, more is needed to uncover the perception of teacher clarity across classroom formats and settings. Are students defining clarity as teachers providing adequate directions and instructions to assignments, or is there something else students relate to clarity that shapes their definition? More research is needed to understand how concepts such as strategic ambiguity affect rapport. Attempting to answer these questions but exploring how clarity, and potential barriers to clarity like strategic ambiguity, can influence a teacher's ability to foster rapport would be an advantageous direction for future research because it would provide a wider scope of understanding of rapport and rapport-building indicators in an online setting.

Chapter Summary

Asynchronous online instructors should accept the critical takeaways from the data represented in this study. If teacher-student rapport is the goal of online instructors, which this study argues it should be, then teacher responsiveness needs to be a primary teaching focus. To extend the effectiveness of this teaching strategy and bolstering the use of this indicator of rapport, teachers should include humor in their courses to keep the students engaged and showcase their personality through sense of humor. Doing so will be useful for instructors when developing rapport with their students according to the findings of this study. Rapport remains an important concept in the field of education, and specifically online education, even though students do not appear to have perceived experience establishing rapport with their online instructors. Therefore, teachers of asynchronous courses should be aware of the current feelings of online students in the context of rapport and do their best to overcome the relational barriers associated with online education. In doing so, students of asynchronous courses will receive the benefits associated with student-teacher rapport, such as improved course experience and increased performance.

REFERENCES

Abdelmalak, M., & Parra, J. (2016). Expanding learning opportunities for graduate students with HyFlex course design. *International Journal of Online Pedagogy and Course Design (IJOPCD), 6*(4), 19–37.

Al-Arimi, A. M. A. K. (2014). Distance learning. *Procedia-Social and Behavioral Sciences, 152*(1), 82-88. doi: 10.1016/j.sbspro.2014.09.159

Alivo, R., F. Cerbito, A., & A. Formaran, M. J. (2022). Perceived barriers in the sudden transition to asynchronous and synchronous online distance learning of Radiologic Technology Student. *International Multidisciplinary Research Journal, 4*(1), 74–81. https://doi.org/10.54476/iimrj10

Alshwiah, A. A. (2021). Barriers to online learning: Adjusting to the 'new normal' in the time of COVID-19. *Turkish Online Journal of Distance Education, 22*(4), 212–228. https://doi.org/10.17718/tojde.1002858

Apuke, O. D. (2017). Quantitative research methods: A synopsis approach. *Kuwait Chapter of Arabian Journal of Business and Management Review, 6*(11), 40-47. doi:10.12816/0040336

Aragon, S. R. (2003). Creating social presence in online environments. *New Directions for Adult and Continuing Education, 100*, 57–68.

Arıkan, G. (2020). Examination of student resistance indicators of rapport towards physical education and sports teachers in the teaching-learning process. *Journal of Educational Issues, 6*(2), 107. https://doi.org/10.5296/jei.v6i2.17432

Atieno, O. P. (2009). An analysis of the strengths and limitations of qualitative and quantitative research paradigms. *Problems of Education in the 21st Century, 13*(1), 12-18. doi:https://scientiasocialis.lt/pec/files/pdf/Atieno_Vol.13.pdf

Bailey, D., Almusharraf, N., & Hatcher, R. (2020). Finding satisfaction: Intrinsic motivation for synchronous and asynchronous communication in the online language learning context. *Education and Information Technologies*, *26*(3), 2563–2583. https://doi.org/10.1007/s10639-020-10369-z

Baloran, E. T., Hernan, J. T., & Taoy, J. S. (2021). Course satisfaction and student engagement in online learning amid covid-19 pandemic: A structural equation model. *Turkish Online Journal of Distance Education*, *22*(4), 1–12. https://doi.org/10.17718/tojde.1002721

Baringer, D. K., & McCroskey, J. C. (2000). Immediacy in the classroom: Student immediacy. *Communication Education, 49*, 178-186.

Benn, G. "Asheru." (2018). Relationships and Rapport: "You don't know me like that!" *Educational Leadership, 76*(1), 20–25.

Benson, T. A., Cohen, A. L., & Buskist, W. (2005). Rapport. Its relation to student attitudes and indicators of rapport towards teachers and classes. *Teaching of Psychology 32*(4), 237–241. https://doi.org/10.1207/s15328023top3204_8

Berends, M. (2006). *Survey Methods in Educational Research.* In J. L. Green, G. Camilli, & P. B. Elmore (Eds.), *Handbook of complementary methods in education research* (p. 623–640). Lawrence Erlbaum Associates Publishers.

Booth-Butterfield, S. & Booth-Butterfield, M. (1991). The communication of humor in everyday life: Individual differences in the use of humorous messages. *Southern Communication Journal, 56*, 205-218. doi:10.1080/10417949109372831

Boulton, M. J., Murphy, D., Lloyd, J., Besling, S., Coote, J., Lewis, J., Walsh, L. (2011). Helping counts: Predicting children's intentions to disclose being bullied to teachers from prior social support experiences. *British Educational Research Journal*, 1–13. doi: 10.1080/01411926.2011.627420

Bower, M. (2012). An ability approach to within-class curriculum differentiation using student response systems and Web 2.0 technologies: Analysing teachers' responsiveness. *Themes in Science & Technology Education*, *5*(2), 5–26. https://doi.org/http://earthlab.uoi.gr/theste

Bozbıyık, M., & Can Daşkın, N. (2022). Peer involvement in dealing with teacher's insufficient response to student initiatives. *Linguistics and Education*, *69*, 101013. https://doi.org/10.1016/j.linged.2022.101013

Brown, M. (2021). What are the main trends in online learning? A helicopter view of possible futures. *Asian Journal of Distance Education*, *16*(2), 118–143. https://doi.org/http://www.asianjde.com/

Cameron, C. (2018). The evolution of a mixed methods study in work-integrated learning. *International Journal of Work-Integrated Learning, 19*(3), 237-247.

