Caring, Teaching, Connecting, Learning: Phenomenological Insights Into the Teacher-Student Relationship in Sonography Education

Abigail Kurtz

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Dedication

This dissertation is dedicated to my parents, the ultimate teachers who I love dearly and am eternally grateful to. I would not be where I am today without their unconditional love, care, and support.

My mom laid the foundation for my love of learning as my kindergarten teacher and continued to show and teach me throughout life what it means to be a good person and to recognize the goodness in others. She was always my biggest supporter and was the most understanding, caring person I have ever known. My sweet, beautiful, and talented mom was taken from her family and this world too soon, but I know she would be proud of me for finishing this journey that we began together.

My dad, with his incredible wisdom and discernment, has shown and taught me the importance of hard work and treating others with respect. My dear ol’ dad, as he affectionately calls himself, is always there to listen, offer sage advice, and help with whatever problem I happen to be facing. In addition to being the best (and smartest) dad in the world, he was also a devoted husband to my mom, for which I am forever grateful. I love you and could not have done this without you, Dad!
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Aside from my amazing parents, there are many others who have supported me throughout this journey. To my dear friends and colleagues, Katie and Connie, to say that your encouragement and support have been instrumental is an understatement. You have helped me in ways I could have never imagined, and I love you both. To my other just as dear friends, Emily and Autumn, thank you for being so understanding all the times I was busy writing and not around over the past few years. I hope you are ready to have your friend back! And to Josh, Andy, and all my friends and family, we are long overdue some fun trips and good times!

To my committee members, I am so appreciative of the time and effort you have dedicated to helping me improve this work. Dr. Nordstrom, where do I begin?!! You inspired my passion for qualitative research and have supported me in so many ways, through your feedforward on my writing to our 1 hour Zoom meetings (i.e., methodological counseling sessions). Thank you for demonstrating care and for helping me become a more thoughtful writer and researcher. Dr. Lasley, you are the epitome of a teacher-scholar. Thank you for encouraging me throughout this journey and for keeping me smiling and laughing when you knew I needed it the most. Dr. Winsor, you have challenged me to think about my research in different ways. Thank you for being a part of this committee and for helping me achieve this goal. And to my advisor and committee chair, Dr. Hsueh, I treasure the conversations we have had over the years. Your unique ways of thinking about teaching and learning have inspired my continued curiosity and openness in the classroom, making me a better teacher and learner. Thank you for
sticking with me through all the setbacks and for helping me reach this incredible milestone!

I am also beyond grateful to my participants. Without your willingness to share your stories with me and your openness during the interviews, this research would not have been possible. I appreciate you trusting me enough to be a part of this study so that together, we can shed light on the importance of caring and supportive teacher-student relationships in sonography education.

Above all, I wholeheartedly acknowledge that I could not have accomplished any of this without the love, hope, comfort, strength, blessings, wisdom, and guidance from God. I owe all of my success to Him!
Abstract
Teacher-student relationships are fundamental to teaching and learning and therefore must be understood, valued, developed, and nurtured. Guided by both hermeneutic phenomenology and relational pedagogy, my primary goal with this study was to achieve in-depth, interpretive understanding of the teacher-student relationship as experienced by sonography students. Through hermeneutic phenomenological interviews with eight recent graduates from a diagnostic medical sonography program, I explored participants’ perceptions of the teacher-student relationship (Research Question 1) and whether and how those relationships provided them with emotional and cognitive support (Research Questions 2 and 3). Hermeneutic phenomenological analysis of the data led to identification of the following interpretive themes: a) stumbling through the darkness, b) shutting down and shutting up, c) surviving and thriving, and d) falling in love with sonography. To bring these thematic findings to life, I combined data from multiple interview transcripts to create two composite narratives, both written from the perspective of a composite character student who is representative of all participants in this study. These composite narratives revealed the relational nature of sonography education, with teachers and students existing in ways that are profoundly connected. Participants thrived and excelled in their learning when they experienced meaningful, positive, caring teacher-student relationships, whereas they experienced obstacles and setbacks to their learning when they did not experience these types of relationships. This study highlights the centrality of educational relations to teaching and learning in sonography education. As the findings indicate, sonography educators can improve the teaching and learning process through a relational pedagogical approach—through a focus on building and
maintaining meaningful, positive, caring teacher-student relationships that support students both emotionally and cognitively. Sonography students need to feel supported in their learning if they are to reach their full potential as competent and caring entry-level sonographers equipped to provide quality care to their patients.

Keywords: teacher-student relationship, sonography education, hermeneutic phenomenology, relational pedagogy, care ethics, patient care, composite narrative, relational ethics, insider research
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Chapter 1: Introduction

Education has always been important to me; I have both a passion for learning and for helping others learn. These qualities have served me well as both a student and a teacher. Like most people, I can recall teachers who I had close relationships with as a student. As I reflect on those relationships, I can see how they positively influenced my excitement about the course content, my self-efficacy, my effort expenditure, and ultimately my learning. Likewise, I can recall teachers who I had less than stellar relationships with; these relational experiences led to frustration, self-doubt, and decreased motivation. For me, educational relations have always mattered.

However, it wasn’t until I became a teacher that I began to appreciate just how important the teacher-student relationship is to the teaching and learning process. Perhaps now that I am entrusted with helping others learn, I pay closer attention to the things that seem to influence the teaching and learning process as a whole. In countless hours spent with students over the past 10 years, I have had the opportunity to form relationships with them, talk with them, and listen to them. Through this dialogue and communion, they have helped me to understand the importance of teachers getting to know their students and showing that they care. I have heard good stories and bad, witnessed joy and frustration, and I approach this research with an acknowledgement of these pre-understandings that have inspired me to study this phenomenon, which is the teacher-student relationship in sonography education.

In this chapter, I provide an overview of sonography education, followed by an overview of teacher-student relationships. I then introduce the theoretical frameworks for this study; these are hermeneutic phenomenology and relational pedagogy. This will lead
into the purpose of my study, a presentation of my research questions, and a discussion of the study’s significance to the field of sonography education and higher education in general. In essence, this chapter introduces both the context and rationale for my dissertation research.

**Sonography Education**

In addition to being a teacher and student, I am also a sonographer. I teach in a sonography program, which allows me to help prepare future sonographers for their careers. Diagnostic medical sonography is a highly specialized health science field, often included in the category of allied health professions. Sonography has been used to image the human body since the mid 20th century. Although physicians were the first to use ultrasound technology to evaluate their patients, nonphysician operators, known then as ultrasound technical specialists and now as diagnostic medical sonographers, entered the field in the early 1970s (Baker, 2005).

The occupation of ultrasound technical specialist was officially recognized in 1973, and as the profession grew and the technology improved, the need for formal training guidelines and requirements became evident. The Department of Allied Medical Professions and Services, which later became known as the Commission on Accreditation of Allied Health Education Programs (CAAHEP), worked from 1974–1979 to develop the Essentials of an Accredited Educational Program for the Diagnostic Medical Sonographer, and the first sonography program was accredited in 1982 (Baker, 2005). Although the profession is still relatively new, there are now nearly 300 CAAHEP-accredited sonography programs in the United States, with that number growing monthly (Joint Review Committee on Education in Diagnostic Medical Sonography, n.d.). The job
outlook for diagnostic medical sonographers is partially responsible for the increase in program offerings; the overall employment for diagnostic medical sonographers in the United States is projected to increase 14% from 2022–2032, much faster than the average for all occupations (Bureau of Labor Statistics, 2023). Paired with the increasing quantity of sonography programs, a focus on quality, grounded in educational research, needs to be at the forefront of sonography education.

The primary goal of sonography programs is to prepare competent entry-level sonographers with the cognitive, psychomotor (i.e., scanning), and affective (i.e., behavioral) skills needed to provide quality patient care. Students and graduates must use critical thinking along with independent, professional, and ethical judgment to safely perform diagnostic sonographic procedures (Commission on Accreditation of Allied Health Education Programs, 2020). Faculty work closely with students to help them develop these skills and learn how to 1) review and integrate pertinent patient history; 2) perform appropriate procedures, modifying the examination as needed based on sonographic findings; 3) record anatomic, pathologic, and/or physiologic data; 4) analyze diagnostic data obtained during the procedure; 5) report findings and analyses to the interpreting physician; 6) demonstrate appropriate communication skills with patients and colleagues; and 7) act in a professional and ethical manner (Commission on Accreditation of Allied Health Education Programs, 2020; Society for Vascular Ultrasound, 2018).

Because of the increased demand for these highly trained professionals and because of their direct impact on patient care, it is imperative that sonography students obtain a high-quality education—one in which they achieve competence in each of the above areas.
The relationships formed between students and faculty contribute to the overall educational experience, and these relationships are considered next.

**Teacher-Student Relationships**

The phenomenon of interest in this study is the teacher-student relationship in sonography education. Education is relational; teachers and students are always in relationship (Bingham & Sidorkin, 2010; Giles, 2011; McConville, 2013; Quinlan, 2016; Sidorkin, 2023). These interpersonal relationships are developed over time and are built on interactions that occur over days, weeks, months, or even years (Dougherty, 2021). Positive teacher-student relationships are fundamental to meaningful teaching and learning, with many scholars calling attention to the centrality of relationships in education (Bingham & Sidorkin, 2010; McConville, 2013; Quinlan, 2016; Sidorkin, 2023). This theoretical work has influenced numerous empirical studies evaluating the impact of the teacher-student relationship in all levels of education, including elementary (Jeffrey et al., 2013), middle school (Engels et al., 2021; Gehlbach et al., 2012; Prewett et al., 2019), high school (Gehlbach et al., 2016; Johnston et al., 2022; Mosley et al., 2021), undergraduate (Anderson et al., 2020; Bell, 2022; Giles, 2011; Giles et al., 2012; Guzzardo et al., 2021; Miller & Mills, 2019; Robinson et al., 2019; Pearce & Down, 2011), and graduate programs (Anderson & Carta-Falsa, 2002; Karpouza & Emvalotis, 2019; Rossiter, 1999). These studies provide overwhelming evidence of the connections between teacher-student relationships and students’ academic outcomes, thus supporting a continued focus on teacher-student relationships, especially in areas such as sonography education where research is currently lacking. In Chapter 2, I explore the current research
on teacher-student relationships in higher education, as this literature links most directly to my study.

**Hermeneutic Phenomenology**

The theory that I have chosen to think through this phenomenon with is hermeneutic phenomenology, which stems from the great philosophical works of Martin Heidegger and Hans-Georg Gadamer (Gadamer, 1975/2013, 1976/2008; Heidegger, 1927/1962). Hermeneutic phenomenology is a philosophical way of understanding the world that we, as humans, are situated in (Dibley et al., 2020). Also known as interpretive phenomenology, it represented a significant shift in thinking from the transcendental, or descriptive, phenomenological philosophy that preceded it. Phenomenology is defined as “letting that which shows itself be seen from itself in the very way in which it shows itself from itself” (Heidegger, 1927/1962, p. 58). Heidegger went on to explain that the thing which shows itself is a phenomenon; thus, phenomenology is the study of phenomena, of seeing the things which show themselves. Building on Heidegger’s work, Gadamer (1975/2013) defined hermeneutics as the art or technique of understanding and interpretation and as “a theory of the real experience that thinking is” (p. xxxiii).

Hermeneutic phenomenology is therefore a way to achieve interpretive understanding of phenomena in the life-world, the world of everyday experience (Gadamer, 1975/2013, 1976/2008). It is through understanding that learning occurs, and there is much to be learned by understanding sonography students’ everyday experiences of phenomena in the classroom, in their life-world.

Because hermeneutic phenomenology provides a framework for understanding human experience, its value in educational research is boundless. Students encounter
various phenomena on a day-to-day basis that undoubtedly impact their learning. By achieving in-depth, interpretive understanding of the teacher-student relationship as experienced by sonography students, my work has led to a broader understanding of this phenomenon and its influence on student learning. The words of previous students have contributed greatly to this understanding, not only through their language but through their shared concern with the subject matter, what Gadamer (1975/2013) considered a helpful hermeneutic precondition. Sonography students care about their relationships with their teachers (Kurtz, 2022); it is therefore important for teachers and everyone with a vested interest in sonography education to learn more about this phenomenon. In order to understand what the relationship with a teacher truly means to a student, it needs to be explored from the student’s perspective (Pranjic, 2021). Hermeneutic phenomenology provides a way for researchers to interpret participants’ understanding and interpretation of their experiences with a phenomenon, which in this study, is the teacher-student relationship in sonography education.

**Relational Pedagogy**

Another theory that I have chosen to think through this phenomenon with is relational pedagogy. People have an innate instinct and desire for communion and positive interpersonal relationships (Baumeister & Leary, 1995; Buber, 1947/2002), and relational pedagogy is built on these instincts and desires. Adams (2018) defined relational pedagogy as “the intentional practice of caring teachers interacting with students to build and sustain positive relationships that cognitively and emotionally support their students throughout their journeys together” (p. 2). Relational pedagogy places the teacher-student relationship at the heart of education, recognizing that learning
happens in and through these relationships (Hinsdale, 2016; Pranjic, 2021). In relational pedagogy, interpersonal relationships are the focus because of their contribution to student growth and development (Pranjic, 2021). Relational pedagogy is rooted in care theory, which is largely attributed to Nel Noddings (Bingham & Sidorkin, 2010; Hinsdale, 2016; O’Brien, 2010). Noddings’s care theory is relationship-centered, recognizing the centrality of caring relations to teaching and learning (Noddings, 2012, 2013). Her work as it connects to relational pedagogy will be further explored in Chapter 2.

Relational pedagogy aligns well with hermeneutic phenomenology. Heidegger and Gadamer, both of whom were educators, acknowledged the relational side of education (Bingham, 2010; Bingham & Sidorkin, 2010; Margonis, 2010; Moran, 2000). Heidegger (1927/1962, 1954/1968), in describing being-with others as a constitutive element of being-in-the-world, recognized the importance of human connections in shaping students’ character and insisted that the relationship between teacher and student must be genuine in order for learning to occur. Gadamer (1975/2004) also wrote about educational relations, asserting that teachers who wish to share their knowledge with students must first earn the trust and respect of their students. It is only then that students will accept their teacher as an expert and acknowledge that there is important insight to be gained from the teacher. Relationships are fundamental to all aspects of life, including education. “To know something about relations, one needs to interpret people’s interpretations of relations” (Sidorkin, 2000, p. 4). Sidorkin went on to suggest that it is impossible to learn about classroom relations without including students in some
dialogue about those relations; this further supports my research decision to speak with previous students about their experiences in relationship with their teachers.

**Purpose of the Study and Research Questions**

In this hermeneutic phenomenological study, I interviewed eight recent graduates from a diagnostic medical sonography program in the southeastern United States to learn about their lived experiences in relations with their teachers while enrolled in the program. Through my interpretive analysis of the data gathered in these phenomenological interviews, I worked to uncover participants’ meanings and understandings of the teacher-student relationship in sonography education. The following research questions were explored:

1. How do sonography students experience the interpersonal relationship with their teacher?
2. What connections do graduates see between their relationships with their teachers and their emotions?
3. What connections do graduates see between their relationships with their teachers and their learning?

**Significance of the Study**

Sonography students spend up to 2 years with their teachers in regular close contact, creating ample opportunities for relationships to develop. They need to experience meaningful, positive, caring teacher-student relationships in which they feel supported in their learning if they are to reach their full potential as competent and caring entry-level sonographers. The sonography education research has largely focused on students’ and sonographers’ experiences in the clinical setting (Burnley & Kumar, 2019;
Mulkey, 2005; Sonaggera, 2004); the use of simulation technology (Evans et al., 2023; Gibbs, 2015; Kloc et al., 2019; Pessin & Tang-Simmons, 2018); course delivery methods (Custer et al., 2022; Wilson & Aagard, 2012); assessment methods (Baker et al., 2011; Curry & Gonzalez-DeJesus, 2010); and accreditation, credentialing, and quality improvement (Sorrentino, 2021; Taylor-Fujikawa & Andrist, 2019). Sonography students’ perspectives of the classroom learning environment have been underexplored in the literature, aside from my recent hermeneutic phenomenological study of students’ emotional experiences while learning sonography (Kurtz, 2022). In this study, sonography students shared their experiences in relationship with their teachers, and participants attributed their motivation to learn, desire to succeed, and tenacity to overcome challenges to positive relationships they had with their teacher (Kurtz, 2022). Unfortunately, that is the only empirical study to-date examining the teacher-student relationship in sonography education.

However, a wealth of research from other fields demonstrates the importance of high-quality teacher-student relationships for student learning. These studies, which will be explored in the following chapter, support the need for additional research into the teacher-student relationship in all areas of higher education, with sonography programs being no exception. By shedding light on the teacher-student relationship in sonography education, my research can help to improve the quality of education that sonography students obtain and in doing so, may improve the quality of care that they provide to their patients.

Such an improvement in quality patient care is of utmost importance given that the diagnostic efficacy of ultrasound is so strongly dependent on the operator (Gornick,
2020; Kremkau, 2022). Joan Baker, a pioneer in the diagnostic medical sonography field, explained this well in an *International Sonography Podcast* hosted by Jaime Fujikawa:

In ultrasound, you have to be able to read the image that you just made in order to make the next image. That is not true in any of the other modalities. You produce a set of films from a protocol, and somebody else decides whether they are diagnostic or not, and that is the physician. But in our field, that decision is made by the operator. (Fujikawa, 2017, 25:11)

This highlights the need for sonographers to be highly educated, as a lack of education can lead to misdiagnoses and potential harm to patients (Hedrick, 2013). To meet this need for highly educated sonographers, sonography educators must consider ways to improve the teaching and learning process, one of which is through a focus on building and maintaining positive relationships with students. This study was designed to bring awareness, understanding, and clarity to this all-important relational aspect of teaching and learning in sonography education.

**Overview of Subsequent Chapters**

In the following chapter, I present the theories and literature that have informed this research study. Chapter 2 begins with an exploration of hermeneutic phenomenology, followed by an exploration of relational pedagogy, drawing on its roots in care ethics. I then review the existing research on teacher-student relationships, focusing on the teacher-student relationship in higher education. Through this analysis, I illustrate a gap in the literature for sonography education, further emphasizing the need for this study. In Chapter 3, specifics of the study design are presented. After exploring hermeneutic phenomenology as the methodology guiding this study, I discuss the ethical
considerations for my study and describe the methods used to collect and analyze my data. Chapter 4 includes a presentation of my data through the interpretive lenses of hermeneutic phenomenology and relational pedagogy. In Chapter 5, I review the research findings, reiterate the significance of the study, and discuss the implications of the study for sonography education. I invite the reader to join me in this phenomenological exploration of the teacher-student relationship as understood through the lived experiences of sonography students.
Chapter 2: Theory and Literature

In this chapter, I explore the theories and literature that have guided my study. I begin by discussing hermeneutic phenomenology, the macro-level theory informing my study. This will lead into a discussion of relational pedagogy, the mid-level theory informing my study. Through my description and interpretation of these theories, I show how they are relevant to and supportive of my study’s purpose and research questions. I then review the literature and discuss current research in light of understanding the phenomenon of interest in this study: the teacher-student relationship in sonography education.

Hermeneutic Phenomenology

Phenomenology is a compound of the Greek words *phēnomenon* and *logos*. A *phenomenon* is that which shows itself from itself, and *logos* is letting something be seen; phenomenology is therefore defined as “letting that which shows itself be seen from itself in the very way in which it shows itself from itself” (Heidegger, 1927/1962, p. 58). To Heidegger, a phenomenon signified a significant way in which something could be encountered. That is, phenomena are encountered, or experienced, in the distinctive way in which they show themselves. Humans experience phenomena in unique ways, and looking closely at these lived experiences with a phenomenon can lead to a deeper understanding of the phenomenon itself.

Edmund Husserl, known as the father of phenomenology, developed phenomenology in the early 20th century as a way to elevate philosophy to the status of a rigorous science, and his work has had lasting effects on epistemology and scholarly research (Gadamer, 1976/2008). Martin Heidegger, once a student of Husserl, moved
away from Husserl’s focus on securing knowledge to one of understanding and interpreting being (Gadamer, 1976/2008; Heidegger, 1927/1962). Heidegger’s (1927/1962) conception of phenomenological description lies in interpretation; to describe a phenomenon, to let it be seen or to bring it to light, one must first understand and interpret it. This was the crux of Heidegger’s departure from Husserl’s transcendental, or descriptive, phenomenology. Heidegger wanted to understand the meaning of being, of what it meant for something or someone to be. And in his quest for an understanding of being, he developed a hermeneutic, or interpretive, phenomenology that can be used to understand not only the being of things, but also the world of human experience, of living in a world of everyday situations and meaningful relationships (Escudero, 2021).

Another key player in hermeneutic phenomenology is Hans-Georg Gadamer, once a student of Heidegger and a strong proponent of his work. Gadamer insisted that Heidegger’s hermeneutic phenomenology totally transformed the intellectual climate of the time, so much so that “nothing today is thinkable without it” (Gadamer, 1976/2008, p. 139). However, Gadamer’s philosophical hermeneutics extended Heidegger’s work, contributing greatly to the current understanding and practice of hermeneutic phenomenology. Hermeneutics is traditionally defined as the art or technique of understanding and interpretation; but according to Gadamer (1975/2013), the purpose of hermeneutics “is not to develop a procedure of understanding, but to clarify the conditions in which understanding takes place” (p. 306). Elsewhere, he described hermeneutics as “a theory of the real experience that thinking is” (Gadamer, 1975/2013, p. xxxiii). By demonstrating that understanding and interpretation pervade all human
relations to the world and those within it, Gadamer popularized hermeneutics and made it central to the practice of philosophy itself (Moran, 2000). The main tenets of hermeneutic phenomenology that have guided my work are being and understanding; both of these concepts will now be explored in greater depth.

**Being**

Ontology is the study of being. In his magnum opus, *Being and Time*, Heidegger (1927/1962) defined being as that which determines entities as entities, in terms of which they are understood. In other words, being is that which makes something what it is or someone who they are. Being, according to Heidegger, was the exclusive and only topic of philosophy (Slaby, 2021). Heidegger’s work thus brought the ontological turn to phenomenology. Heidegger (1927/1962) contended that being finds its meaning in temporality; it is a historiological interpretation. Therefore, being cannot be understood without taking time into consideration, without considering how a person’s prior experiences have influenced their being-in-the-world. Gadamer (1975/2013) also wrote about the temporality of being, explaining that being is to be determined from within the horizon of time and that being’s temporal determinateness is ontologically definitive of its subjectivity; one’s present being is determined by their subjective past. This concept will be revisited in the following section on understanding.

Closely related to being is being-here, what Heidegger referred to as Dasein. Dasein is a German word that is translated in English as existence, being-here, or being-there. But Heidegger used the term to refer to an expression of an entity’s being, the kind of being that belongs to humans, or any person who has such being and is thus an entity himself—a human being (Rouse, 2021). Heidegger, in opposition to Husserl, saw Dasein
as directly engaging in the world rather than merely reflecting on the world; he was concerned more with how humans experience phenomena, not just the essential nature of the phenomena (Gadamer, 1976/2008).

Another closely related ontological term is being-in-the-world, what Heidegger (1927/1962) considered the basic state of Dasein. In other words, humans do not just exist—they exist in an enironing world. The being-here of Dasein, or human existence, is being-in-the-world; it is “knowing the world” (Heidegger, 1927/1962, p. 86). This being-in or knowing the world means that humans are immersed in the world, not in a spatial sense but in an involved sense, like being “in” business or “in” love (McManus, 2021). Furthermore, humans are not alone in the world. They share a common world with others, and it is this togetherness or human social interrelatedness that Heidegger (1927/1962) referred to as being-with. “Because Dasein’s Being is Being-with, its understanding of Being already implies the understanding of Others” (Heidegger, 1927/1962, p. 161). When humans exist with others, they can begin to understand them. For Heidegger, it was through being-in-the-world that phenomena are brought into being (Vagle, 2018). In other words, humans can understand phenomena, the things which show themselves, when they immerse themselves in the world and those within it. A phenomenon is an experience of being-in-the-world.

Each of these concepts—being, being-here, being-in-the-world, and being-with—is important to my study. In attempting to understand the experiences of my participants, I have existed with them and immersed myself in their world throughout the study. In order to bring the teacher-student relationship to light, I have considered how their prior experiences have influenced their being-in-the-world and being-with others and how my
prior experiences have influenced my being-in-the-world and being-with others. Since humans exist in a situated, contextual world, the environment and those within it likely play an instrumental part in the experiencing of phenomena; I have therefore considered how the learning environment and interactions with their teachers may have influenced their experience with the phenomenon. All of this has helped me to uncover graduates’ meanings and understandings of the teacher-student relationship in sonography education, which is the phenomenon I am aiming to understand. I will now explore another central tenet of hermeneutic phenomenology that is of great relevance to this study: understanding.

**Understanding**

Heidegger’s description of philosophy “as a universal phenomenological ontology which takes its departure from the hermeneutic of Dasein” (Gadamer, 1975/2013, p. 62) indicates the central, ontological role that understanding and interpretation played in his thinking. His work revealed the ontological significance of understanding: that all interpretation occurs on the basis of Dasein’s temporality, that is, through a pre-reflective understanding of being related to the interpreter’s past, present, and future (Gadamer, 1976/2008). Thus, understanding occurs through historical understanding; it is a “historically effected event” (Gadamer, 1976/2008, p. 310). This characteristic of understanding is referred to as its historicity and is key to hermeneutic phenomenology. People bring their past experiences with them to every present experience, and these prior experiences help shape their present understanding (Gadamer, 1975/2013).

Gadamer (1975/2013) described understanding as a fusion of horizons, with a horizon being a view of a person who is trying to understand. Important to the present
discussion, the horizon of the present cannot be formed without that of the past. One’s past horizons include what Gadamer (1975/2013) referred to as prejudices, which are judgments made “before all the elements that determine a situation have been finally examined” (p. 283). Humans are not free of prejudices; these prejudices are part of the historical mode of being (Gadamer, 1975/2013). Real understanding requires us to “regain the concepts of a historical past in such a way that they also include our own comprehension of them” (Gadamer, 1975/2013, p. 382). As such, understanding does not require neutrality or the “extinction of one’s self” (Gadamer, 1975/2013, p. 282). But it does require an awareness and understanding of one’s prejudices—one’s foreconceptions and fore-meanings—along with an openness to what one is trying to understand (Gadamer, 1975/2013).

The historicity of understanding and its conception as a fusion of past and present horizons help explain hermeneutic phenomenology’s rejection of the transcendental reduction, or bracketing of the outside world. Husserl insisted that one’s thoughts, concepts of reality, and worldviews should be suspended, or bracketed, while studying a phenomenon in order to minimize the influence of past experiences, preconceptions, and biases (Gadamer, 1976/2008; Heidegger, 1927/1962; Savin-Baden & Major, 2013). Neither Heidegger nor Gadamer supported the idea of bracketing; they did not think it was necessary or possible to suspend one’s beliefs while truly engaging in thinking and being-in-the-world (Braver, 2021; Gadamer, 1976/2008; Heidegger, 1927/1962). While reflecting on Husserl’s problematic use of the transcendental reduction, Gadamer (1976/2008) pointed out the “unsuspendably specific character of the pregiven horizons of the life-world” (p. 192). Due to the impossibility of truly suspending all past horizons
and beliefs, attempting to bracket one’s thoughts actually makes way for “uncontrolled prejudices” (Gadamer, 1976/2008, p. 189) to slip in and influence one’s understanding. Furthermore, one’s prior understandings and viewpoints equip them to ask questions and better understand experience (Gadamer, 1975/2013; Heidegger, 1927/1962). Recognizing and embracing how one’s past horizons and prejudices inform their present horizon and understanding is therefore a key aspect of hermeneutic phenomenology.

Understanding occurs in and through interpretation, and like understanding, interpretation is not a “presuppositionless apprehending” (Heidegger, 1927/1962, p. 191). One’s presuppositions, or pre-understandings, affect their interpretation; every interpretation is grounded in something one sees and grasps in advance, what Heidegger referred to as fore-sight and fore-conception. According to Gadamer (1975/2013), “interpretation begins with fore-conceptions that are replaced by more suitable ones. This constant process of new projection constitutes the movement of understanding and interpretation” (p. 280). These fore-conceptions, or prejudices, are not bad in and of themselves; they are a necessary component of the hermeneutic process.

The constant process of movement between understanding and interpretation leads into a discussion of the hermeneutic circle, which was founded on Dasein’s ontological and temporal relation to being (Farin, 2021). Heidegger’s version of the circle involves the connections between understanding and its unfolding in the interpretive process, while Gadamer’s version involves the connections between the whole and the parts of what one is trying to understand. Both versions of the circle involve a to-and-fro motion—a movement back and forth between understanding and interpretation, for Heidegger, and between parts and the whole, for Gadamer (Grondin, 2021). One’s
willingness to move back and forth, to engage with the hermeneutic circle in search of understanding, is based on an anticipation of meaning. Meaning is that which can be understood; to understand is to share in a common meaning (Gadamer, 1975/2013; Heidegger, 1927/1962). The anticipation of meaning becomes actual understanding when it becomes clear how the parts and the whole exist together as one, with parts and whole informing one another (Gadamer, 1975/2013). Thus, the hermeneutic circle is a “circle of understanding” (Gadamer, 1975/2013, p. 305).

In addition to a willingness to embrace the hermeneutic circle, a person seeking to understand something must also have some sort of bond to the subject matter—a familiarity, or interest. A desire to understand, along with a familiarity with the world, are pre-conditions for interpretation (Heidegger, 1927/1962). There must also be something that they do not yet understand—a strangeness, or something they are curious about. Hermeneutics is based on this “polarity of familiarity and strangeness” (Gadamer, 1975/2013, p. 306). Understanding and questioning are also closely related. Questioning is a “testing of possibilities” (Gadamer, 1975/2013, p. 383) that is both a part of thinking and a precursor to understanding. People ask questions about what they are trying to understand, and they have to start from some level of understanding or familiarity in order to know what questions to ask.

The final concept in this discussion of understanding in hermeneutic phenomenology is language. Both Heidegger (1927/1962) and Gadamer (1976/2008) viewed language and understanding as inseparable structural aspects of humans being-in-the-world. Language is the medium in which understanding occurs; being can only be understood through language (Gadamer, 1975/2013). People use language as a mode of
interpreting the world, often in conversation with others. Through conversation, people can come to an understanding; they can share in a common meaning (Gadamer, 1975/2013, 1976/2008). “Reaching an understanding in conversation presupposes that both partners are ready for it and are trying to recognize the full value of what is alien and opposed to them” (Gadamer, 1975/2013, p. 405). This line of thinking builds on the earlier discussion of the importance of curiosity and openness in understanding. In addition, when two people come together in conversation, their vantage points (i.e., their horizons) can fuse together, resulting in a broader and more complex understanding than either person would have had on their own (Spence, 2017; Vandermause & Fleming, 2011).

The historicity of understanding, interpretation, the hermeneutic circle, a desire to understand, and language have all played important roles in this study. I have looked at the thinking of participants in the context of my own understanding, revisiting my understanding of their thinking throughout the interpretive process. I have engaged with the hermeneutic circle to understand how participants experience the teacher-student relationship in sonography education, attempting to share in a common meaning with participants. I have reflexively considered my own presuppositions and prejudices and remained open to how the phenomenon showed itself. Because of my strong bond to the subject matter, as a sonography educator interested in improving sonography education, I have remained committed to doing the difficult work of bringing meaning and understanding to sonography students’ experiences in relationship with their teachers. Finally, language has impacted all components of the research process, from the initial crafting of research and interview questions, to the dialogue achieved in
phenomenological interviews, to data analysis and interpretation, all the way to presenting my findings in a way that readers can understand.

The ways of thinking about being and understanding described above are key to hermeneutic phenomenology’s interpretive nature, its purpose, and its methodology of the same name. Hermeneutic phenomenology aligns perfectly with my goal to understand what it means for sonography students to be-in-relation with their teachers; it has served as the overarching guide in my attempt to bring meaning and understanding to this phenomenon. Another theory that has guided me in this study is relational pedagogy; it is the mid-level theory I have chosen to think through the phenomenon with. Relational pedagogy, its relevance to my study, and its alignment with hermeneutic phenomenology will now be examined.

**Relational Pedagogy**

Relational pedagogy is a way of teaching that places emphasis on the connections between teachers and students. Teaching is seen as a way of being-in-relation with students, and this relationship is the foundation for great teaching and learning (Aspelin, 2021; Noddings, 2003; Sidorkin, 2000). Adams (2018) defined relational pedagogy as “the intentional practice of caring teachers interacting with students to build and sustain positive relationships that cognitively and emotionally support their students throughout their journeys together” (p. 2). The central premise of relational pedagogy is that meaningful teacher-student relationships are the preconditions for effective teaching and learning (Margonis, 2010). “The conventional discourse on teaching includes two partners, the teacher and the student(s), but these two entities tend to be more or less separated” (Aspelin, 2021, p. 589). Relational pedagogy, however, focuses on the
teacher-student relationship—on how teachers and students are connected to each other—and how this connection influences both parties and hence, the teaching and learning that occur.

Frank Margonis is often credited with authoring the exact phrase *pedagogy of relation* (Bingham & Sidorkin, 2010; Sidorkin, 2023). Margonis (1998) recognized that each teacher-student relationship is unique, with its own character, and that it is the character of the relationship itself that makes learning possible. He went on to suggest that when teachers honor educational relations, take relational dynamics seriously, and find the time and space to relate meaningfully to their students, “the relational prerequisites for good pedagogy” (Margonis, 1998, p. 254) are likely to emerge. Good pedagogy, therefore, depends on good relationships between teachers and students.

Alexander Sidorkin and Charles Bingham are two other prominent relational pedagogy theorists. Two years after the publication of Margonis’s (1998) influential work, Sidorkin (2000) advocated that education be viewed as a function of specific human relations, rather than a function of certain behaviors. This shift from a pedagogy of behavior to a pedagogy of relation helped to lay the groundwork for what has come to be known as relational pedagogy. Bingham and Sidorkin (2010) described relational pedagogy as “a new approach to educational theory” (p. 1), while acknowledging the emphasis placed on the relational aspect of education as far back as Aristotle and more recently by Dewey, Buber, Heidegger, Gadamer, and Noddings. However, it is Noddings who Bingham and Sidorkin (2010) credited with bringing “relational thinking into the mainstream of American educational theory” (p. 1).
Nel Noddings’s contributions to relational pedagogy through her development of care ethics have been widely recognized (Bingham & Sidorkin, 2010; Hinsdale, 2016; O’Brien, 2010; Sidorkin, 2000). Care ethics is a moral theory concerned with how to establish, maintain, and enhance caring relations (Noddings, 2013). Her work focuses on several types of caring relations, including the one between teacher and student. Noddings highlighted not just the caring components of teaching but its essential relational quality (Biesta & Stengel, 2016). Although not the first philosopher to emphasize the relational side of education or to characterize teaching as relational, “what is noteworthy about Noddings’ view is that she puts the caring relation at the center, as the crux of the matter between teacher and student—without which there is no teaching” (Biesta & Stengel, 2016, p. 60). Noddings is considered a care theorist, not a relational pedagogy theorist; however, her work clearly supports the central premise of relational pedagogy: that meaningful teacher-student relationships are the preconditions for effective teaching and learning. Now that I have provided this overview of relational pedagogy and its key players, I will dive deeper into the theory by examining its three main tenets: relations, teaching, and caring.