Carr, J. M., Santos Rogers, K., & Kanyongo, G. (2021). Improving student and faculty communication: the impact of texting and electronic feedback on building relationships and the perception of care. Research in Learning Technology, 29. doi:10.25304/rlt.v29.2463

Cartee, J. (2021). Strategic empathy in virtual learning and instruction: A contemplative essay about teacher-student rapport during times of crisis. *Journal of Instructional Research, 10,* 12-19.

Chakraborty, M., & Nafukho, F. M. (2015). Strategies for virtual learning environments: Focusing on teaching presence and teaching immediacy. *Internet Learning, 4*(1), 8-37. doi:10.18278/il.4.1.1

Chan, P. H., & Aubrey, S. (2024). Strengthening teacher–student rapport through the practice of guided dialogue journaling. *RELC Journal, 55*(1), 179–189. https://doi.org/10.1177/00336882211044874

Claessens, L. C., Tartwijk, J. V., Want, A. C., Pennings, H. J., Verloop, N., Brok, P. J. & Wubbels, T. (2016). Positive teacher–student relationships go beyond the classroom, problematic ones stay inside. *The Journal of Educational Research, 110*(5), 478-493. doi:10.1080/00220671.2015.1129595

Conklin, S. & Garrett Dikkers, A. (2021). Instructor social presence and connectedness in a quick shift from face-to-face to online instruction. *Online Learning, 25*(1), 135-150. https://doi.org/10.24059/olj.v25i1.2482

Corbin. J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. (4th edition) Thousand Oaks, CA: Sage.

Cowie, B., Harrison, C., & Willis, J. (2018). Supporting teacher responsiveness in assessment for learning through disciplined noticing. *The Curriculum Journal, 29*(4), 464–478. https://doi.org/10.1080/09585176.2018.1481442

Creamer, E. (2018). *An introduction to fully integrated mixed methods research*. Sage.

Cunha, F. R., van Kruistum, C., & van Oers, B. (2016). Teachers and facebook: Using online groups to improve students' communication and engagement in Education. *Communication Teacher, 30*(4), 228–241. https://doi.org/10.1080/17404622.2016.1219039

Cunningham, J. M. (2015). Mechanizing People and Pedagogy: Establishing social presence in the online classroom. *Online Learning, 19*(3). doi:10.24059/olj.v19i3.667

Daniel, E. (2016). The usefulness of qualitative and quantitative approaches and methods in researching problem-solving ability in science education curriculum. *Journal of Education and Practice, 7*(15), 91-100. doi:https://files.eric.ed.gov/fulltext/EJ1103224.pdf

Demir, M., Burton, S., & Dunbar, N. (2018). Professor–student rapport and perceived autonomy support as predictors of course and student outcomes. *Teaching of Psychology, 46*(1), 22–33. doi:10.1177/0098628318816132

Dixson, M. D., Greenwell, M. R., Rogers-Stacy, C., Weister, T. & Lauer, S. (2016). Nonverbal immediacy indicators of rapport and online student engagement: Bringing past instructional research into the present virtual classroom. *Communication Education, 66*(1), 37-53. doi:10.1080/03634523.2016.1209222

Drucker, D. J., & Fleischhauer, K. (2021). Language pedagogy in a pandemic: The shift to online instruction at a German university during the COVID-19 crisis. *Journal of Pedagogical Research, 5*(1), 172–187. https://doi.org/10.33902/jpr.2021167474

Dunlap & Lowenthal, P. R. (2009). Tweeting the night away: Using Twitter to enhance social presence. *Journal of Information Systems Education, 20*(2), 129-135.

Dzubinski, L. (2014). Teaching presence: Co-creating a multi-national online learning community in an asynchronous classroom. *Online Learning, 18*(2). https://doi.org/10.24059/olj.v18i2.412

Elfirdoussi, S., Lachgar, M., Kabaili, H., Rochdi, A., Goujdami, D., & El Firdoussi, L. (2020). Assessing distance learning in higher education during the COVID-19 pandemic. *Education Research International*, *2020*, 1–13. https://doi.org/10.1155/2020/8890633

Ellis, J. B., Abreu-Ellis, C., Moore, A., Aukerman, K., Buttil, M., & Edwards, A. (2017). Developing cultural responsiveness while teaching content standards: Lessons from a Brazilian experience. *American Secondary Education*, *45*(2), 69–84.

Ensign, J., Mays Woods, A., Kulinna, P. H., & McLoughlin, G. (2018). The teaching performance of first-year physical educators. *Physical Education and Sport Pedagogy*, *23*(6), 592–608. https://doi.org/10.1080/17408989.2018.1485140

Fallon, L. M., Veiga, M. B., Susilo, A., & Kilgus, S. P. (2022). Do teachers' perceptions of high cultural responsiveness predict better behavioral outcomes for students? *Behavioral Disorders*, 019874292110672. https://doi.org/10.1177/01987429211067217

Filippou, K. (2020). Identifying thesis supervisors' attitudes: Indications of responsiveness in International Master's Degree Programs. *Innovations in Education and Teaching International*, *57*(3), 274–284. https://doi.org/10.1080/14703297.2019.1621764

Finn, A. N., & Schrodt, P. (2012). Students perceived understanding mediates the effects of teacher clarity and nonverbal immediacy on learner empowerment. *Communication Education, 61*(2), 111-130. doi:10.1080/03634523.2012.656669

Fitzgerald, J., & Hooker, J. (2022). Establishing rapport in higher education classrooms. *Alberta Journal of Educational Research*, *68*(3), 1–15.

Frias, K. M., & Popovich, D. (2019). An experiential approach to teaching mixed methods research. *Journal of Education for Business, 95*(3), 193-205. doi:10.1080/08832323.2019.1627995

Frisby, B. N., Berger, E., Burchett, M., Herovic, E., & Strawser, M. G. (2014). Participation apprehensive students: The influence of face support and instructor–student rapport on classroom participation. *Communication Education*, *63*(2), 105–123. https://doi.org/10.1080/03634523.2014.881516

Frisby, B., & Buckner, M. (2017). Rapport in the instructional context. In *Handbook of Instructional Communication: Rhetorical and Relational Perspectives* (2nd ed., Vol. 1, p. 126-137). New York City, NY: Routledge.

Frisby, B. N., Goodboy, A. K., & Buckner, M. M. (2014). Students' instructional dissent and relationships with faculty members' burnout, commitment, satisfaction, and efficacy. *Communication Education*, *64*(1), 65–82. https://doi.org/10.1080/03634523.2014.978794

Frisby, B. N., & Martin, M. M. (2010). Interpersonal Motives and Supportive Communication. *Communication Research Reports*, *27*(4), 320–329. doi:10.1080/08824096.2010.518913

Frisby, B., & Myers, S. A. (2008). The relationships among perceived instructor rapport, student participation, and student learning outcomes. *Texas Speech Communication Journal*, *33*(1), 27-34. Retrieved from: https://www.etsca.com/journal.asp

Frymier, A. B., Wanzer, M. B., & Wojtaszczyk, A. M. (2008). Assessing students' perceptions of inappropriate and appropriate teacher humor. *Communication Education, 57*(2), 266-288. doi:10.1080/03634520701687183

Furlich, S. A. (2016). Understanding instructor nonverbal immediacy, verbal immediacy, and student motivation at a small liberal arts university. *Journal of the Scholarship of Teaching and Learning*, *16*(3), 11–22. https://doi.org/10.14434/josotl.v16i3.19284

Gardner, R. C. (1985). *Social psychology and second language learning: The role of attitudes and motivation*. Arnold.

Ge, Z., Zhang, A., Li, Y., & Su, J. (2019). Exploring the Impact of Teachers' Verbal Immediacy as an Emotion Mediating Factor on Adult E-learners' Language Learning. *Educational Technology & Society*, *22*(4), 77–89.

Gilchrist-Petty, E. S. (2017). Unraveling complexities in the teacher-student relationship: Perceptions of immediacy, credibility, and learning. *Carolinas Communication Annual, 33*, 345-3361.

Glazier, R. A., & Harris, H. S. (2021). Instructor presence and student Satisfaction across modalities: Survey data on student preferences in online and on-campus courses. *International Review of Research in Open and Distributed Learning*, *22*(3), 77-98. https://doi.org/10.19173/irrodl.v22i3.5546

Granitz, N. A., Koernig, S. K., & Harich, K. R. (2009). Now it's personal. *Journal of Marketing Education*, *31*(1), 52–65. https://doi.org/10.1177/0273475308326408

Grohl, D. (2021). *The storyteller: tales of life and music.* First edition. New York, NY, Dey St., an imprint of William Morrow.

Gunawardena, C.N., & Zittle, R. (1996). An examination of teaching and learning processes in distance education and implications for designing instruction. In M.F. Beaudoin (Ed.), *Distance Education Symposium 3: Instruction (12)*. 51–63. Pennsylvania State University College of Education, American Center for the Study of Distance Education.

Gunes, S., & Alagozlu, N. (2021). Asynchronous distance learning and blended learning in terms of learner autonomy, motivation, and academic success. *The Turkish Online Journal of Educational Technology*, *20*(3), 54–65.

Hagenauer, G., & Volet, S. (2014). Teacher–student relationship at university: an important yet under-researched field, Oxford Review of Education, 40:3, 370-388, doi: 10.1080/03054985.2014.921613

Horton, S. L. (2010). Mentoring at midlife: Views from two sides of a key relationship. *Adult Learning*, *21*(3–4), 40–43. https://doi.org/10.1177/104515951002100306

Huang, M., Hsiao, W., Chang, T. & Hu, M. (2012). Design and implementation of a cooperative learning system for digital content design curriculum: Investigation on learning effectiveness and social presence. *The Turkish Online Journal of Educational Technology, 11*(4), 94-107. doi:https://files.eric.ed.gov/fulltext/EJ989259.pdf

Hudson, P. (2013). Desirable attributes and practices for mentees: Mentor teachers' expectations. *European Journal of Educational Research, 2*(3), 107–119. doi:10.12973/eu-jer.2.3.107

Hunter, W. C., Jasper, A. D., Barnes, K., Davis, L. L., Davis, K., Singleton, J., Barton-Arwood, S., & Scott, T. (2023). Promoting positive teacher-student relationships through creating a plan for classroom management on-boarding. *Multicultural Learning and Teaching*, *18*(1), 79–97. https://doi.org/10.1515/mlt-2020-0012

Ilin, V. (2021). The role of user preferences in engagement with online learning. *E-Learning and Digital Media*, *19*(2), 189–208. https://doi.org/10.1177/20427530211035514

Impey, C. D., Wenger, M. C., & Austin, C. L. (2015). Astronomy for astronomical numbers: A worldwide massive open online class. *The International Review of Research in Open and Distributed Learning*, *16*(1). https://doi.org/10.19173/irrodl.v16i1.1983

Ismail, S. N., Nur, A., Raman, A. & Purnomo, Y. W. (2019). A mixed-method study of the epistemological teacher-beliefs towards educational research in classroom teaching practices. *International Journal of Instruction, 12*(3), 393-406. doi:http://www.e-iji.net/

Kang, M., Choi, H. & Park, S. (2007). Construction and Validation of a Social Presence Scale for Measuring Online Learners' Involvement. In C. Montgomerie & J. Seale (Eds.), *Proceedings of ED-MEDIA 2007--World Conference on Educational Multimedia, Hypermedia & Telecommunications* (pp. 1829-1833). Vancouver, Canada: Association for the Advancement of Computing in Education (AACE). doi: https://www.learntechlib.org/primary/p/25619/

Karatas, K. (2020). The competencies of the culturally responsive teacher: What, why and how? *Inquiry in Education, 12*(2), 1–23. https://doi.org/https://digitalcommons.nl.edu/ie/vol12/iss2/2

Katz, S. (2021). Rapport in the foreign language classroom: From face-to-face to online in times of pandemic. *Íkala*, *26*(3), 485–511. https://doi.org/10.17533/udea.ikala/v26n3a02

Kavanagh, S. S., Metz, M., Hauser, M., Fogo, B., Taylor, M. W., & Carlson, J. (2020). Practicing responsiveness: Using approximations of teaching to develop teachers' responsiveness to students' ideas. *Journal of Teacher Education*, *71*(1), 94–107. https://doi.org/10.1177/0022487119841884

Kaya, V., & Akpinar, B. (2021). Effects of the online learning environment designed with instruction activities model on academic achievements, attitudes, and retention of learning. *International Journal of Education*, *9*(4), 59–77. https://doi.org/10.34293/education.v9i4.4062

Kayalar, M. T. (2021). Perspectives of university students on the efficiency of synchronous and asynchronous learning. *Journal of Educational Leadership and Policy Studies*.