Relations

“A relation is a shared understanding between two people of what they are to each other, and what kinds of interactions are expected, and what interactions are not acceptable” (Sidorkin, 2023, p. 53). Relations are a part of human life, of being-with others (Heidegger, 1927/1962). An educational relation is a unique type of relation that takes place between a teacher and a student. These teacher-student relationships are multidimensional; they are grounded in student well-being but are focused on student
growth and development. The well-being dimension includes concepts such as comfort, security, trust, acceptance, validation, recognition, and care. The growth dimension includes concepts such as challenge, motivation, direction, thinking, learning, and becoming (Sidorkin, 2023).

According to Sidorkin (2023), the quality of an educational relation can be represented as the balance between these two dimensions, but an “educational relation is meaningless without the dimension of growth” (p. 81). This is important to remember when teachers are building and maintaining relationships with students; a focus on well-being at the expense of growth is neither appropriate nor is it advocated by relational pedagogy. Looking back at Adams’s (2018) definition of relational pedagogy, one is reminded that teachers provide both cognitive and emotional support through the positive relationships that they form with students. The growth dimension should not and must not be ignored.

Another important consideration is the time and effort that it takes to build and sustain meaningful teacher-student relationships. Teachers need time to get to know their students, to talk with them and learn about them, so that they can recognize and attend to their complex ways of understanding and their unique needs (Margonis, 1998; Noddings, 2003). Students need time to get to know their teacher, so that they can trust the teacher and feel comfortable opening up and expressing their needs (Bingham, 2010; Margonis, 1998; Noddings, 2003). This is time and effort well spent, considering that the relations between teachers and students “affect and define teaching and learning ... [and] that meaningful education is possible only when relations are carefully understood and developed” (Bingham & Sidorkin, 2010, p. 2). Because relations are central to the
educational experience, they should not be viewed as an afterthought, as something that takes time and effort away from other important activities. Instead, they should foreground everything that occurs in the classroom and should be emphasized throughout the entire educational experience (Bingham & Sidorkin, 2010; Noddings, 2013; Sidorkin, 2023).

**Teaching**

Teaching implies a relationship between the one doing the teaching and the one being taught (Biesta & Stengel, 2016). Teaching is a relational practice, a way of being-in-relation with students (Aspelin, 2021; Noddings, 2003). From a relational standpoint, teaching is defined as “an interactive, mutual, situated process, which cannot be fully understood without acknowledging both teachers’ and students’ positions” (Aspelin, 2021, p. 594). As an interactive and mutual process, teaching involves teachers and students working together, with both parties contributing to the educational exchange. As a situated process, teaching involves various personal and contextual factors, including teachers’ and students’ prior experiences, beliefs, and abilities, as well as classroom, institutional, and broader societal conditions. The fact that both teacher and student play a role in this process is key to its relational nature.

Teaching can also be viewed as “an invitation for understanding and sense-making” (Biesta & Stengel, 2016, p. 65). The relational nature of teaching—that teachers invite students in—is still present in this conception of teaching. But the desire for students to engage in understanding and sense-making, which may lead to learning and growth, is also evident; this is a piece that was missing from Aspelin’s (2021) definition. Although teaching does not cause learning and growth, it can and should promote
learning and growth (Biesta & Stengel, 2016; Noddings, 2016). Importantly, students who experience a positive, meaningful relation with their teacher will be more likely to accept the invitation to engage in understanding and sense-making, thus making the potential for learning and growth much greater. As Margonis (1998) suggested, the character of the teacher-student relationship is what makes learning possible.

It is important to recognize the relational nature of teaching because the teacher-student relationship greatly impacts the experience of both students and teachers (Noddings, 2003). Teachers affect the lives of their students not just by helping them learn the content but by relating to them as people. The way that they relate and the relationships formed can have either devastating or uplifting effects on students’ emotions, motivation, and learning. These relationships can also have devastating or uplifting effects on the teacher’s emotions, motivation, and teaching (Noddings, 2003). Through the forming of supportive and meaningful relationships, students are able to develop as students, and teachers are able to develop as teachers.

One cannot consider the relational nature of teaching without acknowledging the asymmetric power dynamics at play. Teaching is an inherently asymmetric relation imbued with power imbalances (Bingham, 2010; Bingham & Sidorkin, 2001; Hinsdale, 2016). Power is defined as the ability to exercise influence over another person; therefore, teachers inherently have more power in the teacher-student relationship (Sidorkin, 2000). For the relationship to flourish, the teacher must invite students into the relation (Hinsdale, 2016). They must acknowledge and respect students’ unique identities, needs, and opinions so that students are open to the teacher challenging, motivating, and pushing them in a particular positive direction (Sidorkin, 2000). This
openness or “consent to be nudged” (Sidorkin, 2023, p. 74) is a critical element of the
teacher-student relationship. As they interact with students, teachers must continually
reflect on these relational power dynamics in order to prevent what is supposed to be a
growth-promoting, caring relationship from becoming a dominating, constraining one.
The student’s perception of the teacher’s power, of how the teacher exercises their
influence, can cause the relationship to either flourish or deteriorate (Bingham, 2010).

**Caring**

Like teaching, caring is relational; it is a way of being-in-relation (Noddings, 2005, 2013). Caring is defined as “a set of relational practices that foster mutual
recognition and realization, growth, development, protection, empowerment, and human
community, culture, and possibility” (Gordon et al., 1996, p. xiii). In caring educational
relations, the promotion of student growth, both intellectual and moral, is of central
importance (Noddings, 1998). As conceived by Noddings (2013), caring is a relation
between two people: the one-caring and the cared-for. In teacher-student relationships,
the teacher is the one-caring, and the student is the cared-for. In order for it to be a true
caring relation, both parties—teacher and student—must contribute to the relationship in

The teacher, as the one-caring, must demonstrate engrossment and motivational
displacement (Noddings, 1988, 2005, 2013). Engrossment, as defined by Noddings
(2013), is an attentiveness or receptivity to the needs of the other, and motivational
displacement is a shifting of motive energy toward meeting those needs. In short, the
teacher “feels with” (Noddings, 1998, p. 220) the student and acts on their behalf. This
does not mean that a caring teacher must meet every need that the student expresses or
desires, but a caring teacher does acknowledge the need and respond in an open and
genuine way (Noddings, 2013). They engage in a dialogue with the student, which
connects both parties and helps to maintain the caring relation (Noddings, 2005).

The student, as the cared-for, contributes to the relation by recognizing and
responding to the teacher’s caring (Noddings, 1988, 2001, 2005, 2013). The student’s
response to the teacher’s caring may include a smile, a nod, a question, an expression of
gratitude, a courteous gesture, a movement toward a learning goal—some type of
acknowledgement that the caring has been received. “The response of the cared-for
completes the caring relation. Without it, there is no caring relation—no matter how hard
the one-caring has tried to care. This conclusion is basic to the idea of caring as relation”
(Noddings, 2012, p. 773). The teacher must show the student that they care, and the
student must show that this caring has been received. This reciprocity is essential to
relational caring. When students experience these caring relations with their teachers,
they learn what it means to care and be cared; the hope is that they in turn develop a
caring attitude that they will take with them into their professional lives (Noddings, 1998,
2012). This is especially important in health professions education like sonography
because students will become the ones-caring in their relations with patients.

A major impediment to caring in teaching is the incorrect, yet prevalent,
assumption “that caring is merely a nice attitude, an attitude that ignores poor behavior
and low achievement in favor of helping students to feel good” (Noddings, 2001, p. 101).
Caring teachers work hard to promote the intellectual and moral growth of their students,
neither of which would result from ignoring poor behavior or low achievement
(Noddings, 1998, 2001, 2013). Caring teachers focus on both dimensions of the teacher-
student relationship described by Sidorkin (2023). They establish relations of care and trust, and they challenge and motivate their students, all of which contribute to student learning and growth. Furthermore, the teachers providing cognitive and emotional support in Adams’s (2018) definition of relational pedagogy are not just any teachers—they are caring teachers. Thus, from a relational pedagogical perspective, caring and teaching go hand in hand in meaningful educational relations. Each of these tenets of relational pedagogy—relations, teaching, and caring—is of great relevance to a study of teacher-student relationships.

**Current State of Teacher-Student Relationship Literature**

Teacher-student relationships are both important and complex; as such, a wealth of research exists on the topic. However, the majority of this research has been conducted at the elementary, middle school, and high school levels, with researchers mostly neglecting the teacher-student relationship in higher education (Hagenauer et al., 2022; Hagenauer & Volet, 2014; Karpouza & Emvalotis, 2019; Pranjic, 2021). Fortunately, research in this area has increased in recent years, perhaps due to a growing recognition of the relational nature of teaching and learning in higher education settings. Unfortunately, the empirical research on teacher-student relationships in sonography education remains scarce. In the next section, I explore the current research on teacher-student relationships in higher education. This literature has informed my present understanding of the topic and helped guide my methodological and analytical choices.

**Literature Review**

The phenomenon of interest in this study is the teacher-student relationship in sonography education. However, because there is currently only one empirical research
report on the teacher-student relationship in sonography education (Kurtz, 2022), this review encompasses the teacher-student relationship literature in all areas of higher education. Positive teacher-student relationships are fundamental to meaningful teaching and learning (Bingham & Sidorkin, 2010; McConville, 2013; Quinlan, 2016; Sidorkin, 2023). Accordingly, a relational pedagogical approach focuses on positive and caring teacher-student relationships, recognizing that learning happens in and through these relationships (Bingham & Sidorkin, 2010; Hinsdale, 2016; Pranjic, 2021). To support these theoretical claims for relational and caring approaches to teaching in higher education, researchers must start by exploring caring teacher-student relationships, what caring teaching looks like, and the role relational pedagogy plays in students' educational experiences (Walker-Gleaves, 2019). This is what I have done with this study; but to set the stage for my research, a thorough review of the current research in the field is needed.

**Search and Selection Criteria**

My review of the literature began with a search for previous research on the topic. This was carried out through database searching (e.g., Academic Search Ultimate, EBSCO Discovery Service, Education Full Text, Google Scholar, JSTOR, PsychINFO) using the following key search terms: sonography (OR ultrasonography OR ultrasound) AND education as well as teacher-student relationships AND higher education (OR college OR university). In addition, I used citation searching (i.e., finding additional sources in the reference list of relevant publications) and manual searching of key relevant journals (e.g., *College Teaching, Higher Education, Journal of Diagnostic Medical Sonography, Journal of Further and Higher Education, Teaching in Higher Education*) to identify potentially relevant literature.
I further limited my search parameters by type of source, publication outlet, and date of publication. The following types of textual works were included: empirical research reports, research reviews/syntheses, conceptual/theoretical works, and scholarly essays. Sources from the following publication outlets were included: peer-reviewed journals, books, and dissertations. The initial search was limited to work published in the past 10 years, but this was subsequently refined to work published in the past 5 years. This decision was made in order to focus on the most current literature which has built upon the older, foundational work (Savin-Baden & Major, 2013). Because of the drastic increase in relevant literature published in the last 5 years as compared to the previous 5 years, it was determined that a review of this recent body of research and scholarship would lead to the most effective evaluation of the current field of higher education teacher-student relationship literature. Sources determined to be irrelevant or of poor quality were excluded from the review, using the selection criteria recommended by Savin-Baden and Major (2013). One seminal review of the teacher-student relationship literature in higher education (Hagenauer & Volet, 2014) was included due to its significance and continued relevance to the field.

**Methodological Challenges Surrounding Teacher-Student Relationship Research**

A general challenge in assessing and measuring teacher-student relationship quality in higher education is the conceptual complexity of teacher-student relationships, making them difficult to operationalize and quantify (Hagenauer & Volet, 2014; Walker-Gleaves, 2019). The majority of studies are qualitative; therefore the findings, although informative and insightful and perhaps even transferable, are not generalizable (Hagenauer & Volet, 2014). Also, many studies focus on teacher-student interactions,
Interactions affect the nature of the relationship, just as the nature of the relationship affects future interactions (Hinde, 1995). However, the terms are not synonymous and should not be used interchangeably; it is insufficient to study interactions only when the relationship is the supposed focus of the research. Furthermore, many studies look at the frequency, not the quality, of interactions; the quality of interactions would provide more useful information than just the frequency (Hagenauer & Volet, 2014). In addition, the vast majority of quantitative research on the topic has used correlational, cross-sectional study designs. This research has led to associations between teacher-student relationships and many important student outcomes; but without experimental and longitudinal studies, the causality between teacher-student relationships and student outcomes cannot be established (Walker-Gleaves, 2019).

Another challenge is that existing instruments used to assess teacher-student relationship quality in K-12 settings have not been validated in higher education and likely do not apply to the very different contexts in college (Hagenauer & Volet, 2014). There have been two recent attempts to combat this challenge. Tormey (2021) developed a scale to measure the emotional quality of teacher-student relationships in college. The Classroom Affective Relationships Inventory (CARI) is a 15-item questionnaire that encompasses three dimensions: assertion/status, affiliation/warmth, and attachment/safety. For all 15 items, students are asked to rate the extent to which they associate their professor with various terms linked to each of the three dimensions, using a 7-point scale ranging from not at all to very much (Tormey, 2021). Another instrument developed recently to evaluate teacher-student relationship quality is the Private College
Student-Teacher Relationship Scale (PCSTRS; Bai et al., 2022). The PCSTRS is a 29-item questionnaire that encompasses six dimensions: trust, interaction, intimacy, care, approval, and comfort. For all 29 items, students are asked to rate the extent to which they agree or disagree with various questions linked to one of the six dimensions, using a 5-point scale ranging from strongly disagree to strongly agree (Bai et al., 2022).

Although the dimensionality, reliability, and validity of both scales were established by the authors, additional studies in which the scales are utilized are needed to confirm their reliability and validity in different settings and with different participants.

**Conceptual Framework**

This review focuses on the following concepts from the existing higher education literature: (a) the constitutive elements of meaningful, positive, caring teacher-student relationships and (b) the connections between meaningful, positive, caring teacher-student relationships and student learning. This conceptual framework is a natural extension of the relational pedagogy theoretical framework described above, in which meaningful, positive, caring teacher-student relationships are central to effective teaching and learning. Although it is difficult to deny the importance of teacher-student relationships, empirical evidence of the constitutive elements and benefits of meaningful teacher-student relationships will better equip educators to advocate for and embrace a relational and caring approach to teaching (Hagenauer et al., 2022). I begin by exploring how meaningful, positive, caring teacher-student relationships have been described in the literature, after which I explore the connections between these types of relationships and student learning.
Constitutive Elements of Meaningful, Positive, Caring Teacher-Student Relationships

In their seminal review of 15 years of higher education teacher-student relationship research, Hagenauer and Volet (2014) identified two main dimensions used by researchers when describing teacher-student relationships in higher education: affective and support. The affective dimension describes the bond between students and teachers which forms the foundation for secure and positive relationships. It includes concepts such as care, honesty, trust, respect, connectedness, and closeness. The support dimension describes the assistance provided through these relational bonds that promotes students’ academic success. It includes concepts such as approachability, availability, encouragement, challenge, clear expectations, and high standards (Hagenauer & Volet, 2014). These dimensions are in line with the well-being and growth dimensions of teacher-student relationships identified by Sidorkin (2023) in the relational pedagogy literature. Furthermore, many of these concepts from both the affective and support dimensions are consistently recognized in the current literature by both students and teachers as essential elements of meaningful and positive teacher-student relationships.

Students’ Perspectives. For example, 48 undergraduate students from multiple majors at a California university participated in semi-structured interviews and shared that they wanted to feel supported by their teachers; they wanted teachers to encourage and challenge them and to want to help them succeed (Guzzardo et al., 2021). Participants also shared that they wanted teachers to be inclusive and aware; they wanted teachers to make all students feel welcome, like they belong, that their perspectives are valued, and that they have the ability to succeed. In addition, they wanted their teachers to demonstrate care for their well-being and academic achievement; they wanted teachers
to listen to them, make them feel like they matter, and be approachable and available. In other words, students wanted their teachers to do “more than just teach” (Guzzardo et al., 2021, p. 51). They wanted their teachers to get to know them and talk with them—to form relationships with them.

Similarly, 31 undergraduate students from arts, humanities, STEM, education, and health care majors at a Mississippi university were asked to share their perspectives of faculty caring in individual and focus group interviews (Miller & Mills, 2019). Many students recognized the importance of teachers demonstrating empathy, relatability, approachability, and enthusiasm for students’ learning, and the authors suggested that teachers who possess these qualities have a caring attitude. In addition, several participants recognized the importance of teachers listening to students, communicating with students, being responsive to their feedback, and adapting to try to meet their needs; the authors described these actions as caring practices. Some overlap exists in the distinction of a caring attitude versus caring practices in Miller and Mills’s (2019) analysis. I contend that these practices come from a place of caring; thus, it is difficult to distinguish the caring practices from a caring attitude. For example, is demonstrating enthusiasm a caring attitude, as Miller and Mills suggested, or a caring practice? Is being responsive a caring practice, as Miller and Mills suggested, or a caring attitude? According to Noddings (2005), caring is neither an attitude nor a set of specific behaviors; it is a way of being-in-relation with students.

Because of the things that teachers did in class to show students in this study that they cared (i.e., their teaching practices or techniques), Miller and Mills (2019) suggested that "effective teaching is at the core of caring" (p. 86). I would argue, along with
Noddings (2001, 2005, 2012), that caring is at the core of effective teaching. Teachers who care for their students and their success are driven to teaching excellence. They care enough to teach in ways that help students learn, by encouraging them, motivating them, challenging them, and inspiring them. Because they care, they teach effectively in order to help their students learn and grow. Thus, care, and more specifically, caring relations, are at the core of effective teaching. Teachers listen, communicate, and are responsive and adaptive when they care about students. Therefore, it is care that is at the core of effective teaching, not the other way around.