Kehrwald, B. (2008). Understanding social presence in text-based online learning environments. *Distance Education*, *29*(1), 89–106. https://doi.org/10.1080/01587910802004860

Keppel, G. (1991). *Design and analysis: A researcher's handbook*. Prentice Hall.

Keselman, I., & Yakovleva, Y. (2021). Short teacher responses in The EFL classroom: A corpus-approach assessment. *Journal of Language and Education*, *7*(2), 175–188. https://doi.org/10.17323/jle.2021.9767

Knaub, A., Aiken, J. & Ding, L. (2019). Two-phase study examining perspectives and use of quantitative methods in physics education research. *Physical Review Physics Education Research, 15*(2), 1-20. doi: https://doi.org/10.1103/PhysRevPhysEducRes.15.020102

Knoster, K., Goodboy, A., Martin, M., & Thomay, A. (2021). What matters most? A prioritization of medical students' preferences for effective teaching. *Communication Education*, *70*(2), 183–200. https://doi.org/10.1080/03634523.2020.1841254

Kornilov, I. V., Danilov, D. A., Kornilova, A. G., Golikov, A. I., & Gosudarev, I. B. (2020). Different approaches to the development of online learning in higher education. *Propósitos y Representaciones*, *8*(3). https://doi.org/10.20511/pyr2020.v8nspe3.706

Krane, V., Karlsson, B., Ness, O., & Binder, P.-E. (2016). They need to be recognized as a person in everyday life: Teachers' and helpers' experiences of teacher–student relationships in upper Secondary School. *International Journal of Qualitative Studies on Health and Well-Being*, *11*(1), 1–12. https://doi.org/10.3402/qhw.v11.31634

Krause, A., & Goering, E. M. (2021). Like peas in a pod: A strategy for creatively transposing interaction-based classes into an online learning environment. *Journal of Teaching and Learning with Technology*, *10*, 279–293.

Kreijns, K., Xu, K., & Weidlich, J. (2022). Social presence: Conceptualization and measurement. *Educational Psychology Review*, *34*(1), 139–170. https://doi.org/10.1007/s10648-021-09623-8

Kuo, S. (1994). *Verbal Playfulness as a Rapport-Building Strategy in Conversation among Chinese Female Friends*.

Lee, G., & Schallert, D. L. (2008). Meeting in the margins: Effects of the teacher–student relationship on revision processes of EFL College students taking a composition course. *Journal of Second Language Writing*, *17*(3), 165–182. https://doi.org/10.1016/j.jslw.2007.11.002

Lehtimaja, I., & Tainio, L. (2015). Encouraging participation or restraining teasing? teacher responses to uninvited students' answers. *Journal of Applied Linguistics and Professional Practice*, *12*(1), 1–22. https://doi.org/10.1558/jalpp.36883

Lenth, R. V. (2001). Some practical guidelines for effective sample size determination. *The American Statistician, 55*(3), 187–193. https://doi.org/10.1198/000313001317098149

Ley, K., & Gannon-Cook, R. (2012). Marketing a blended university program: An action research case study. In I. Management Association (Ed.), *E-Marketing: Concepts, Methodologies, Tools, and Applications* (pp. 591-608). IGI Global. https://doi.org/10.4018/978-1-4666-1598-4.ch035

Lifshin, U., Kleinerman, I. B., Shaver, P. R., & Mikulincer, M. (2019). Teachers' attachment orientations and children's school adjustment: Evidence from a longitudinal study of first graders. *Journal of Social and Personal Relationships*, *37*(2), 559–580. https://doi.org/10.1177/0265407519874881

Lin, X., & Gao, L. (2020). Students' sense of community and perspectives of taking synchronous and asynchronous online courses. *Asian Journal of Distance Education*, *15*(1), 169–179. https://doi.org/http://www.asianjde.org/

Lind, J., Poppen, M., & Murray, C. (2016). An intervention to promote positive teacher–student relationships and self-determination among adolescents with emotional disturbance. *Career Development and Transition for Exceptional Individuals, 40*(3), 186–191. https://doi.org/10.1177/2165143416683936

Longobardi, C., Ferrigno, S., Gullotta, G., Jungert, T., Thornberg, R., & Marengo, D. (2021). The links between students' relationships with teachers, likeability among peers, and bullying victimization: The intervening role of teacher responsiveness. *European Journal of Psychology of Education, 37*(2), 489–506. https://doi.org/10.1007/s10212-021-00535-3

Lowenthal, P. R. (2010). Social presence. In P. Rogers, G. Berg, J. Boettcher, C. Howard, L. Justice, & K. Schenk (Eds.), *Encyclopedia of distance and online learning* (pp 202-211). Information Science Reference.

Majewska, I., & Zvobgo, V. (2023). Students' satisfaction with quality of synchronous online learning under the COVID 19 pandemic: Perceptions from Liberal Arts and science undergraduates. *Online Learning, 27*(1), 313–335. https://doi.org/10.24059/olj.v27i1.3201

Malecki, C. K., & Demary, M. K. (2001). Measuring perceived social support: Development of the child and adolescent social support scale (CASSS). *Psychology in the Schools, 39*(1), 1–18. doi: 10.1002/pits.10004

Marshall, H., & Kostka, I. (2020). Fostering teaching presence through the synchronous online flipped learning approach. *The Electronic Journal for English as a Second Language, 24*(2), 1–14.