In another qualitative study, six undergraduate students majoring in diagnostic medical sonography at a Tennessee university participated in semi-structured phenomenological interviews during which they shared their emotional experiences while learning sonography (Kurtz, 2022). Although the focus of the study was students' academic emotions, the relational nature of teaching and learning was evident in the participants' responses. Students recognized the importance of feeling encouraged by their teacher, feeling connected to their teacher, and feeling comfortable going to their teacher for help. Students also recognized the importance of teachers being receptive and attentive to their needs, getting to know them, being there for them, supporting them, listening to them, and showing that they care (Kurtz, 2022). Emotions are relational and play an essential role in the teacher-student relationship in higher education (Beard et al., 2007; Cavanaugh, 2016). As such, it is important for educators to consider students’ emotions as they are connecting with students and to have an informed understanding of the role of emotions in the teaching and learning process.
Lubicz-Nawrocka and Bunting (2019) took a different approach to studying students’ perceptions of their educational experiences, specifically their perspectives of excellent teaching. They analyzed comments from 2,924 student-led teaching award nominations at a university in Scotland and found that students appreciated teachers who made a concerted effort, were approachable, took time to engage with students, planned well-structured and clear lectures that helped students learn, and listened to student feedback. Another key finding was a commitment to engaging students; students described these teachers as showing a passion and enthusiasm for teaching, facilitating engaging discussions, being invested in teaching, and caring about students. Breaking down student-teacher barriers was another key finding; student comments supporting this theme included mention of teachers who created strong personal connections with students, made an effort to know each student individually, and fostered a supportive and inclusive learning environment in which all members’ contributions were valued and respected. Lastly, students recognized and appreciated stability of support from their teachers, including helping students overcome personal struggles and persevere with their studies, providing consistent feedback and encouragement, and being someone students can depend on (Lubicz-Nawrocka & Bunting, 2019).

Interestingly, Lubicz-Nawrocka and Bunting (2019) set out to examine excellent teaching, and the relational and caring aspects of teaching were evident in all four themes. Excellent teachers, as described by students in this study, showed care for their students while getting to know them on a personal level to provide high-quality teaching and support. Students appreciated and acknowledged the teachers who created strong personal connections with them, often writing at length about the positive academic
experiences they attributed to teacher care and support (Lubicz-Nawrocka & Bunting, 2019). These are the types of teachers who are respected and admired by their students, and the findings from this study, along with the others, support a relational and caring approach to college teaching.

**Students’ and Teachers’ Perspectives.** Researchers have also conducted studies in which both students and teachers were included as study participants. Bell (2022) conducted individual, semi-structured interviews with teachers and focus group interviews with undergraduate students respectively teaching and studying in high- and low-rated National Student Survey (NSS) rated courses at a university in the United Kingdom. Four teachers from high satisfaction courses (courses with an overall satisfaction score of 100% on the NSS) and four teachers from low satisfaction courses (courses with an overall satisfaction score of 80% or less on the NSS) along with 10 students from high satisfaction courses and 10 students from low satisfaction courses participated in the study. The importance of high-quality teacher-student relationships was highlighted in each of the four focus group sessions, with students emphasizing teacher approachability, empathy, sensitivity, and caring. In the teacher interviews, although there was no perceptible difference between methods used to improve teaching and learning in the high and low satisfaction courses, teachers from the high-scoring courses put a great deal of emphasis on listening to students and making changes in response to their comments and suggestions, when possible. Teachers from the low-scoring courses did not spontaneously mention listening to students and, when asked about it, were dismissive of the idea (Bell, 2022).
Although teachers from both groups acknowledged the importance of positive teacher-student relationships, high-scoring teachers placed much more emphasis on ensuring quality interactions with students and nurturing positive teacher-student relationships compared to the low-scoring teachers (Bell, 2022). These findings highlight the importance of developing positive teacher-student relationships based on trust and the importance of teacher caring and sensitivity for student learning and satisfaction. Of note is that there was no difference in teaching methods between high- and low-scoring teachers, but there was a difference in their willingness to listen to students. This finding is reminiscent of the pedagogy of behavior versus pedagogy of relation distinction proposed by Sidorkin (2000). The difference in this study was relations, not behaviors. Teachers who cared for their students and wanted to learn their individual needs listened to them. Also, the high-scoring teachers put more emphasis on building and maintaining meaningful teacher-student relationships (Bell, 2022). It is not surprising that their courses received high student satisfaction scores. These teachers put in the time and effort to develop high-quality, supportive teacher-student relationships; they made it a priority.

Karpouza and Emvalotis (2019) also explored the perspectives of both teachers and students in their constructivist grounded theory study. They conducted intensive interviews with 20 teacher educators and focus group interviews with 25 graduate students who were respectively teaching and studying in educational sciences master’s degree programs at Greek universities. Key determinants of the teacher-student relationship identified by both teachers and students included mutual engagement, trust, respect, and care; approachability; fairness, with teachers treating students equally; and reciprocity, with both parties contributing to the relationship (Karpouza & Emvalotis,
These findings closely align with relational pedagogy and its emphasis on the mutual and reciprocal nature of meaningful, positive, caring teacher-student relationships.

**Teachers’ Perspectives.** Teachers’ perspectives of teacher-student relationships have also been the sole focus of investigation, with teachers as the only study participants. In Hagenauer et al.’s (2022) exploratory qualitative study, researchers conducted semi-structured interviews with 15 experienced faculty members teaching in teacher education programs at two Australian universities. Participants identified the following as core elements of high-quality teacher-student relationships: mutual engagement, care, closeness, trust, honesty, respect, approachability, fairness, and academic and emotional support (Hagenauer et al., 2022). These findings closely mirror those from the previously described studies conducted with student participants, suggesting that both teachers and students want the same things out of their relationships.

Another qualitative study was performed to explore teachers’ perspectives of mattering in higher education (Pychyl et al., 2022). These researchers conducted semi-structured interviews with 12 faculty members who had been recognized with a teaching award; faculty were of various ranks and experience, teaching in various programs at a Canadian university. Participants shared that they conveyed mattering by paying attention to students, showing interest in students, depending on students and their input, caring about students, and individualizing students. Eleven of the 12 participants, professors with a demonstrated and recognized history of teaching effectiveness and excellence, were described by the authors as relationship-focused; they felt that mattering is important, and they tried to make students feel like they matter (Pychyl et al., 2022). The importance of a relational approach to teaching—knowing students as individuals, caring
for them, and showing them that they matter—was evident in the study’s findings. As Noddings (2005) stated, students will "listen to people who matter to them and to whom they matter" (p. 36).

Effective teachers in this study valued their students; they cared about their students, invested in their students and their students' well-being, and conveyed this message through their teaching practices and interactions with students (Pychyl et al., 2022). The authors also explored the notion of mattering as caring in light of the study findings, suggesting the need for a greater emphasis on feeling cared for and about as part of the mattering construct. They stated that mattering and caring have been studied separately rather extensively but have not been described as inter-connected in previous research. Pychyl et al. (2022) viewed caring as central to the mattering construct, and I agree. When teachers and students are in a caring relationship, the student matters to the teacher and the teacher matters to the student. Teachers who demonstrate caring in their relationships with students show the students that they matter. This was also evident in the responses of undergraduate students in Guzzardo et al.’s (2021) study, with several participants making the connection between caring and mattering during their interviews.

**Additional Evidence.** In addition to these empirical research reports, two scholarly essays exploring the constitutive elements of meaningful, positive, caring teacher-student relationships have also been published recently. Dougherty (2021) reflected on qualitative research she conducted with five recent social work graduates in Canada as they transitioned to practice, sharing how this research influenced her relational approach to teaching and learning. Through her reflections on the participants' narratives and her time in the classroom, Dougherty suggested that caring in higher
education involves creating open dialogue with students, communicating with an intent to understand, and building a connection that promotes reciprocal learning and growth. This reciprocity is important in adult-adult relationships in college; teachers must be genuine and humble and recognize that they can learn from their students' experiences, history, culture, beliefs, and values (Dougherty, 2021). This does not eliminate the inherent power differentials in the classroom, but it can provide an opportunity to critically reflect on power dynamics in the classroom, and perhaps more importantly, in the social work and/or health care system. It is important for clients and patients to have a voice, and by valuing their students’ thoughts and opinions, educators can help students to recognize that importance and carry this belief into practice.

In her reflections on researching and working with social work students, Dougherty (2021) also argued that positive teacher-student relationships are more likely to occur when teachers are approachable, make time for their students, are there for their students, and make students feel cared for. Engaging with students throughout the teaching and learning process is key. Teachers who engage with students get to know them; they seek out their perspectives and feedback so that they can gather meaningful input that improves their teaching. This demonstrates to students that teachers care, thus promoting positive teacher-student relationships (Dougherty, 2021). It is important for all teachers to listen to their students, but perhaps more so with those students who will be going into caring professions like social work or sonography. Students need to understand the importance of listening to their clients or patients. They need to recognize the importance of humility and understand that they will not have all the answers. They
need to recognize the value of working with their client or patient—of forming connections—to achieve positive outcomes.

The importance of teacher-student relationships grounded in trust, a sense of belonging, and an openness to students and teachers learning from each other was also recognized by Su and Wood (2023). In this essay, the authors explored the nature and importance of relational pedagogy, which they defined as the intentional practice of teachers building connections and positive relationships with students for learning purposes (Su & Wood, 2023). This is in line with the positive and supportive relationships included in Adams’s (2018) definition of relational pedagogy. Su and Wood also highlighted the exceptional need for caring and supportive teacher-student relationships, now more than ever, in the aftermath of the COVID-19 pandemic. Teachers have an ongoing obligation to care for students and develop close, positive relationships that support students both cognitively and emotionally (Pranjic, 2021; Su & Wood, 2023; Walker-Gleaves, 2019). But considering the academic, social, emotional, and personal toll the pandemic took on students and teachers alike, everyone could benefit from some extra care and support as they navigate higher education during this post-pandemic era.

**Multidimensionality of Teacher-Student Relationships.** In each of these studies, the constitutive elements of meaningful, positive, caring teacher-student relationships are largely reflective of the well-being and growth and the affective and support dimensions described by Sidorkin (2023) and Hagenauer and Volet (2014), respectively. Sidorkin’s well-being dimension includes concepts such as comfort, security, trust, acceptance, validation, recognition, and care. The growth dimension includes concepts such as challenge, motivation, direction, thinking, learning, and
becoming. Hagenauer and Volet’s affective dimension includes concepts such as care, honesty, trust, respect, connectedness, and closeness. And the support dimension includes concepts such as approachability, availability, encouragement, challenge, clear expectations, and high standards. It is evident from the research presented above that the multidimensional nature of teacher-student relationships described by Sidorkin (2023) and Hagenauer and Volet (2014) provides a useful way of conceptualizing these complex phenomena. Now that I have explored how meaningful, positive, caring teacher-student relationships are described in the current literature, I will look to the literature to see how they can, as relational pedagogy suggests, support student learning.

**Connections Between Meaningful, Positive, Caring Teacher-Student Relationships and Student Learning**

Learning is a multidimensional process involving cognitive, motivational, and emotional factors that results in a relatively enduring change in a person, their perceptions, and their responses to the world and those within it (Alexander et al., 2009). It is through this dynamic, interactive, and situated process that teachers, by building and sustaining meaningful, positive, caring teacher-student relationships, can greatly influence their students’ learning outcomes (Adams, 2018). Meaningful, positive, caring teacher-student relationships have consistently been linked to many important factors that contribute to student learning and achievement in college, including positive emotions, enhanced motivation, and increased engagement. In this section, I will review the research supporting these claims; many of these studies were introduced in the previous section, but some additional studies will be introduced as well.
According to Felten and Lambert (2020), the question is no longer whether positive teacher-student relationships contribute to student learning but rather how they do so. Through my analysis of the higher education literature, I will show how teacher-student relationships contribute to student learning by influencing each of the above variables. Although there is considerable overlap among student emotions, motivation, and engagement, the research shows that they are each influenced by the quality of the teacher-student relationship. Furthermore, each of these important constructs has entire bodies of research providing evidence of its contributions to student learning. In this review, I provide a brief summary of each concept and its influence on student learning but focus on the role of the teacher-student relationship in the learning process, as established in the current higher education literature.

**Emotions.** Emotions are complex sets of interactions among subjective and objective factors, mediated by neural systems, that can give rise to affective experiences, generate cognitive processes, activate physiological adjustments, and lead to behavior that may or may not be expressive, goal-directed, and adaptive (Kleinginna & Kleinginna, 1981a). Emotions are closely intertwined with both learning and cognition, forming a critical piece of how, what, when, and why students think, remember, and learn (Hascher, 2010; Immordino-Yang, 2016; Immordino-Yang & Damasio, 2007). The quality of the teacher-student relationship can both support students’ positive emotions about learning (e.g., enjoyment and enthusiasm) and serve as a buffer for negative emotions (e.g., frustration and hopelessness) that they will undoubtedly encounter at some point in the learning process (Goetz et al., 2021; Mainhard et al., 2018; Pekrun, 2006). I will now explore recent studies that have connected teacher-student relationships
to students’ emotions in higher education. This literature demonstrates how relational and caring approaches to teaching influence college students’ emotions and their learning.

The undergraduate students in Guzzardo et al.’s (2021) study took part in semi-structured interviews, during which participants shared their perspectives of how the relationships with their teachers facilitated or hindered their learning. Students who experienced positive, supportive teacher-student relationships shared that they enjoyed learning in those teachers’ courses. When they felt cared for and like they mattered to the teacher, they experienced less stress and anxiety; they perceived caring teachers as more approachable and were therefore more likely to go to them for help. Conversely, when students felt like teachers did not care, they expressed feelings of frustration and self-doubt, which inhibited their willingness to reach out to the teacher for help, even when they knew they needed it (Guzzardo et al., 2021).

The undergraduate students in Anderson et al.’s (2020) study expressed similar sentiments in their focus group interviews. These participants also shared how the quality of the teacher-student relationship impacted their willingness to seek out support from the teacher. As one student put it, “if you’re scared of someone or you don’t think they want to help, that kind of hinders your learning” (p. 13). Other students shared that they experienced greater levels of happiness and enjoyment of learning when their teachers seemed to care about them. When it was evident to participants that teachers enjoyed being with students and helping them learn, this influenced the students’ enjoyment and enthusiasm for learning. Participants who described close, caring connections with their teachers expressed a love of learning (Anderson et al., 2020), further evidence that an
emotionally supportive environment in which teacher-student relationships are nurtured is essential for student learning and growth.

In another study exploring the connections among teacher-student relationships, emotions, and learning, undergraduate sonography students shared how the relationships with their teachers impacted their emotions (Kurtz, 2022). When students felt supported by their teacher, they experienced happiness, enjoyment, enthusiasm, and hope. On the other hand, when students did not feel supported by their teacher, they experienced stress, frustration, and self-doubt. These positive and negative emotions respectively supported or hindered their desire to learn, choice of effective learning strategies, and belief in their learning capabilities. One student described how important it is for teachers to get to know their students so that they can recognize when students are struggling, either emotionally or cognitively. As this participant stated, “just knowing your students and getting to know them helps a lot” (Kurtz, 2022, p. 253). It is through relationships that teachers are able to provide students with the emotional and cognitive support that they need. Students in this study wanted to connect with their teachers on a personal level, and whether they felt cared for by their teacher had a tremendous impact on their thoughts about learning (Kurtz, 2022).

Each of these studies provides evidence that meaningful, positive, caring teacher-student relationships directly impact students’ emotions and learning. Because emotions are so closely intertwined with thoughts and actions, the emotions that students experience also influence their motivation (Pekrun, 1992; Weiner, 1986). For example, positive emotions such as enjoyment and pride strengthen students’ motivation, whereas negative emotions such as boredom and hopelessness hinder students’ motivation.
Despite the clear connections between emotion and motivation, they are separate constructs and are treated as such in educational research. Several studies have demonstrated the connections among teacher-student relationships, motivation, and learning, and these are explored in the following section, following a brief overview of motivation in education.

**Motivation.** Another way that teachers, through the relationships they form with students, can support students’ learning is by enhancing their motivation (Li et al., 2020; McGuire, 2015; Van Etten et al., 2008). Motivation refers to the energizing or arousing mechanisms which have the potential to facilitate some actions while inhibiting others (Kleinginna & Kleinginna, 1981b). Motivation influences students’ choice of tasks, effort expenditure, and persistence, all of which contribute to student learning and achievement (National Academies of Science, Engineering, and Medicine, 2018). The relationships formed between teachers and students greatly impact students’ motivation (Pelaccia & Viau, 2017; Wentzel, 2016). Furthermore, both the process of learning and the motivation to learn are largely relational (Sidorkin, 2023). In this section, I explore recent studies that have connected meaningful, positive, caring teacher-student relationships to students’ motivation to learn in higher education settings. This literature demonstrates how relational and caring approaches to teaching enhance not only students’ motivation but also their learning.

Four recent qualitative studies have linked teacher-student relationships to college students’ motivation to learn. Two of these studies (Anderson et al., 2020; Kurtz, 2022) were discussed in the previous section because their findings also demonstrated a link between relationships and emotions. However, the findings related to student motivation
will now be presented. One participant in Anderson et al.’s (2020) study shared that they were more motivated to learn and willing to put in more effort when they felt that the teacher cared about them. Another student explained the importance of teachers investing in students’ well-being and learning, sharing that they felt challenged and motivated by teachers who demonstrated care and commitment to students. As this participant stated, “the relationship is so important” (Anderson et al., 2020, p. 12). These findings demonstrate the importance of a relational pedagogical approach, in which the challenge and motivation provided by caring teachers contribute to student learning and growth.

Likewise, students in Kurtz’s (2022) study were more motivated to learn and willing to work harder when they felt that the teacher cared, was willing to help, and was someone they could depend on. As one participant stated when describing a positive relationship with one of their teachers, “it made me want to do well. It made me want to know all that I could and know how to do well” (Kurtz, 2022, p. 253). This student’s motivation to learn and succeed was greatly impacted by their experiences in relation with their teacher. Another participant shared how a close, positive, supportive relationship with a teacher motivated them to continue in the program when they were on the verge of withdrawing from school. This student’s learning would have been halted without the presence of a caring teacher who provided the motivation and support that they needed to persist in their educational pursuits (Kurtz, 2022). These findings provide further evidence of the importance of teachers finding time and space to relate meaningfully to their students and attend to their unique needs, as Margonis (1998) suggested.
Undergraduate students in Miller and Mills’s (2019) study took part in individual and focus group interviews, during which they shared their perspectives on the impact of caring teachers. Participants in this study, like those from the previous two studies, shared that they were more motivated to learn and willing to work harder when they believed that teachers cared about them and their success. Students wanted to connect with their teachers in meaningful ways, and they recognized the influence of the relationship on their motivation and effort expenditure. One participant articulated this well, stating “I would just say it’s really important to have a relationship with your professor. ... It makes you want to work harder because you want to succeed for them” (Miller & Mills, 2019, p. 86). Once again, these findings show that teachers who built and sustained meaningful, positive, caring teacher-student relationships were able to enhance their students’ motivation to learn and succeed.

The award-winning, relationship-focused teachers in Pychyl et al.’s (2022) study took part in semi-structured interviews, during which they described the increased motivation they observed in students when they felt like they mattered to the teacher and that the teacher cared about them and their success. From these participants’ perspectives, their students were more motivated to learn and to put in the effort needed to improve their grades and performance when they experienced positive and supportive teacher-student relationships (Pychyl et al., 2022). Relationships are powerful motivators and consequently play an important role in student learning (Noddings, 2003). Closely related to students’ emotions and motivation is their engagement. In the next section, I provide a brief overview of student engagement, after which I explore research demonstrating the connections among teacher-student relationships, engagement, and learning.
**Engagement.** Engagement is the mental state students are in while learning, representing the intersection of feeling and thinking (Barkley & Major, 2020). Student engagement is a multidimensional phenomenon including affective (e.g., enthusiasm, interest, belonging), cognitive (e.g., deep learning, self-regulation), and behavioral (e.g., time and effort, interaction, and participation) components (Collaco, 2017; Kahu, 2013). In Kahu’s (2013) conceptual framework of student engagement in higher education, teacher-student relationships are “the crux of the learning situation” (p. 767), greatly influencing both student motivation and engagement. Furthermore, Barkley and Major (2020) contended that college students’ emotions and motivation, which are in large part influenced by the relationships with their teachers, are critical to whether and how students actively engage in the learning process. Engagement, therefore, is largely relational. As one student said regarding their teachers, “if they don’t care, I don’t care” (Miller & Mills, 2019, p. 82). Students who experience a meaningful, positive, caring relationship with their teacher will be more likely to accept the teacher’s invitation to engage and invest emotional and intellectual effort into their learning. I will now look to the recent higher education literature to see how relational and caring approaches to teaching influence students’ engagement and learning.

In addition to the increased motivation observed by the award-winning, relationship-focused teachers in Pychyl et al.’s (2022) qualitative study, these teachers also observed increased engagement in students when they felt like they mattered to the teacher and that the teacher cared about them and their success. Participants shared that students were more interested in learning, more engaged in the learning process, more likely to attend and participate in class, and more interactive with course materials when
they felt like they mattered to the teacher (Pychyl et al., 2022). When teachers made students feel important and significant, they became more affectively, cognitively, and behaviorally engaged.

Parnes et al. (2020) conducted a correlational study to explore the influence of teacher-student relationships on students’ engagement utilizing a cross-sectional survey. Participants included 646 students from three community colleges in the northeastern United States. Teacher-student relationships were measured using a nine-item self-reported scale focusing on students’ perceptions of teacher support, approachability, care, and respect. Academic engagement included self-reported cognitive and behavioral aspects of students’ engagement. Cognitive engagement was measured using a six-item scale focusing on the extent to which students were interested and intellectually engaged in their learning. Behavioral engagement was measured using a six-item scale focusing on the extent to which students engaged in effortful behaviors for the class. Findings showed that teacher-student relationship quality was significantly associated with both cognitive engagement ($R = 0.38, p < .001$) and behavioral engagement ($R = 0.41, p < .001$; Parnes et al., 2020).

In addition, a meta-analysis was recently conducted to investigate factors influencing student engagement in higher education (Li & Xue, 2023). This meta-analysis included 148 studies, and teacher-student relationships were one of the 14 factors found to influence student engagement. Although the teacher-student relationship was only moderately correlated with student engagement ($R = 0.456, p < .001$), the only factor more strongly correlated with student engagement was students’ positive emotions ($R = 0.751, p < .001$). Furthermore, only three of the 14 factors were either strongly or
moderately correlated with student engagement. The third was positive teacher behavior, which included guidance, motivation, timely feedback, and other supportive behaviors; it was moderately correlated with student engagement \( (R = 0.419, p < .001) \). The remaining 11 factors were weakly correlated with student engagement (Li & Xue, 2023). These findings demonstrate the value of relational pedagogy for student engagement and reiterate the importance of caring teachers providing emotional and cognitive support through their relationships with students.

Emotions, motivation, and engagement are conceptually distinct phenomena, but as the findings from these studies have shown, they are closely related in the interactions that influence student learning. Furthermore, these studies have shown the importance of meaningful, positive, caring teacher-student relationships for supporting students’ positive emotions, enhancing their motivation, and increasing their engagement, all of which support student learning. In addition, some researchers have evaluated the connections between teacher-student relationships and academic achievement. In the following section, I discuss academic achievement in college and review the findings from three recent quantitative studies that have established evidence of correlations between teacher-student relationships and students’ academic achievement using various measures as described below.

**Academic Achievement.** Academic achievement is a level of proficiency in scholastic work, typically measured by grades (American Psychological Association, 2018). Although grades are an imperfect measure of student learning, they do provide a quantitative summary of students’ successful adjustment to the intellectual and other demands of college (Pascarella & Terenzini, 2005). Meaningful, positive, caring teacher-
student relationships are pivotal in helping students adjust to the demands of college. Therefore, one might expect that such high-quality relationships would positively impact students’ academic achievement. Several researchers have tested this hypothesis.

For example, in addition to collecting the student engagement data from surveys as described in the previous section, Parnes et al. (2020) also collected the cumulative grade point average (GPA) of each participant from campus administrative data, which they linked to the survey data using unique identifiers. The teacher-student relationship, as measured using the nine-item self-reported scale described above, was a significant predictor of students’ cumulative GPA ($R = 0.14, p < .01$; Parnes et al., 2020). Although this association is not as strong as the ones between the teacher-student relationship and students’ cognitive and behavioral engagement, the findings are statistically significant and contribute to the teacher-student relationship research in higher education.

In another correlational study, Bai et al. (2022) explored the association between teacher-student relationships and students’ academic achievement using a cross-sectional survey design. Participants included 360 students from public and private colleges in China. Students were asked to think of a teacher and answer the survey questions with that teacher in mind. Teacher-student relationships were measured using a 29-item self-reported scale encompassing six dimensions: trust, interaction, intimacy, care, approval, and comfort. Academic achievement was measured using a three-item self-reported scale focusing on students’ perceptions of their performance in the course taught by said teacher. It is important to note that participants’ self-assessment and reporting of their performance may not be reflective of their true academic performance in the course or their grades, potentially limiting the validity of these data. Despite this limitation, the
teacher-student relationship, after controlling for student gender, age, and major, was a significant predictor of students’ academic achievement ($R = 0.34, p < .001$; Bai et al., 2022).

Lastly, Robinson et al. (2019) conducted an experimental study to evaluate whether improvements in teacher-student relationship quality would result in increased academic achievement, as measured by student course grades and final exam grades. Participants included 120 faculty of various ranks and experience and 2,065 of their undergraduate students from a large public university in California. This study was an attempt to replicate and extend Gehlbach et al.’s (2016) experimental study conducted at the high school level, in which an intervention highlighting teacher and student similarities was successful at increasing perceptions of similarity and relationship quality in both teachers and students. However, in Robinson et al.’s study, the intervention designed to increase student and teacher perceptions of similarity did not successfully increase their perceptions of the teacher-student relationship; the treatment had no impact on student or teacher perceptions of the teacher-student relationship as measured using a seven-item self-reported scale (Robinson et al., 2019). Because the intervention failed to increase the perceived quality of the relationship in the treatment group, the researchers were not able to evaluate whether improvements in relationship quality resulted in, or caused, improvements in downstream student academic outcomes including course grades and final exam grades.

However, like with the previous two correlational studies, Robinson et al. (2019) were able to find associations between teacher-student relationship quality and student academic achievement. When controlling for student gender and prior academic
achievement, both students' and teachers' perceptions of the teacher-student relationship were highly predictive of student course grades ($B = 0.22$ and $B = 0.54$, respectively, $p < .001$) and final exam grades ($B = 0.22$ and $B = 0.58$, respectively, $p < .001$; Robinson et al., 2019). The lack of success of the intervention in this study points to the complexity of teacher-student relationships in higher education. To improve them, it will take more than a single intervention designed to leverage similarity. Relations are a way of being-with others, so researchers must consider how teachers and students are being-with each other if they want to understand how to improve the relationships between teachers and students. Quantitative studies like this one undoubtedly add to the understanding of teacher-student relationships in college, but a qualitative approach may lead to a more nuanced understanding of such a complex interpersonal phenomenon.

**Gaps in Existing Teacher-Student Relationship Research**

Despite the wealth of research presented above, several gaps exist in the teacher-student relationship literature. For one, there has been only one study (Kurtz, 2022) that evaluated the teacher-student relationship in sonography education. Because teacher-student relationships “affect and define teaching and learning” (Bingham & Sidorkin, 2010, p. 2), it is imperative that researchers gain a better understanding of this relationship in sonography education. Furthermore, there is a gap in teacher-student relationship research in health professions education more broadly. It is critical to fill this void so that educators can better understand how the development of caring teacher-student relationships might impact the quality of care students provide to their future patients. According to Noddings (2005, 2012), being cared for by their teachers helps
students to develop a capacity to care for others. Research is needed to determine whether this includes sonography students’ capacity to care for their patients.

Also, the majority of studies conducted to evaluate teacher-student relationships in higher education have been qualitative, as these approaches are well-suited for studying both teachers’ and students’ perspectives of the teacher-student relationship. However, the search for literature on this topic published in the past 10 years revealed only one hermeneutic phenomenological study (Kurtz, 2022). This poses many missed opportunities for the rich data that such a powerful approach can provide, by looking closely, deeply, around, and through the phenomenon of interest (Dibley et al., 2020). The use of a hermeneutic phenomenological approach in my study has helped to fill this existing methodological gap in the teacher-student relationship literature, thus offering a unique contribution to the field.

**Conclusion**

Relational pedagogy encourages those with a vested interest in education to deeply question both the nature of the teacher-student relationship and what it might mean to teaching and learning (Hinsdale, 2016). As Bingham and Sidorkin (2010) so eloquently stated, “meaningful education is possible only when relations are carefully understood and developed” (p. 2). This is precisely why I have sought to uncover meaning and understanding of the teacher-student relationship in sonography education. Hermeneutic phenomenology, with its emphasis on being and understanding, provides just the right theoretical grounding for this deep questioning and search for meaning. To improve the educational process, and ultimately student learning, educators need to think less in terms of doing and more in terms of being, of being-with their students and being-
in-relation with them (Sidorkin, 2023). Both teaching and caring imply being-with another person; they are ways of being-in-the-world with others—of relating to others (Aspelin, 2021; Biesta & Stengel, 2016; Noddings, 2003). The being-with others that Heidegger (1927/1962) described is therefore central to the practice of relational pedagogy.

Relational pedagogy, as defined by Adams (2018) is “the intentional [emphasis added] practice of caring teachers interacting with students to build and sustain positive relationships that cognitively and emotionally support their students through their journeys together” (p. 2). For a practice to become intentional, teachers need to understand it and see its value. Therefore, a deeper understanding of the teacher-student relationship and its supportive educational role is needed. Guided by both hermeneutic phenomenology and relational pedagogy, my primary goal with this study was to achieve in-depth, interpretive understanding of the teacher-student relationship as experienced by sonography students. Through hermeneutic phenomenological interviews with recent graduates, I explored participants’ perceptions of the teacher-student relationship (Research Question 1) and whether and how those relationships provided them with emotional and cognitive support (Research Questions 2 and 3). This knowledge will contribute to the existing conversation about teacher-student relationships in higher education and will help to get the conversation started in sonography education.

Sonography students need to experience meaningful, positive, caring teacher-student relationships in which they feel supported in their learning if they are to reach their full potential as competent and caring entry-level sonographers who are equipped to provide quality care to their patients. Because a lack of education can lead to
misdiagnoses and potential harm to patients, it is imperative that sonographers obtain a high-quality education (Hedrick, 2013). To meet this need, sonography educators must consider ways to improve the teaching and learning process, one of which is through a focus on building and maintaining meaningful, positive, caring relationships with students. As the above research shows, teacher-student relationships in higher education play an essential role in student learning, in large part by their influence on students’ emotions, motivation, and engagement. The clear and established benefits of a positive, caring teacher-student relationship make this a worthwhile research topic to pursue in the field of sonography education.

Walker-Gleaves (2019) called for research approaches that are responsive enough to articulate and interpret students’ lived experiences of caring teacher-student relationships. A hermeneutic phenomenological approach is just the right answer to this call. In the next chapter, I discuss hermeneutic phenomenology, the methodology I have chosen to address my research questions. I also describe the method of data collection used and other specifics of the study design that have assisted me in finding answers to my research questions. In addition, I present the data analysis method used and describe how each of these methodological decisions supports my ultimate goal of achieving in-depth, interpretive understanding of the teacher-student relationship as experienced by sonography students.
Chapter 3: Methodology and Methods

Hermeneutic phenomenology is more than just a philosophical movement; methodologically, it provides us with a possibility for understanding phenomena (Heidegger, 1927/1962). Humans experience phenomena in unique ways, and looking closely at these lived experiences with a phenomenon can lead to a deeper understanding of the phenomenon itself. In this study, the phenomenon of interest is the teacher-student relationship in sonography education. I interviewed eight recent graduates from a diagnostic medical sonography program in the southeastern United States to learn about their lived experiences in relations with their teachers while enrolled in the program. Through my interpretive analysis of the data gathered in these phenomenological interviews, I worked to uncover participants’ meanings and understandings of the phenomenon. The following research questions were explored:

1. How do sonography students experience the interpersonal relationship with their teacher?
2. What connections do graduates see between their relationships with their teachers and their emotions?
3. What connections do graduates see between their relationships with their teachers and their learning?

Hermeneutic phenomenology is a thoughtful, caring, and mindful wondering of what it means to be-in-the-world (van Manen, 1997b). It is therefore ideal for understanding the richness and complexity of human experiences (Holroyd, 2007), including those of sonography students in relationship with their teachers.
According to Gadamer (1975/2013), hermeneutics is both a universal aspect of philosophy and the methodological basis of the human sciences. And according to Heidegger (1927/1962), phenomenology is a methodological conception that characterizes “the how” (p. 50) of philosophical research. In this chapter, I explain how I carried out my research. This includes a discussion of methodology, site selection, participants, data collection method, trustworthiness, ethics, data analysis method, and representation. Methodology is the “examination of possible plans to be carried out ... so that an understanding of phenomena can be obtained” (Polkinghorne, 1983, p. 5). Methods, on the other hand, are the particular activities used to achieve research results (Polkinghorne, 1983). The methodology chosen for this study is hermeneutic phenomenology, and the methods of data collection and analysis are the hermeneutic phenomenological interview and hermeneutic phenomenological analysis, respectively.

Trustworthiness and ethics are of upmost importance in research, so I examine both of these topics in depth. I will demonstrate an alignment between the philosophy guiding this study, the methodology, and the methods; such an alignment is key to establishing the trustworthiness of research (Freeman et al., 2007; Neubauer et al., 2019). An ethical researcher must always strive to do the right thing (Gadamer, 1975/2013). In the Ethics section of this chapter, I discuss procedural ethics, situational ethics, relational ethics, positionality, reflexivity, and subjectivity, as these are all key ethical components of my study. I conclude the chapter by explaining how I analyzed the data and chose to represent my interpretive analysis. I invite the reader to continue with me on this hermeneutic phenomenological journey of exploration and thinking, beginning with a
look into my methodological decisions and the philosophical assumptions that have informed these decisions.

**Methodology**

The methodology employed in this study is hermeneutic phenomenology. This methodology is strongly rooted in the philosophy of hermeneutic phenomenology (Dibley et al., 2020; Vagle, 2018). The main tenets of Heidegger’s and Gadamer’s hermeneutic phenomenology that were presented in Chapter 2—being and understanding—are therefore ever-present throughout my research process. In addition to aligning with my chosen theory, the methodology I have chosen also aligns with my ontological and epistemological views. I believe, like Heidegger and Gadamer, that temporality and historicity are fundamental to how people experience the world. Every phenomenon—every experience of being-in-the-world—shows itself uniquely to the individual, influenced by and understood in light of their past experiences and background. Reality is therefore a unique, individual perception, and knowledge is generated from experience. One’s past influences not only what they know but also how they interpret their present situation, thus facilitating new understanding.