Martin, A. J. & Collie, R. J. (2019). Teacher–student relationships and students' engagement in high school: Does the number of negative and positive relationships with teachers matter? *Journal of Educational Psychology, 111*(5), 861-876. doi:10.1037/edu0000317

Martin, F., Sun, T., Turk, M., & Ritzhaupt, A. (2021). A meta-analysis on the effects of synchronous online learning on cognitive and affective educational outcomes. *The International Review of Research in Open and Distributed Learning*, *22*(3), 205–242. https://doi.org/10.19173/irrodl.v22i3.5263

McCroskey, J. C., Richmond, V. P., & Bennett, V. E. (2006). The relationships of student end-of-class motivation with teacher communication indicators of rapport and instructional outcomes. *Communication Education, 55*(4), 403–414. doi: 10.1080/03634520600702562

McCroskey, J. C., Richmond, V. P., & Daly, J. A. (1975). The development of a measure of perceived homophily in interpersonal communication. *Human Communication Research, 1*, 323-332. doi:10.1037/t13196-000

McDaniels, M., Pfund, C., & Barnicle, K. (2016). Creating dynamic learning communities in synchronous online courses: one approach from the center for the integration of research, teaching and learning (CIRTL). *Online Learning*, *20*(1), 110–129. https://doi.org/10.24059/olj.v20i1.518

Mehrabian, A. (1971). *Silent messages*. Belmont, CA: Wadsworth.

Muller, C., Katz, S., Dance, L. (1999). Investing in teaching and learning: Dynamics of the teacher-student relationship from each actor's perspective. *Urban Education.34*(3), 292-337. doi:10.1177/0042085999343003

Myers, S., & Huebner, A. (2011). The relationship between students' motives to communicate with their instructors and perceived instructor credibility, attractiveness, and homophily. *College Student Journal*, *45*(1), 84–91. Retrieved from https://go.galegroup.com/ps/anonymous?id=GALE|A252632759&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=01463934&p=AONE&sw=w

O'Sullivan, P. B., Hunt, S. K., & Lippert, L. R. (2004). Mediated immediacy. *Journal of Language and Social Psychology, 23*(4), 464-490. doi:10.1177/0261927x04269588

Oregon, E., McCoy, L., & Carmon-Johnson, L. (2018). Case analysis: Exploring the application of using rich media technologies and social presence to decrease attrition in an online graduate program. *Journal of Educators Online, 15*(2). doi:10.9743/jeo.2018.15.2.7

Park, H., & Shea, P. (2020). A ten-year review of online learning research through co-citation analysis. *Online Learning, 24*(2). https://doi.org/10.24059/olj.v24i2.2001

Perry, D., & Steck, A. (2019). Changes in faculty perceptions about online instruction: Comparison of faculty groups from 2002 and 2016. *The Journal of Educators Online, 16(*1). doi:10.9743/jeo.2019.16.2.8

Philips, A. (2020). Empathy in teaching staff across educational settings. *Psychology of Education Review, 44*(2), 89–94.

Phillips, A. (2022). An uneasy, challenging, yet meaningful experience: A reflection on a face-to-face to online synchronous COVID-19 course transition. *Journal of Education for Library and Information Science, 63*(2), 120–125. https://doi.org/10.3138/jelis-2020-0100

Phirangee, K., & Malec, A. (2020). Othering in online learning: an examination of social presence, identity, and sense of community. *Social Presence and Identity in Online Learning, 38*(2) 160-172. doi:10.4324/9780429294235-3

Politis, J., & Politis, D. (2016). The relationship between an online synchronous learning environment and knowledge acquisition skills and traits: The blackboard collaborate experience. *The Electronic Journal of e-Learning*, *14*(3), 196–222. https://doi.org/http://www.ejel.org/

Queirós, A., Faria, D., & Almeida, F. (2017). Strengths and limitations of qualitative and quantitative research methods. *European Journal of Education Studies, 3*(9), 369-387. http://dx.doi.org/10.5281/zenodo.887089

Rahman, M. S. (2016). The advantages and disadvantages of using qualitative and quantitative approaches and methods in language "testing and assessment" research: A literature review. *Journal of Education and Learning, 6*(1), 102-112. doi:10.5539/jel.v6n1p102

Ramirez, A., Dimmick, J., Feaster, J. & Lin, S. (2008). Revisiting Interpersonal Media Competition. *Communication Research, 35*(4), 529-547. doi:10.1177/0093650208315979

Raza, S. A., Khan, K. A. & Rafi, S. M. (2020). Online education & MOOCs: Teacher self-disclosure in online education and a mediating role of social presence. *South Asian Journal of Management Sciences, 14*(1), 142-158. doi:10.21621/sajms.2020141.08

Regan, K. S., Berkeley, S. L., Hughes, M., & Brady, K. K. (2015). Understanding practitioner perceptions of responsiveness to intervention. *Learning Disability Quarterly*, *38*(4), 234–247. https://doi.org/10.1177/0731948715580437

Richards, A. R., & Hemphill, M. A. (2017). A practical guide to collaborative qualitative data analysis. *Journal of Teaching in Physical Education, 37*(2), 225-231. doi:https://doi.org/10.1123/jtpe.2017-0084

Richmond, V. P. (2002). Teacher nonverbal immediacy: Uses and outcomes. In J. L. Chesebro & J. C. McCroskey (Eds.), *Communication for Teachers* (pp. 65-82). Boston, MA: Allyn & Bacon.

Rodger, S., Murray, H. G., & Cummings, A. L. (2007). Effects of teacher clarity and student anxiety on student outcomes. *Teaching in Higher Education, 12*(1), 91–104. doi: 10.1080/13562510601102255

Şahin, M. D. & Öztürk, G. (2019). Mixed method research: Theoretical foundations, designs and its use in educational research. *International Journal of Contemporary Educational Research, 6*(2), 301-310. DOI: https://doi.org/10.33200/ijcer.574002

Saleem, M., Hussain, C., & Ahmad, S. (2017). Identification of Gaps in Service Quality in Higher Education. *Bulletin of Education and Research, 39*(2), 171–182. https://doi.org/http://pu.edu.pk/home/journal/32

Sameena, T. K. (2020). Students' perception on core service quality in higher education institutions in UAE. *Shanlax International Journal of Education*, *8*(2), 43–49. https://doi.org/10.34293/education.v8i2.1877

Sanpanich, N. (2021). Investigating factors affecting students' attitudes toward hybrid learning. *REFLections*, *28*(2), 208–227.