The life-world manifests itself in a “subjective and relative structure” (Gadamer, 1976/2008, p. 190). This is why multiple realities are possible among people having the same experience and why Hughes (2018) suggested that philosophically informed hermeneutic phenomenological research is “always, already entangling ontology and methodology” (p. 805). I believe that by speaking with previous sonography students about their experiences in relationship with their teachers, I can gain understanding about this phenomenon and that through my interpretation of their experiences, I can reveal
meaning (i.e., generate knowledge) about what it means to be-in-relation with a teacher. I agree with Holroyd (2007) that understanding arises out of being open to the perspective of others, and I agree with Polkinghorne (1983) that “all human knowledge is ultimately interpretation because it is derived from a historical and cultural perspective” (p. 228). Through hermeneutic phenomenological research, new insights can be gained about a particular phenomenon by carefully exploring and learning from the unique experiences of others (Neubauer et al., 2019).

One of the most prominent present-day hermeneutic phenomenologists is Max van Manen. van Manen (1997b) recognized that hermeneutic phenomenological philosophy paved the way for hermeneutic phenomenological methodology and suggested that the use of this methodology requires the ability to be reflective, insightful, sensitive to language, and open to experience. In addition to being a hermeneutic phenomenological researcher, van Manen is also an educator who combines his research and pedagogic approaches. “Pedagogy requires a phenomenological sensitivity to lived experience. ... [and] a hermeneutic ability to make interpretive sense of the phenomena of the lifeworld in order to see the pedagogic significance of situations and relations” (van Manen, 1997b, p. 2). This further speaks to my choice of methodology as I study what it is like for students to be-in-relation with their teachers and to experience the teacher-student relationship in sonography education.

In the health sciences field, several nursing scholars have also recognized the value of hermeneutic phenomenological research in their practice. Like van Manen, their writings about hermeneutic phenomenology have assisted me greatly in planning and conducting my research. Those who are cited throughout this chapter include (in
alphabetical order) Lorna de Witt, Lesley Dibley, Suzanne Dickerson, Mel Duffy, Pamela Ironside, Jenny Ploeg, Margarete Sandelowski, Elizabeth Smythe, Deborah Spence, and Roxanne Vandermause. Although their works primarily focus on clinical nursing and not nursing education, their knowledge of hermeneutic phenomenology and approaches to research are applicable to the field of educational research and to this study in particular. However, because hermeneutic phenomenological methodology and its corresponding methods would not exist without hermeneutic phenomenological philosophy, I have continued to rely heavily on the works of Heidegger and Gadamer to guide me throughout my research.

Hermeneutic phenomenology is used when one wants to uncover the meaning and significance of a phenomenon, as understood through the interpretation of lived experiences of that phenomenon (Dibley et al., 2020). van Manen (1997b) referred to the research questions in hermeneutic phenomenological research as meaning questions—questions that “cannot be ‘solved’ ... but can be better or more deeply understood” (p. 23). This deeper understanding enables people to act more thoughtfully and tactfully when they encounter that phenomenon again with the new and different understanding that they have gained (van Manen, 1997b). Hermeneutic phenomenology has allowed me to gain a deeper understanding of how sonography students experience the teacher-student relationship as well as how that relationship provided them with emotional and cognitive support. By applying Heideggerian and Gadamerian philosophy, I have been able to achieve in-depth, interpretive understanding of the teacher-student relationship as experienced by sonography students, thus opening up a broader understanding of this phenomenon and its influence on student learning.
Site Selection

The site chosen for this study, from which the research population was selected from, is a diagnostic medical sonography program at a private university in the southeastern United States. This sonography program is accredited by the Commission on Accreditation of Allied Health Educational Programs, and students earn a Baccalaureate degree in Diagnostic Medical Sonography upon graduation. The program has four faculty members, including me, who are responsible for teaching the classroom, laboratory, and clinical components of the sonography curriculum. Between 12 to 16 students are accepted into a cohort each year, allowing students ample time over their 2 years in the program to interact with and form relationships with their teachers. During their time in the program, which consists of their junior and senior years at the university, students spend 2 days a week on campus in sonography classes and scan labs and 3 days a week in the clinical setting. During their 2 days on campus each week, students work directly with program faculty for anywhere from 4 to 8 hours a day.

This site was selected due to my professional and personal connections to it. In hermeneutic phenomenological research, the researcher’s history and experiences are influential in directing their thinking towards certain issues, and the thing that they are directed towards often becomes the focus of their research (Dibley et al., 2020). “The researcher is situated within the very world they seek to research, connected to it on a professional and/or personal level” (Dibley et al., 2020, p. 52). This situatedness or insider-status does more than just help to gain access to a site. It brings with it historical understanding and familiarity with the site and research context, which helps researchers accomplish their purpose of exploring, understanding, and revealing meaning (Dibley et
al., 2020). My prior connections and familiarity with this site and its potential research population made it an ideal location for me to achieve in-depth understanding of what it means for sonography students to be-in-relation with their teachers. By “knowing the world” (Heidegger, 1927/1962, p. 86) of participants, I was better equipped to understand the phenomenon (i.e., participants’ experience of being-in-the-world).

Participants

Participants for this study were recruited from the site described above. All members of a recent graduating class were invited to participate, thereby ensuring equitable selection of participants from this population. In the initial recruitment email (see Appendix A), I shared basic information about the study (e.g., the topic, methodology, and data collection method) and requested that the graduates contact me if they were interested in participating. For those that expressed interest, I scheduled a time to discuss their potential participation so that I could provide more information about the study, explain what their role would entail, and answer any questions they had.

It was assumed that all recent graduates of this sonography program would have a wealth of rich, unique experiences with the phenomenon (i.e., the teacher-student relationship in sonography education), making this a purposive sample. In hermeneutic phenomenological research, purposive sampling is the method of choice “precisely because it selects people who have had the experience of interest, those who are most able to provide insights into the particular phenomenon and therefore most likely to provide data which address the research questions” (Dibley et al., 2020, p. 54). Through purposive sampling, I sought out participants who had lived experience with the
phenomenon so that they could provide relevant and meaningful data about the research topic.

In hermeneutic phenomenological research, the number of participants, or sample size, is a matter of balancing the purpose of the research with the available population from which the sample can be drawn, along with a willingness of that population to engage with the research (Dibley et al., 2020). The sample size needs to be large enough to provide sufficient data for the researcher to analyze and provide an answer to each research question. “There is no such thing as the answer in hermeneutic phenomenological research, because, although there may be similarities between experiences, each person’s experience and perspective are unique to them” (Dibley et al., 2020, p. 57). To determine the sample size, one must consider how many participants will be needed to provide enough experiential data from which insights, meaning, and understanding may be discovered and conveyed to readers in a scholarly, engaging way (van Manen, 2014). Ultimately, the richness and depth of the experiential data gathered become more important than sample size (Dibley et al., 2020). The eight recent graduates who agreed to participate in this study were experientially rich and provided sufficient data for me to analyze and provide an answer to each of my research questions.

**Data Collection**

“Every inquiry is a seeking, [and] every seeking gets guided beforehand by what is sought” (Heidegger, 1927/1962, p. 24). What Heidegger was saying is that the phenomenon and what one wants to know about it (i.e., the research questions) determine the method of inquiry. One must choose a method that will allow the phenomenon to “show itself in itself and from itself” (Heidegger, 1927/1962, p. 37). The data collection
method I have chosen to allow the teacher-student relationship to show itself is the hermeneutic phenomenological interview. “Methods are judged for their usefulness and for their success in producing meaningful understanding about the objects of inquiry” (Polkinghorne, 1983, p. 259). In hermeneutic phenomenological research, the aim is to gain insight into and reveal meaning of a given experience as understood and shared by the participant; methods that enable the voice of the participant to be heard are therefore key (Dibley et al., 2020). Both Heidegger (1927/1962, 1959/1971) and Gadamer (1975/2013, 1976/2008) focused on the centrality of language as the means by which humans reveal their experiences to others, hence the use of interviews to gather data in hermeneutic phenomenological studies.

Hermeneutic phenomenological interviews are grounded in Heideggerian and Gadamerian ways of thinking, with the goal of generating meaning and understanding about the phenomenon by eliciting the lived experiences of participants (Dibley et al., 2020). The interviews provide a way, a method, to “understand a phenomenon by drawing from the respondent a vivid picture of the ‘lived experience,’ complete with the richness of detail and context that shape the experience” (Dinkins, 2005, p. 113). The researcher must remain open and allow space for interactive exchange to occur (Vandermause & Fleming, 2011). The hermeneutic phenomenological interview, then, is more of a conversational dialogue than a question-and-answer session. The goal is to achieve a successful conversation—an open, fluid, and dynamic dialogue—that uncovers and generates understanding (Gadamer, 1975/2013; Heidegger, 1959/1971).

The interviewer is an integral part of the inquiry, as “the manner in which interviewers call forth participants’ thoughts and feelings related to a phenomenon has a
direct impact on the quality of the data obtained” (Dinkins, 2005, p. 111). The interview process must provide sufficient flexibility for participants to reveal their experiences, yet the researcher must skillfully encourage and guide the participant to remain focused on the phenomenon of interest (Dinkins, 2005). In addition, the interviewer must actively listen and take cues from the participant as the interview ensues (Vandermause & Fleming, 2011). By engaging in a true dialogue, or conversation, the researcher is able to probe deeper into participants’ responses, inviting them to explore and expand on their thoughts and feelings, thus allowing the experience to reveal itself (Dibley et al, 2020).

Gadamer (1975/2013) defined dialectic as the art of questioning and seeking truth, of preserving an orientation toward openness. “The art of questioning is the art of questioning even further—i.e., the art of thinking. It is called dialectic because it is the art of conducting a real dialogue” (Gadamer, 1975/2013, p. 375). He went on to explain that the first condition of the art of conversation is ensuring that the other person is with us; this means that rapport and trust must be established if a conversation (i.e., interview) is to be successful. This is a widely accepted view among many qualitative interview scholars, especially those who have written about approaches to interviewing grounded in phenomenological philosophy. For example, Roulston (2022) described a romantic conception of the interview, in which the goal and activity of information gathering intersects with the relational work of interviewer and interviewee. In this relational and respectful approach to interviewing, the researcher must establish personal connections and build rapport and trust in order to engage with participants. Similarly, Rubin and Rubin (2012) emphasized a conversational partnership in their responsive interviewing
approach. This style of interviewing also requires a relationship built on trust and respect, which allows the interviewer and interviewee to work together to make meaning.

Brinkmann and Kvale (2015) defined the research interview as a “professional conversation ... where knowledge is constructed in the inter-action between the interviewer and the interviewee. ... [and as] an inter-change of views between two persons conversing about a theme of mutual interest” (p. 4). They emphasized the importance of a conversational relation, one which allows knowledge to be co-constructed between interviewer and interviewee. Gadamer (1975/2013) also contended that meaning is co-constructed. Through the art of conversation, two people can work out a common meaning, and the knowledge that emerges “is neither mine nor yours” (Gadamer, 1975/2013, p. 376). This again speaks to the relational aspect of interviewing. To come to an understanding in conversation, both parties must open themselves to the other and accept the other’s point of view as valid, hence the importance of trust and respect in research interviews.

Gadamer (1975/2013) suggested that “there is no such thing as a method of learning to ask questions” (p. 374). Brinkmann and Kvale (2015) echoed this sentiment, suggesting that research interviewing is a craft that cannot be determined by a fixed, pre-determined set of rules. Likewise, van Manen (2014) insisted that hermeneutic phenomenological research cannot be reduced to a methodical schema or set of procedures. Nevertheless, there are some basic principles that I have employed in my in-depth, semi-structured interviews. The in-depth component stems from speaking with participants who have knowledge about and experience with the topic (Rubin & Rubin, 2012). The semi-structured component involves preparing an interview guide with open-
ended questions but maintaining the willingness and flexibility to ask follow-up questions as needed (Roulston, 2022). For my interview guide (see Appendix B), I crafted open-ended questions designed to encourage detailed, deep, vivid, and rich responses and to elicit authentic, in-depth self-revelations and experiential descriptions (Roulston, 2022; Rubin and Rubin, 2012).

Some additional strategies that I used while engaging in dialogue with participants are as follows:

- engaging in active listening, so that I could carefully determine which responses or topics to pursue in search of deeper meaning;
- using the interview guide cautiously, being willing to stray from the guide as needed to respond organically to the flow of the conversation;
- tolerating silence and giving participants time to think, given the complexity of the topic;
- remaining focused on the research questions when asking follow-up and clarifying questions; and
- maintaining a friendly, supportive, and non-confrontational tone, encouraging participants to talk at length about their experiences (Brinkmann and Kvale, 2015; Dibley et al., 2020; Roulston, 2022; Rubin & Rubin, 2012; Seidman, 2019).

By achieving each of these things, I was able to share in a common meaning with participants, thus achieving a true fusion of horizons.

Interviews should be conducted in a convenient, safe, private, and comfortable location that allows for high-quality audio recording (Roulston, 2022). Interviews for this study were conducted using Zoom videoconferencing, a technology that all participants
were familiar with and that allowed them to participate in the research from the privacy and comfort of their homes. The interviews averaged 55 minutes in length and were audio recorded and transcribed verbatim by me. To transcribe is to transform, to change from one form to another (Brinkmann & Kvale, 2015). Through transcription, I changed the audio recording of each interview to a textual representation of the conversation. This was the beginning phase of my analysis of the data, as I added pauses and emotional tone such as humor or sarcasm to each transcript in an effort to illuminate meaning (Dibley et al., 2020).

Confidentiality in interview research involves not disclosing private, identifiable information about participants (Brinkmann & Kvale, 2015). I worked to protect participants’ confidentiality by labeling audio recordings and transcripts with pseudonyms and removing identifying features from transcripts (Dibley et al., 2020; Vandermause & Fleming, 2011). In addition, audio recordings and transcripts were stored in secure, password-protected locations accessible only by me. Maintaining confidentiality can be a challenge when conducting research with participants from a small community, such as the sonography community, or when people are even slightly familiar with the research setting, such as a college or university campus (Esterberg, 2002; McElhinney & Kennedy, 2022; Saunders et al., 2015). In these situations, “providing only a few details about a participant ... might be enough for others to guess the person’s identity” (Esterberg, 2002, p. 50). It was therefore important for me to provide vague descriptions of the participants and to carefully consider whether any portion of the participants’ words could be identifying when presenting my research.
These concerns are discussed further in both the Ethics and Representation sections.

**Trustworthiness and Ethics**

**Trustworthiness**

Trustworthiness refers to the degree of confidence that the reader may have in the way a study was conducted and its findings (Dibley et al., 2020). Trustworthiness in hermeneutic phenomenological research requires a commitment to thinking that stays grounded in the data, while at the same time maintaining an engaged, reflexive stance in connection with theory, literature, and one’s prior experiences (Smythe et al., 2008; Spence, 2017). Validity refers to the overall merit of a study—its quality and its trustworthiness (Freeman et al., 2007). It is the “characteristic of a study design that convinces others of its soundness or quality” (Freeman, 2011, p. 544). Heidegger (1927/1962) referred to validity as “a theory of ‘judgment’” (p. 198). Essentially, validity concerns are judgments made about whether research is good and whether it can be trusted. Validity questions must be considered in light of a study’s theoretical frameworks and methodological traditions (Freeman et al., 2007).

As such, there is no one-size-fits-all approach to evaluating or judging qualitative research. In hermeneutic phenomenological studies, the most important validity issues are whether the phenomenological interpretations of the underlying meaning structures of [the participants’ experiential] descriptions are valid and executed in a scholarly manner and whether the phenomenological themes and insights emerging from the descriptions are appropriate and original. For these questions,
no procedural method will be adequate to ascertain the value, strength, originality, and significance of a phenomenological study. The validity of a phenomenological study has to be sought in the appraisal of the originality of insights and the soundness of interpretive processes demonstrated in the study. No predetermined procedure such as “members’ check” or “triangulation of multiple methods” can fulfill such demand for validating a phenomenological study. (van Manen, 2014, pp. 348–349)

The validity issues relevant to philosophically informed hermeneutic phenomenological research speak to the uniqueness of each hermeneutic phenomenological study, which is dependent on the researcher, the phenomenon, the participants, and the research context. The researcher’s ability to reveal a particular phenomenon in a meaningful and convincing way matters more than their ability to work through a generic list of validity procedures such as member checking or triangulation.

These procedures have been recognized as problematic in hermeneutic phenomenological research by other researchers as well. Because of the temporality and historicity of human experience, asking participants to confirm the accuracy of either transcripts or analyses through the process of member checking can raise concern. “The typically narrative nature of interview data makes the problem of determining accuracy of meaning and intention a deeply theoretical and moral one” (Sandelowski, 1993, p. 5). The participants’ views may have changed from the time of the interview, participants may be uncomfortable seeing their words in print, and they may not agree with the researcher’s interpretative analysis (Sandelowski, 1993). Sandelowski’s concerns may be particularly relevant in a study like this one, in which participants have shared their lived
experiences with a phenomenon as complex as the teacher-student relationship. Furthermore, because there is no fixed truth or objective reality against which an interpretive analysis can be measured, any disagreement about analytic choices can introduce friction into the researcher-participant relationship (Angen, 2000).

Triangulation also conflicts with the ontological and epistemological assumptions underlying hermeneutic phenomenological research. Triangulation is defined as using different methods or sources to provide a more accurate and objective representation of a phenomenon (Silverman, 2020). These different methods and sources may lead to different understandings of a phenomenon but not necessarily a more correct or true understanding (Gadamer, 1975/2013). Because knowledge and experience are contextual, the context of the research being conducted and the context of those taking part in the research influence the findings (Silverman, 2020). In hermeneutic phenomenological research, the contextual, situated, and historical nature of experience is valued and appreciated. “Triangulation of data fails to do justice to the situated nature of [participants’] accounts” (Silverman, 2020, p. 470). It devalues the contextualized knowledge gained from participants’ experiences and shows a lack of appreciation of participants’ unique, individual experiences with the phenomenon. Due to these philosophical and methodological inconsistencies, attempting to use procedures such as member checking or triangulation to establish trustworthiness or validity in a hermeneutic phenomenological study would be problematic.