Santana, J. C. (2019). Establishing teacher-student rapport in an English medium instruction class. *Latin American Journal of Content & Language Integrated Learning, 12*(2), 265-291. https://doi.org/10.5294/laclil.2019.12.2.4

Sari, W., & Fakhruddiana, F. (2019). Internal locus of control, social support and academic procrastination among students in completing the thesis. *International Journal of Evaluation and Research in Education*, *8*(2), 363–368. doi: 10.11591/ijere.v8i2.17043

Schaack, D., Le, V., & Stedron, J. (2020). When fulfillment is not enough: Early childhood teacher occupational burnout and turnover intentions from a job demands and resources perspective. *Early Education and Development*, *31*(7), 1011–1030. https://doi.org/10.1080/10409289.2020.1791648

Schonfeld, S. & Mazzola, J. (2013). Strengths and limitations of qualitative approaches to research in occupational health psychology. In. R.R. Sinclair, M. Wang & L. E. Tetrick (Eds.), *Research methods in occupational health psychology* (pp. 268-289). New York: Routledge. doi: https://academicworks.cuny.edu/cgi/viewcontent.cgi?article=1555&context=gc_pubs

Schrum, L., English, M. C. & Galizio, L. M. (2012). Project DAVES: An exploratory study of social presence, e-mentoring, and vocational counseling support in community college courses. *The Internet and Higher Education, 15*(2), 96-101. doi:10.1016/j.iheduc.2011.08.001

Schultz, S. (2022). *Discussion boards in the online classroom: Are they actually influencing instructor mediated immediacy, student motivation, student affective leraning, student connectedness, and online learning climate?* [Master's thesis, Illinois State University]. ProQuest Dissertations and Theses Global.

Severino, L., Petrovich, M., Mercanti-Anthony, S., & Fischer, S. (2021). Using a design thinking approach for an asynchronous learning platform during COVID-19. *IAFOR Journal of Education*, *9*(2), 145–162. https://doi.org/10.22492/ije.9.2.09

Short, J., Williams, E., & Christie, B. (1976). *The social psychology of telecommunications*. London: John Wiley & Sons.

Simsek, I., Kucuk, S., Biber, S., & Can, T. (2021). Online learning satisfaction in higher education amidst the Covid-19 pandemic. *Asian Journal of Distance Education*, *16*(1), 247–261. https://doi.org/http://www.asianjde.com/

Spilt, J. L., Hughes, J. N., Wu, J., & Kwok, O. (2012). Dynamics of teacher-student relationships: stability and change across elementary school and the influence on children's academic success. *Child Development, 83*(4), 1180-1195. doi:10.1111/j.1467-8624.2012.01761.x

Sugino, C. (2021). Student perceptions of a synchronous online cooperative learning course in a Japanese women's university during the COVID-19 pandemic. *Education Sciences*, *11*(5), 231. https://doi.org/10.3390/educsci11050231

Sung, E. & Mayer, R. E. (2012). Five facets of social presence in online distance education. *Computers in Human Behavior, 28*(5), 1738-1747. doi:10.1016/j.chb.2012.04.014

Sybing, R. (2019). Making connections: Student-teacher rapport in higher education classrooms. *Journal of the Scholarship of Teaching and Learning, 19*(5), 18-35. doi:10.14434/josotl.v19i5.26578

Tackie, H. N. (2022). (dis)connected: Establishing social presence and intimacy in teacher–student relationships during emergency remote learning. *AERA Open, 8*(1), 1–14. https://doi.org/10.1177/23328584211069525

Taxer, J. L., Becker-Kurz, B., & Frenzel, A. C. (2018). Do quality teacher–student relationships protect teachers from emotional exhaustion? the mediating role of enjoyment and anger. *Social Psychology of Education*, *22*(1), 209–226. https://doi.org/10.1007/s11218-018-9468-4

Tie, Y. C., Birks, M. & Francis, K. (2019). Grounded theory research: A design framework for novice researchers. *SAGE Open Medicine, 7*(1), 1-8. doi:10.1177/2050312118822927

Titsworth, S., Mazer, J. P., Goodboy, A. K., Bolkan, S., & Myers, S. A. (2015). Two meta-analyses exploring the relationship between teacher clarity and student learning. *Communication Education, 64*(4), 385-418. doi:10.1080/03634523.2015.1041998

Tu, C.-H. (2000). On-line learning migration: From social learning theory to social presence theory in a CMC environment. *Journal of Network and Computer Applications*, *23*(1), 27–37.

Tuncel, G. (2016). Improving the cultural responsiveness of prospective social studies teachers: An action research. *Educational Sciences: Theory and Practice*, *17*(4), 1317–1344. https://doi.org/10.12738/estp.2017.4.0269

Ucar, H., Bozkurt, A., & Zawacki-Richter, O. (2021). Academic procrastination and performance in distance education: A causal-comparative study in an online learning environment. *Turkish Online Journal of Distance Education*, *22*(4), 13–23. https://doi.org/10.17718/tojde.1002726

Uri, T. (2015). The strengths and limitations of using situational analysis grounded theory as research methodology. *Journal of Ethnographic & Qualitative Research, 10*(1), 135-151. doi:https://www.depts.ttu.edu/education/our-people/Faculty/additional_pages/duemer/epsy_5382_class_materials/2019/The_Strengths_and_Limitations_of_Using_SituationalAnalysis_Grounded_Theory_as_Research_Methodology_Uri_2015.pdf

vanOostveen, R., Childs, E., Clarkson, J., & Flynn, K. (2016). Becoming close with others online: Distributed community building in online PBL courses. *College Quarterly, 19*(1), 1–22. https://doi.org/http://www.collegequarterly.ca

Voelker, T., McDowell, W., & Harris, M. (2013). Collaborative preference: The role of homophily, multiplexity, and advantageous network position across small and medium-sized organizations. *Administrative Issues Journal Education Practice and Research*, *3*(2), 1–12. doi: 10.5929/2013.3.2.1

Waldbuesser, C., Houser, M. L., Hosek, A. M., & Hackenburg, L. (2020). Teacher confirmation: The influences of emotional contagion, satisfaction, teaching efficacy, and perceptions of student nonverbal responsiveness. *The Northwest Journal of Communication*, *48*(1), 175–202.

Walker, J. M. T., & Hoover-Dempsey, K. V. (2015). Parental engagement and classroom management. In E. T. Emmer & E. J. Sabornie (Eds.), *Handbook of classroom management* (2nd ed., pp. 459–478). New York: Routledge.

Walther, J. B. & Bazarova, N. N. (2008). Validation and application of electronic propinquity theory to computer-mediated communication in groups. *Communication Research, 35*(5), 622-645. doi:10.1177/0093650208321783

Wei, C.-W., Chen, N.-S., & Kinshuk. (2012). A model for social presence in online classrooms. *Educational Technology Research and Development, 60*(3), 529–545. doi:10.1007/s11423-012-9234-9

West, M. S., & Martin, M. M. (2019). Students' perceptions of instructor appropriateness and humor homophily. *Communication Education, 68*(3), 328–349. doi: 10.1080/03634523.2019.1608368

Wombacher, K. A., Harris, C. J., Buckner, M. M., Frisby, B. & Limperos, A. M. (2016). The effects of computer-mediated communication anxiety on student perceptions of instructor indicators of rapport, perceived learning, and quiz performance. *Communication Education, 66*(3), 299-312. doi:10.1080/03634523.2016.1221511

Zeng, X., & Wang, T. (2021). College Student Satisfaction with Online Learning during COVID-19: A Review and Implications. *International Journal of Multidisciplinary Perspectives in Higher Education*, *6*(1), 182–195.

Zhang, B. (2023). The relationship between teacher-student rapport and EFL learners' engagement in online scaffolding setting. *Journal of Psycholinguistic Research*, *52*(5), 1685–1705. https://doi.org/10.1007/s10936-023-09954-3

Zhang, Y., Li, P., Zhang, Z. S., Zhang, X., & Shi, J. (2022). The relationships of parental responsiveness, teaching responsiveness, and creativity: The mediating role of creative self-efficacy. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.748321

APPENDIX A: SURVEY INSTRUMENTS

Quantitative Survey Instrument

Synchronous Directions: For the following questions, please refer to the last online instructor of the last Synchronous course you last attended.

Synchronous courses occur online with a scheduled meeting time via Zoom, Google Teams, etc.

If understood, please proceed.

Please indicate below the numerical response which best represents your perception regarding the Synchronous online instructor you had most recently to this class. There are no right or wrong answers.

Asynchronous Directions: For the following questions, please refer to the last online instructor of the last Synchronous course you last attended.

Synchronous courses occur online with a scheduled meeting time via Zoom, Google Teams, etc.

If understood, please proceed.

Please indicate below the numerical response which best represents your perception regarding the Asynchronous online instructor you had most recently to this class. There are no right or wrong answers.

Rapport Scale (Frisby & Myers, 2008)

l=strongly agree, 2=agree, 3=neutral, 4=disagree 5=strongly disagree, not applicable

1. In thinking about my relationship with my instructor, I enjoy interacting with them 2. My instructor create(s) a feeling of ‘‘warmth’’ in our relationship.

3. My instructor relates well to me.

4. In thinking about this relationship, I have a harmonious relationship with my instructor.

5. My instructor has/had a good sense of humor.

6. I am comfortable interacting with my instructor.

7. I feel like there is a ‘‘bond’’ between my instructor and myself.

8. I look forward to interacting with my instructor in class.

9. I strongly care about my instructor.

10. My instructor has/had taken a personal interest in me.

11. I have/had a close relationship with my instructor.

Homophily Scale (McCroskey et al., 1975)

My synchronous/asynchronous online teacher…

1. Is like me - 7 6 5 4 3 2 1 - Is unlike me

2. Is different from me - 1 2 3 4 5 6 7 - Is similar to me

3. Thinks like me - 7 6 5 4 3 2 1 - Does not think like me

4. Doesn't behave like me - 1 2 3 4 5 6 7 - Behaves like me

My synchronous/asynchronous online teacher…

1. Has status like mine - 7 6 5 4 3 2 1 - Has status different from mine

2. Is from a different social class - 1 2 3 4 5 6 7 - Is from the same social class

3. Is culturally different - 1 2 3 4 5 6 7 - Is culturally similar

4. Has an economic situation like mine - 7 6 5 4 3 2 1- Does not have an economic situation like mine

Scoring:

Add the numbers you circled for each measure separately.

Scores for each concept must be between 4 and 28.

Humor Orientation Scale (Booth-Butterfield & Booth-Butterfield, 1991)

Please indicate below the numerical response which best represents your perception regarding the asynchronous/synchronous instructor you had most recently to this class. There are no right or wrong answers.

l=strongly agree, 2=agree, 3=neutral, 4=disagree 5=strongly disagree, not applicable

1. My instructor regularly tells jokes and funny stories in class.
2. People usually laugh when my teacher tells jokes or funny stories.
3. My teacher has no memory for jokes or funny stories.
4. My teacher can be funny without having to rehearse a joke.
5. Being funny is a natural communication style of my teacher.
6. My teacher cannot tell a joke well.
7. Students seldom ask my teacher to tell stories.
8. Their students would say my teacher is a funny person.
9. Students don't seem to pay close attention when my teacher tells a joke.
10. Even funny jokes seem flat when my teacher tells them.
11. My teacher can easily remember jokes and stories.
12. People often ask my teacher to tell jokes or stories.
13. Students would not say that my teacher is a funny person.
14. My teacher doesn't tell jokes or stories even when asked to.
15. My teacher tells stories and jokes very well.
16. Of all the people I know, my teacher is one of the funniest.
17. My teacher uses humor to communicate in a variety of situations in class.