To combat this problem, de Witt and Ploeg (2006) proposed a framework of rigor specific to hermeneutic phenomenological methodology. Drawing on van Manen’s (1997a, 1997b) work, Madison’s (1988) criteria of rigor for hermeneutic phenomenology,
and the theoretical hermeneutic phenomenological nursing literature, de Witt and Ploeg identified five expressions of rigor that can be used to assess hermeneutic phenomenological studies. They also suggested that these expressions be used to stimulate, not constrain, innovative hermeneutic phenomenological research designs, thus supporting the open and flexible nature of these types of studies. The first expression is balanced integration. This includes an articulation of hermeneutic phenomenological philosophy and its fit with the researcher and topic, an interweaving of philosophical concepts throughout all components of the study, and a balance between the voice of participants and the researcher’s interpretative analysis. The second expression of rigor is openness, which is defined as an attunement toward the phenomenon that a hermeneutic phenomenological researcher adopts and sustains throughout the study (de Witt & Ploeg, 2006). Both openness and balanced integration reflect the research process; the remaining expressions of rigor address the research outcomes.

Concreteness is the third expression of rigor in de Witt and Ploeg’s (2006) framework. It means that the study findings are written in such a way that the reader is situated concretely in the phenomenon so that they may experientially recognize it. In essence, the reader is connected to the phenomenon in a meaningful way. The fourth expression, resonance, encompasses the experiential or felt effect on the audience when reading the study findings. The findings reverberate with the reader, and the reader is able to grasp the essential meaning of the text. Actualization is the fifth expression of rigor; it addresses the future realization of a study’s resonance, or a study’s potential for impacting readers in the future (de Witt & Ploeg, 2006). Actualization has to do with the good a study will do and the lasting impact it will have on readers.
Concreteness, resonance, and actualization all influence the transferability of research findings. Transferability occurs when the reader feels as though the study’s findings are relevant and applicable in their own context and situation (Dibley et al., 2020). It is an important goal of this study; I want other sonography educators to consider my findings relevant and applicable in their programs and interactions with students. To achieve concreteness, resonance, and actualization, I have presented rich experiential accounts shared by participants in the form of composite narratives and supported those narratives with thoughtful interpretive analysis, attempting to present plausible insights that will connect and resonate with readers. To achieve balanced integration, I have weaved the concepts of hermeneutic phenomenological philosophy throughout the study and balanced the participants’ voices (i.e., verbatim quotes presented in the composite narratives) with theory and literature in my interpretive analysis and representation of the data. To achieve openness, I have remained open and sensitive to the phenomenon through sustained engagement with the phenomenon, the participants, and the data (Vagle, 2018). Although there is no recipe or map for valid and trustworthy qualitative research, “as researchers, we are always beholden to the decisions that we make” (Angen, 2000, p. 387). As such, I have used de Witt and Ploeg’s (2006) framework to enhance the quality and trustworthiness of my study while engaging with the data in creative ways.

Truth is another concept that is pertinent to the trustworthiness of my study. Heidegger (1961/1977) defined truth as the uncovering, disclosedness, and unconcealment of being. A hermeneutic truth “is not a verifiable measure but rather a stance of openness that resists the pull of traditional measures of validity to achieve a giving over of oneself to understanding” (Freeman, 2011, p. 549). Understanding is a
genuine encounter with something that asserts itself as truth through the process of interpretation (Gadamer, 1975/2013). Qualitative data “are always already interpretations” (Freeman et al., 2007, p. 27) made by participants and researchers; what a participant shares in an interview and what a researcher presents in the report are their truths. However, because being-in-the-world is not encountered objectively, truth is subjective and relative (Gadamer, 1976/2008). Assessing validity, therefore, should not be about judging the “truth-value” (Angen, 2000, p. 383) of research results.

“Hermeneutically, there is no method that can ascertain that an interpretation is correct or incorrect, true or false” (Freeman, 2011, p. 549). Researchers make claims to describe, interpret, and explain lived experience; these claims are “statements of meaning grounded in evidence and theory” (Freeman et al., 2007, p. 27). In hermeneutic phenomenological research, these interpretive claims represent the meaning that is co-constructed by the researcher and participants. A claim does not need to be irrefutable, but it does need to be sufficiently convincing “to bring about belief in its understanding and a willingness to act on the basis of that belief” (Polkinghorne, 1983, p. 259). By conducting and presenting trustworthy research, readers will be more likely to believe in my interpretations and find them relevant and applicable to their lives; hence, trustworthiness will influence the transferability of my study findings. In addition to conducting trustworthy research, it was also essential that I conduct ethical research. In the next section, I share the ethical considerations for my study.

Ethics

The human sciences are “moral sciences” (Gadamer, 1975/2013, p. 325), and interview research is, above all else, a “moral enterprise” (Brinkmann & Kvale, 2015, p.
Researchers must conduct themselves in an ethical and moral way as they make decisions that impact others; they must be ethical in terms of how they interact with participants and how they work with the data (Dibley et al., 2020; Ellis, 2007; Guillemin & Gillam, 2004; Guillemin & Heggen, 2009). Drawing on Aristotelian ethics, Gadamer explained that virtue, or morality, is based on practice and character. Thus, what is good in terms of human action is based on what one does and how one is (i.e., how one thinks, feels, and behaves). In this section, I discuss procedural ethics, which includes the basic ethical principles of respect for persons, beneficence, and justice; situational ethics, which includes ethically important moments that may arise during the research process; relational ethics and positionality, which include my relational bonds and personal involvement with those involved in the research; and reflexivity and subjectivity, which include an awareness and acknowledgement of the connectedness between me and my research.

**Procedural Ethics**

Procedural ethics involves the basic ethical principles that must be considered when conducting research with human subjects. It is typically what researchers think about when attempting to gain approval from an institutional review board prior to commencing their research. These basic ethical principles—respect for persons, beneficence, and justice—were established in the Belmont Report and are regulated in the United States by the Department of Health and Human Services’ Office for Human Research Protections. “The expression ‘basic ethical principles’ refers to those general judgments that serve as a basic justification for the many particular ethical prescriptions and evaluations of human action… [and] are particularly relevant to the ethics of research
Respect for persons involves respecting individuals’ autonomy and putting safeguards in place for those individuals who are not fully autonomous, such as those with diminished capacity or from vulnerable populations (Seidman, 2019). The first practical aspect of this principle is obtaining free and informed consent. Participation must be completely voluntary; potential participants should not feel pressured to participate, and they should understand that they have the right to withdraw from the study at any time. Informed consent helps potential participants to thoughtfully consider the research, what their role would entail, and, in the case of interview research, how their words may be used in the final report. This allows them to consider the potential risks and benefits so that they can make an informed decision as to whether, and on what terms, to participate (Guillemin & Gillam, 2004; Seidman, 2019).

The second practical aspect of this principle involves safeguards for vulnerable populations. This includes people in dependent relationships with the researcher, such as current students. When contemplating doing research with vulnerable populations, a respect for individuals’ autonomy requires researchers to consider whether the research questions could be answered another way with a less vulnerable group (Dibley et al., 2020). By choosing to conduct research with recent graduates instead of currently enrolled students, I have demonstrated a respect for my current students’ autonomy so that they did not feel any pressure or unintended coercion to participate in the study.

Prior to obtaining informed consent from participants, I clearly explained the research purpose and the study procedures, including what participants would be asked to
do, how I would work to protect their confidentiality, and how their words would be used in the dissemination of my findings. I shared with them the potential risks of participating, including possible emotional discomfort or stress from the interview, as well as possible exposure (i.e., their identities being recognizable by others reading the research report) and the personal and professional implications this may have (Dibley et al., 2020; Guillemin & Gillam, 2004; Seidman, 2019). In addition, I shared the potential benefits of participating in the research, which include being able to share their stories and contribute to the field of sonography education (Seidman, 2019). I answered any questions they had and assured them that the decision to participate was entirely theirs.

Because of the inherent power imbalance in our (previous) teacher-student relationship, it was important for the recent graduates to freely choose to participate without feeling obligated or pressured to be a part of the study.

The next basic ethical principle identified in the Belmont Report is beneficence, which involves doing no harm, minimizing possible risks, and maximizing possible benefits (Guillemin & Gillam, 2004; Seidman, 2019). It includes weighing the potential risk of harm to participants against the benefits that might be gained from the research. “The potential harms to participants in qualitative social research are often quite subtle and stem from the nature of the interaction between researcher and participant” (Guillemin & Gillam, 2004, p. 272). In interview research, this might involve the interviewer asking questions about a topic that makes the participant uncomfortable or not showing enough interest in the participant’s shared experiences. My study involved minimal risk of psychological harm, including possible emotional discomfort brought on by the sharing of sensitive information in interviews and possible exposure if
participants’ identities are recognizable by others reading the research report. As mentioned above, such exposure could impact the participants both personally and professionally.

To minimize these potential risks, I informed participants before the interview that they did not have to answer any questions that they were uncomfortable with and reminded them that they could choose to stop the interview at any time (Seidman, 2019). I have worked to reduce the potential risk of exposure by carefully securing audio recordings and transcripts and by presenting the research findings in a way that limits the likelihood of participants’ identities being recognizable by those reading the report (Dibley et al., 2020; Esterberg, 2002; Johnston et al., 2023). The benefits that might be gained from my research are the generation of knowledge and subsequent contribution to the field of sonography education and those affected by it, including future sonography students, their teachers, and the patients who they will care for. I have worked to maximize these potential benefits by presenting the findings in a way that achieves concreteness, resonance, and actualization so that readers may benefit from the knowledge generated and the meanings made. The only direct benefits to participants might include feeling listened to and cared for; I have worked to maximize these potential benefits by giving participants a voice (both during the interview and in my representation of the data), thereby demonstrating that their voice matters.

Justice is the third basic ethical principle identified in the Belmont Report. Justice involves ensuring equitable selection of participants so that the benefits and burdens of the research are shared across the community and treating participants fairly (Guillemin & Gillam, 2004; Seidman, 2019). In practice, this requires selecting research participants
for the right reasons (i.e., because of their ability to address the research questions) and not for their easy availability, compromised position, or manipulability (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979, Justice section). I selected participants from a recent class of sonography graduates due to their lived experience with the phenomenon of interest. All members of this graduating class were invited to participate, thereby ensuring equitable selection and sharing of benefits and burdens. I treated participants fairly by being honest and transparent in all of our interactions, from the initial sharing of information about the study to the meaning we co-constructed in the interviews to the way I chose to represent them in the research report.

Although these basic ethical principles of respect for persons, beneficence, and justice are important, they are not enough. In other words, one’s consideration of ethics should not stop once they receive approval from their institutional review board (Guillemin & Heggen, 2009; Seidman, 2019). Ethics approval for this study was formally obtained, with exempt status granted, prior to recruiting participants and beginning the data collection process (see Appendix C). However, ethical issues permeate every aspect of the research process, long after receiving formal ethics approval. As researchers, we can and should do more to protect our participants. This is where situational ethics, or “ethics in practice” (Guillemin & Gillam, 2004, p. 262), comes into play.

**Situational Ethics**

Situational ethics involves “the complex dynamics between researcher and participant” (Guillemin & Gillam, 2004, p. 266). It has to do with the ethical issues that arise during the seemingly routine conduct of research, requiring the researcher to make
an ethical (or unethical) decision in the moment, often without much time to contemplate their decision or seek outside advice. Guillemin and Gillam (2004) referred to these situations as “ethically important moments” (p. 265). A researcher can never predict all of the ethically important moments that may arise when working with human subjects and therefore must be prepared to apply the basic ethical principles in practice. It is in the interactions between researcher and participant that a researcher’s ethics—what they do and how they are—become most important (Guillemin & Gillam, 2004).

Rapport and trust were discussed in the Methods section because they are essential for a successful, engaging, interview relationship (Brinkmann & Kvale, 2015; Gadamer, 1975/2013; Roulston, 2022; Rubin & Rubin, 2012). However, they also have important ethical implications as interviews are filled with ethically important moments. An interview relationship built on trust may lead to the sharing of rich and insightful data, but in doing so, it requires some vulnerability of participants. Researchers seek to gain entry into the innermost zones of participants, where their deepest and private thoughts are encompassed; an ethical researcher must acknowledge and recognize participants’ zones and decide when, and how much, to push these boundaries (Guillemin & Heggen, 2009). They must balance their desire to obtain meaningful, rich data with their obligation to respect participants and do no harm. “Being ethically responsible is being able to identify and sensitively negotiate relations out of respect for the other person” (Guillemin & Heggen, 2009, p. 295).

I encountered several ethically important moments during the interviews conducted for this study. When participants opened up about sensitive topics, including emotionally charged relational experiences, I had to decide whether and how far to probe
each participant about their experiences. There were many times when I had to decide in
the moment how to respond to participants’ disclosures about me, my colleagues, and the
program I am a part of. Although these types of situations relate to the principle of
beneficence and doing no harm, each situation is nuanced and affected by both researcher
and participant, as well as the context. “It is within the dimension of ‘ethics in practice’
that the researcher’s ethical competence comes to the fore” (Guillemin & Gillam, 2004,
p. 269). Ethics in practice involves a researcher’s integrity, empathy, sensitivity, and
commitment to moral issues and action (Brinkmann & Kvale, 2015). Knowledge of
situation ethics and the ethical responsibilities it entails has enabled me to interact with
participants and the data “in a humane, nonexploitative way while at the same time being
mindful of [my] role as a researcher” (Guillemin & Gillam, 2004, p. 269). This
mindfulness of my role as a researcher and as a human conducting research with and
about other humans leads to a discussion of relational ethics and positionality.

Relational Ethics and Positionality

Relational ethics involves doing what is necessary “in order to be true to one’s
caracter and responsible for one’s actions and their consequences on others” (Slattery &
Rapp, 2003, p. 55). It strongly emphasizes our relational bonds with others and our
ethical responsibilities to those involved with our research (Ellis, 2007; Slattery & Rapp,
2003). It is closely related to Noddings’s (2013) care ethics and to Heidegger’s
(1927/1962) being-with others in that it involves researching from an ethic of care and
considering my social interrelatedness with those I am researching with and writing
about. If I want to maintain personal and professional relationships after the research is
complete, I must consider the consequences of my writing and how the experiences I
choose to reveal could cause distress to people who might be identifiable in the report, including both participants and non-participants (Ellis, 2007; Etherington, 2007; Portelli, 2008). Relational ethics is therefore part of “being a researcher and remaining human” (Etherington, 2007, p. 615).

Like ethics in practice, these highly contextual situations are related to the principle of beneficence and doing no harm. However, relational dilemmas require thoughtful and sometimes painstaking ethical decisions. Researchers must anticipate and feel the consequences of their research and consider “which questions to ask, which secrets to keep, and which truths are worth telling” (Ellis, 2007, p. 26). In hermeneutic phenomenological research, participants share their lived experiences with a phenomenon, and the researcher actively engages with the data to shed light on the phenomenon—to allow it to reveal itself through interpretation. Seeking and uncovering truth, as subjective and relative as it may be, are important goals of hermeneutic phenomenological research (Gadamer, 1975/2013, 1976/2008; Heidegger, 1961/1977). However, a consideration of relational ethics introduces a disconcerting tension between sharing that truth, allowing the phenomenon to reveal itself and withholding or modifying the truth, thus keeping the phenomenon concealed for fear of consequences (Portelli, 2008).

“Omission is political; it is also tricky, yet it is often necessary” (Taylor, 2011, p. 14). What should the researcher do when the participants’ truths could be harmful to others? These decisions become even more complicated when those “others” are people the researcher knows and cares about (Clark & Sharf, 2007; Portelli, 2008; Taylor, 2011). I am a part of the phenomenon I have chosen to investigate not only as a researcher but
also as a previous teacher of the participants and as a colleague and friend of the non-participant teachers who were discussed in the participants’ accounts. Positionality is defined as “the roles and other social locations that inform how people self-identify and define who people are taken to be by others” (Roulston, 2022, p. 172). My role as a faculty member teaching in the sonography program attended by participants undoubtedly played a role in this study due to my insider positioning.

Insider research is “undertaken by people who, before they begin to research, already have an attachment to, or involvement with, the institutions or social groups in, or on, which their investigations are based” (Sikes & Potts, 2008, p. 1). With insider research, prior relationships can facilitate rapport and provide huge benefits in terms of the ability to uncover meaning (Dibley et al., 2020; Roulston, 2022). The researcher’s knowledge of the research context and insight into participants and others involved (e.g., teachers discussed in the interviews) bring a nuanced perspective for interpretation (Chavez, 2008; Greene, 2014). My insider positioning in this study afforded many such advantages.

Participants knew that I was deeply invested in the topic because of our prior relationship as teacher and student. Furthermore, the mutual trust and respect that had been established during that relationship contributed to open and honest dialogue during the interviews. I believe that my familiarity with the research context, including the participants and the sonography program, profession, and faculty, enhanced my ability to uncover participants’ meanings and understandings of the teacher-student relationship in sonography education. Belonging to a tradition is a condition of hermeneutics; it makes it
possible to understand (Gadamer, 1975/2013). My prejudices and traditions gave me a reference point from which to understand the phenomenon in a deep, meaningful way.

However, insider research is not without complicated methodological and ethical issues, especially when the research involves sensitive topics such as interpersonal relationships, when it is conducted with or about those who the researcher has deeply embedded relationships with, or when it involves the researcher’s place of business (Clark & Sharf, 2007; Drake & Heath, 2008; Sikes & Potts, 2008; Smyth & Holian, 2008; Taylor, 2011). Consequently, it requires large amounts of impression management (i.e., considering the social implications of one’s actions) to maintain rapport and sometimes leads to selective reporting (Chavez, 2008; Ellis, 2007; Portelli, 2008). I experienced several of these challenges due to my close connections with those involved with the research and the tensions surrounding my research, personal, and professional roles.