Scoring: After administering, recode (reverse score) items 3, 6, 7, 9, 10, 13, 14; then sum.

Measuring Social Support (Malecki & Demary, 2001)

Please indicate below the numerical response which best represents your perception regarding the asynchronous/synchronous instructor you had most recently to this class. There are no right or wrong answers.

l=strongly agree, 2=agree, 3=neutral, 4=disagree 5=strongly disagree, not applicable

My online teacher(s) . . .

1. listens if I'm upset . . .
2. cares about me
3. is fair to me
4. understands me
5. explains things when . . .
6. shows me how to . . .
7. gives good advice
8. helps me when I want to . . .
9. helps me solve problems by . . .
10. praises me when I've tried . . .

Immediacy Scale (Wilson & Locker, 2008)

Please indicate below the numerical response which best represents your perception regarding the asynchronous/synchronous instructor you had most recently to this class. There are no right or wrong answers.

l=strongly agree, 2=agree, 3=neutral, 4=disagree 5=strongly disagree, not applicable

1. My online teacher uses personal examples or talks about personal experiences.

2. My online teacher asks questions or encourages students to participate.

3. My online teacher has discussions based on something student bring up even when it doesn't seem to be part of their lesson plan.

4. My online teacher uses humor in class.

5. My online teacher addresses students by name.

6. My online teacher addresses me by name.

7. My online teacher gets into conversations with individual students outside of my online class.

8. My online teacher has initiated conversations with me outside of our online class.

9. My online teacher refers to class as "our" class or what "we" are doing.

10. My online teacher provides feedback on my individual work through comments on papers, discussions, etc.

11. My online teacher asks students how they felt about an assignment.

12. My online teacher invites students to telephone, video chat, or meet outside of class if they have a question or want to discuss something.

14. My online teacher asks questions to solicit viewpoints or opinions.

15. My online teacher praises students' work, actions, or comments.

16. My online teacher will have discussions about things unrelated to class with individual students or with the class as a whole.

17. My online teacher has invited students to use their first name.

18. My online teacher gestures while lecturing (if applicable).

19. My online teacher uses a monotone/dull voice while lecturing (if applicable).

20. My online teacher converses with the class as a whole, not just a few select students.

21. My online teacher has a tense body position while lecturing (if applicable).

22. My online teacher utilizes movement while lecturing (if applicable).

Social Presence Scale (Kang et al., 2007)

Please indicate below the numerical response which best represents your perception regarding the asynchronous/synchronous online instructor you had most recently to this class. There are no right or wrong answers.

l=strongly agree, 2=agree, 3=neutral, 4=disagree 5=strongly disagree, not applicable

Co-presence

1. I think that my instructor is aware of my presence.

2. I feel like I am learning with my instructor.

3. I am interested in what my instructor is doing.

4. My instructor is interested in what I am doing.

5. The level of mutual interest seems high.

Influence

1. I think I can convey my ideas clearly to my instructor

2. My instructor understands me well.

3. I think I can understand well what my instructor thinks.

4. We accept each other's ideas well.

5. My instructor's ideas affect what I think.

6. We help each other solve difficult problems.

7. We help each other.

Cohesiveness

1. It is pleasant to exchange ideas with my instructor

2. I get quick responses from my instructor.

3. I feel comfortable communicating with my instructor.

4. My ideas help us proceed with class discussion.

5. All online course participants contribute to course effectiveness.

6. I feel close to my instructor.

7. I feel like I am part of a team.

Teacher Responsiveness Scale (Zhang et al., 2022)

Please indicate below the numerical response which best represents your perception regarding the asynchronous/synchronous instructor you had most recently to this class. There are no right or wrong answers.

l=strongly agree, 2=agree, 3=neutral, 4=disagree 5=strongly disagree, not applicable

1. My online teacher talks to me about my daily life beyond class time.
2. My online teacher is interested in my extracurricular activities.
3. My online teacher truly cares about me.
4. My online teacher comforts me when I do not perform well.
5. My online teacher and I discuss things together that are fun.
6. My online teacher spends time just talking to me.
7. My online teacher hardly ever praises me for doing well.

Demographics

1. Choose one or more races that you consider yourself to be?
    - **a.** White or Caucasian
    - **b.** Black or African American
    - **c.** American Indian/Native American or Alaska Native

   - **d.** Asian
   - **e.** Native Hawaiian or Other Pacific Islander
   - **f.** Other
   - **g.** Prefer not to say
2. How do you describe yourself?
   - **a.** Male
   - **b.** Female
   - **c.** Non-binary/third gender
   - **d.** Prefer to self-describe
   - **e.** Prefer not to say
3. Please enter your age below

4. What is your year in school?
   - **a.** Freshman
   - **b.** Sophomore
   - **c.** Junior
   - **d.** Senior
   - **e.** Graduate Student
   - **f.** Graduated
   - **g.** Other

Qualitative Survey Instrument

1. What specifically did your teacher do to connect with you during your online course?
2. What do you wish you teacher did specifically to connect with you during your online course?
3. How did your instructor generate rapport with their students during your online course?
4. What should your instructor have done to establish rapport with their students during your online course?
5. How does feedback on assignments affect rapport with your teacher?
6. What are the best ways teachers can provide feedback to their students in online classes that help foster rapport?

Demographics

7. Choose one or more races that you consider yourself to be?
    a) White or Caucasian
    b) Black or African American
    c) American Indian/Native American or Alaska Native
    d) Asian
    e) Native Hawaiian or Other Pacific Islander
    f) Other
    g) Prefer not to say
8. How do you describe yourself?
    a) Male
    b) Female
    c) Non-binary/third gender
    d) Prefer to self-describe
    e) Prefer not to say
9. Please enter your age below
10. What is your year in school?
    a) Freshman
    b) Sophomore
    c) Junior
    d) Senior
    e) Graduate Student
    f) Graduated
    g) Other