In order to maintain rapport with participants, I needed to not only protect their identities but also accurately represent the richness and complexity of their experiences. In procedural ethics, the principle of beneficence is typically taken to mean doing no harm to participants. In fact, Clark and Sharf (2007) suggested that a researcher’s primary ethical obligation is to do no harm to participants. I believe that as researchers, we also have an ethical responsibility to do no harm to anyone associated with our research, or to at least minimize the likelihood of harm as much as possible. This includes non-participants who are associated with or may be affected by the data, and it was important for me to consider the consequences of my actions on them as well as my participants. In order to maintain rapport, friendships, and collegial working relationships with my
colleagues, I needed to carefully (agonizingly) consider which secrets to keep and which truths to tell.

Consequently, my positionality has required complex ethical negotiations as I tried to balance my needs as a researcher with those of participants and the communities involved in this study (Etherington, 2007). I had to evaluate the risks of reporting findings that might portray my non-participant colleagues or my program in an unflattering way while also considering my responsibility as a researcher to share the participants’ authentic, unedited stories (Dwyer & Buckle, 2009; Ellis, 2007; Taylor, 2011). My direct and personal involvement in the research became all too clear as I felt pulled between these multiple roles of researcher, teacher, colleague, and friend while working with the data and considering what to do with it. Like Ellis (2007), I found myself wondering, “how do we honor our relational responsibilities yet present our [data] in a complex and truthful way for readers?” (p. 14).

In my attempts to research from an ethic of care, maintain relationships with those involved with my research, and conduct ethical yet compelling research that resonates with readers, I have heeded the following recommendations while analyzing the data and making representation choices:

- speaking with dissertation committee members about my ethical dilemmas involving sensitive data and reporting options;
- considering alternative forms of representation in order to protect the identities of participants and others who might be identifiable in the report;
• involving my colleagues—those non-participants who had not given consent to participate in the study yet are intimately associated with the data—in my decision-making process and representation plans; and
• reflecting on my ethical and moral dilemmas and the role that they played in my methodological decisions so that other researchers might learn from my experiences (Clark & Sharf, 2008; Etherington, 2007; Kuntz, 2010; Saunders et al., 2015; Smyth & Holian, 2008).

Insider research has been referred to as “professionalizing the personal” (DeLyser, 2001, p. 446), and researchers are often cautioned against undertaking such studies (Sikes & Potts, 2008). However, when researchers are drawn to topics that are close to their hearts or that they are emotionally connected to, insider research often cannot be avoided. This was the case in my study, and this awareness of the connectedness between me and my research leads to a discussion of reflexivity and subjectivity.

**Reflexivity and Subjectivity**

Reflexivity in research is “a continuous process of critical scrutiny and interpretation, not just in relation to the research methods and the data, but also to the researcher, participants, and the research context” (Guillemin & Gillam, 2004, p. 275). This includes a thoughtful consideration of the ultimate purpose of the research (and whether this purpose is ethically sound), the interpersonal aspects of the research, and the influence of the researcher on the knowledge that is generated (Finlay, 2003; Guillemin & Gillam, 2004). Reflexivity must be at work in all hermeneutic activity (Gadamer, 1975/2013). It is an active, ongoing process that permeates every stage of hermeneutic phenomenological research, leading to reflexive engagement within and across horizons.
of understanding (Spence, 2017). It allows researchers to situate the study and offer transparency about their values and beliefs “that almost certainly influence the research process and its outcomes” (Etherington, 2007, p. 601).

Acknowledging one’s subjectivity in relation to the research topic and participants is an important aspect of reflexivity (Portelli, 2008; Roulston, 2022). Subjectivity refers to a researcher’s “preferences, presuppositions, opinions, beliefs, attitudes, and so forth” (Roulston, 2022, p. 172). It is closely connected to reflexivity in that the researcher is aware of the impact of their mere presence on the research and therefore continually engages with their prior understandings throughout the research process (Roulston, 2022; Spence, 2017). In hermeneutic phenomenological research, subjectivity is a given; researchers are no more isolated from their feelings or the world they live in than participants are (Dibley et al., 2020). “One’s subjectivity is like a garment that cannot be removed. It is insistently present in both the research and nonresearch aspects of our life” (Peshkin, 1988, p. 17).

A reflexive researcher is open about their subjectivity and its impact on the research process. This reflexive, self-aware analysis is not meant to pull attention away from the participants or the phenomenon; it is a way to enhance understanding of the phenomenon (Finlay, 2003). Reflexivity has been a continuous endeavor as I considered how the interactions and relational dynamics between participants and me might have influenced the stories they shared as well as my interpretive analysis of their experiences (Doucet, 2008; Finlay, 2003; Mauthner & Doucet, 2003). Over the course of the interviews, participants revealed intimate accounts about their experiences with me as well as my colleagues, and our relational dynamics undoubtedly influenced which stories
they chose to share. My close, personal involvement with the data gathered during those interviews required a rigorously reflexive analytic process in order to remain open to possible interpretations (Spence, 2017).

Humans are always situated within traditions, and an awareness of this situatedness is referred to as “historical consciousness” (Gadamer, 1975/2013, p. 294). Gadamer explained that one’s prejudices and traditions (i.e., their subjectivity) are involved in all stages of research, from the initial motivation to pursue a particular topic to the decision about how to study that topic to the way the data are interpreted and represented. A reflexive hermeneutic phenomenological researcher must “make conscious the prejudices governing [their] own understanding” (Gadamer, 1975/2013, p. 309). I have therefore worked to consciously acknowledge my historical horizon—the prejudices, pre-understandings, and presuppositions I brought to this study—in order to bring about the fusion of my past and present horizons (i.e., my interpretive understanding) in a trustworthy and ethical way.

The prejudices, pre-understandings, and presuppositions that constitute my subjectivity in relation to the research topic and participants stem from my personal history and professional experiences. As a student, I have experienced meaningful educational relations which have positively impacted my learning and my future educational and professional endeavors in significant ways. I have also had teachers who seemed to not care about their students, and I can recall how this relational dynamic negatively impacted my emotions, motivation, and engagement. As an educator, I have seen students excel and thrive with a caring, supportive teacher; conversely, I have seen them lose confidence and motivation when they did not sense a teacher’s care and
support. These experiences as both student and teacher have helped shape my teaching philosophy; my desire to form meaningful, positive, caring relationships with students; and my decision to pursue this research topic in hopes of shedding light on the importance of caring and supportive teacher-student relationships in sonography education.

Because I am connected with participants and the research context in a meaningful way, I am more than a researcher in this study; I am what Peshkin (1988) referred to as a “Nonresearch Human” (p. 20). My nonresearch humanness stems from the multiple layers of relationships that I have navigated throughout this study. Gadamer (1975/2013) suggested that in order to achieve interpretive understanding, one must direct their gaze on the phenomenon and keep their gaze fixed throughout all constant distractions originating within them; however, “to let [oneself] be guided by the things themselves is obviously not a matter of a single, ‘conscientious’ decision, but is the first, last, and constant task” (p. 279). While trying to focus on seeing the phenomenon—the thing itself—clearly, I was constantly reminded of my nonresearch humanness in this study. I could not simply ignore these distractions, prejudices, and traditions. Instead, as Gadamer pointed out, I have had to constantly acknowledge and examine them while remaining open to how the phenomenon showed itself. It is not surprising that my prior relations (i.e., my nonresearch humanness) would play such a significant role in this study. Relations are a part of human life, of being-with others (Heidegger, 1927/1962). Whether I was existing with others as researcher, teacher, colleague, or friend, these connections could not be ignored.
As the last two sections have shown, professionalizing the personal has been no easy task. Fortunately though, the methodological and ethical dilemmas associated with my positionality and subjectivity in this study have led to a greater appreciation of reflexivity and its importance in qualitative research. Reflexive work is challenging, but it has helped me to think through the research process and consider my interpersonal relationships as I immersed myself in the data. It has helped me to acknowledge not only how I affect my research but also how my research affects me. Reflexivity has been an essential component of this study, especially during the analysis and representation stages, as I worked to gain and provide insight into the teacher-student relationship in sonography education while also remaining human.

**Interpretive Analysis**

The data analysis method I have chosen to allow the teacher-student relationship to show itself is hermeneutic phenomenological analysis. According to Heidegger (1927/1962), the method of phenomenological analysis “lies in *interpretation*” (p. 61), and for an analysis to be authentic, one must bring forth phenomena in the right way, allowing them to show themselves in the way that genuinely belongs to them. The purpose of hermeneutic phenomenological analysis is to interpret human meaning and experience so that the researcher can give insight into understanding the experience in ways that resonate with others (Dibley et al., 2020). “Interpretation is not an occasional, post-facto supplement to understanding; rather, understanding is always interpretation, and hence interpretation is the explicit form of understanding” (Gadamer, 1975/2013, p. 318). Interpretation is thus a “working out of possibilities projected in understanding”
(Heidegger, 1927/1962, p. 189) that allows one to “discover and recognize a valid meaning” (Gadamer, 1975/2013, p. 397).

Despite the title of his magnum opus, *Truth and Method*, Gadamer (1975/2013) insisted that he was not proposing a method for interpretation, suggesting that understanding and interpretation were “far too dominated by the idea of a procedure, a method” (p. 302). He encouraged readers to expand the possibilities of understanding by thinking beyond a fixed method that constrains the interpretive process. Hermeneutic phenomenological analysis therefore is “not a rule-bound process but a free act of seeing meaning” (van Manen, 1997b, p. 79). There is no set, step-by-step method that can be followed to reach interpretive understanding because one does not “come to new understanding in formal, linear ways” (Dibley et al., 2020, p. 118). Even the hermeneutic circle is not a prescription for the practice of understanding; it is a description of the ontological structure of understanding (Gadamer, 1975/2013).

To expand the possibilities for understanding and interpretation, it was necessary for me to maintain a hermeneutic stance, which required an openness to thinking and questioning and an attunement to listening and understanding (Dibley et al., 2020). Thinking is a way of being, and “we learn to think by giving our mind to what there is to think about” (Heidegger, 1954/1968, p. 4). In order to make meaning of the data collected, I thought about what the data were saying about the phenomenon and asked myself questions to open up possibilities of meaning (Gadamer, 1975/2013). I listened to the words of participants as I thought and questioned, remaining open to their thoughts and experiences. And I attempted to place myself in each participant’s situation so that I
could see and understand the phenomenon from their point of view (Gadamer, 1975/2013).

Interpretive analysis of the data began during transcription. After transcribing the recordings, I read each transcript as a whole. I then re-read each transcript, line by line, noting important and memorable statements and marking comments and preliminary codes, which served as a rudimentary list of patterns and themes (Dibley et al., 2020). As I engaged in repeated readings of each transcript, I focused on the data that specifically related to the research questions, noted what seemed interesting and evoked thinking, and identified verbatim quotes which exemplified this thinking (Dibley et al., 2020). This helped me to identify working or early themes that I further developed and refined as I engaged the hermeneutic circle in a continuous back-and-forth movement between parts and whole of each transcript and between parts and whole of all data collected (i.e., thinking about each transcript in relation to all the other transcripts). I made note of what resonated with my present understanding of the phenomenon as I interpreted the meaning of the data, repeatedly returning to the transcripts to enhance and affirm my interpretations (Dibley et al., 2020).

Through all of this reading and thinking with the data, I worked to make meaning by identifying themes that seemed to reveal something significant about the phenomenon. Themes are “a way to show what we ‘see’ or ‘hear’” (Smythe et al., 2008, p. 1392) in participants’ stories. They are “the sense we are able to make of something” (van Manen, 1997b, p. 88) and are a means to get at the experiential meaning of a phenomenon. Themes are not a series of statements that are true for everyone; rather, they are an invitation to readers to think about the phenomenon in a new way (Smythe et al., 2008).
They are not meant to represent a perfect or complete understanding, but rather an understanding that is “most fully realized” (Gadamer, 1975/2013, p. 304). The themes that I identified represent my understanding of the phenomenon; they are a way for me to convey meaning, evoke thinking, and open up new understandings of what it means for sonography students to be-in-relation with their teachers.

**Representation**

The representational form chosen to bring my thematic findings to life is the composite narrative. Composite narratives are an interpretive form of representation that can be used with a variety of methodological approaches, including hermeneutic phenomenology (McElhinney & Kennedy, 2022; Wertz et al., 2011). They are created by combining data from multiple interview transcripts to present a composite, first-person account of participants’ lived experiences with a phenomenon (Johnston et al., 2023; Wertz et al., 2011). This allows the researcher to convey the richness and complexity of participants’ experiences in a concise and credible way, while presenting research findings in a format that is engaging and memorable for readers (Johnston et al., 2023).

The composite representation of data from multiple participants also decreases the likelihood of participants or others associated with the data being identifiable in the report (McElhinney & Kennedy, 2022; Willis, 2019). Composite narratives therefore offer a unique solution to many of the challenges associated with insider research, especially when the researcher is faced with sensitive data that pose an identification risk to participants or others (Johnston et al., 2023; McElhinney & Kennedy, 2022; Willis, 2019). In response to the methodological and ethical dilemmas I encountered in this study, I determined composite narratives to be the best option for representing the data in
an ethical and moral way. In crafting my composite narratives, I created a composite character student (representing all of the participants) and two composite character teachers (representing the teachers discussed in the participants’ experiential accounts). This allowed me to share participants’ authentic experiences in relation with their teachers in a way that would not link back to individual participants or faculty members.

The goal in crafting composite narratives is to achieve resonance so that the reader can personally relate to the themes and can see and understand the phenomenon in a new way (Wertz et al., 2011). After introducing my interpretive themes in Chapter 4, I explain how I created composite narratives using interview excerpts. I then present these composite narratives and offer interpretive analysis to support my findings, drawing on hermeneutic phenomenology, relational pedagogy, and current teacher-student relationship literature. Interpretation is “the product and purpose of the study” (Dibley et al., 2020, p. 160). It is the rendering provided to readers to both show the data and tell the participants’ stories (Spence, 2017). My interpretive representation of the data offers phenomenological insights so that readers can come to see and understand the phenomenon in a new and different way.

**Conclusion**

In this chapter, I have demonstrated an alignment between the philosophy guiding this study, the methodology, and the methods chosen to achieve in-depth, interpretive understanding of the teacher-student relationship as experienced by sonography students. I have demonstrated that openness and flexibility are key components of hermeneutic phenomenological research, from methodology to methods and everywhere in between (Dibley et al., 2020; Dinkins, 2005; Gadamer, 1975/2013; Heidegger, 1927/1962;
Vandermause & Fleming, 2011; van Manen, 1997b). I have shared how I collected and analyzed data in search of meaning and understanding, attempting to share in a common meaning with participants. And I have shown how understanding and interpretation are indissolubly bound together in the research process, permeated by prejudices, pre-understandings, and presuppositions (Gadamer, 1975/2013; Heidegger, 1927/1962).

Because these prejudices and traditions are involved in every interpretation, it is “constantly necessary to guard against overhastily assimilating the past to our own expectations of meaning” (Gadamer, 1975/2013, p. 316). This is where my reflexivity, or “methodologically conscious understanding” (Gadamer, 1975/2013, p. 282), has come into play. As I analyzed and interpreted the data, I continually evaluated my prejudices so that I did not become fixed in my own ways of thinking and understanding. I remained open to new meanings and horizons so that I could see the phenomenon—the thing that showed itself—in its true and genuine form. Although methodologically disciplined use of reason cannot safeguard from all error or guarantee truth, “what the tool of method does not achieve must—and really can—be achieved by a discipline of questioning and inquiring” (Gadamer, 1975/2013, p. 506). This questioning and inquiring stance in search of genuine understanding is how I have approached this study, attempting to reveal, enhance, and extend understandings of the teacher-student relationship in sonography education.
Chapter 4: Data Representation and Explicit Interpretation

Hermeneutic phenomenological research requires a reflexive process of questioning, seeking truth, and preserving an orientation toward openness (Gadamer, 1975/2013). Throughout this study, I have thoughtfully questioned, searched for truth, and remained open to the phenomenon so that I could understand what it means for sonography students to be-in-relation with their teachers. Understanding leads to a “new intellectual freedom” (Gadamer, 1975/2013, p. 261), making it possible to see connections, draw conclusions, and disclose what is enclosed. In this chapter, I present the data gathered from hermeneutic phenomenological interviews conducted with eight recent graduates of a diagnostic medical sonography program. In an attempt to uncover participants’ meanings and understandings of the teacher-student relationship in sonography education, I explored the following research questions:

1. How do sonography students experience the interpersonal relationship with their teacher?
2. What connections do graduates see between their relationships with their teachers and their emotions?
3. What connections do graduates see between their relationships with their teachers and their learning?

Through hermeneutic phenomenological analysis of the data, I worked to “discover and recognize a valid meaning” (Gadamer, 1975/2013, p. 397) that I could share with others.

Hermeneutic phenomenological analysis and representation require creativity and openness; the researcher must be willing to work with the data in various ways (Crowther et al., 2017). Sandelowski (1998) recommended that researchers transform the data (i.e.,
participants’ stories) through analysis and interpretation as opposed to simply retelling their stories. The themes and composite narratives that I present in this chapter are my interpretations of the data. They are my attempts to transform the participants’ stories and to represent the data in a “‘thought-full’ [and] thought-provoking way” (Spence, 2017, p. 837). They are the meanings I was able to make while coming to understand the phenomenon—the teacher-student relationship in sonography education—in a new and different way. I invite readers to question my interpretations and to arrive at their own understanding of meaning, acknowledging the subjectivity and relativity of the life-world that is at work in all hermeneutic activity (Gadamer, 1976/2008; Smythe et al., 2008).

My engagement with the hermeneutic circle in search of genuine understanding led to identification of the following interpretive themes for this study: a) stumbling through the darkness, b) shutting down and shutting up, c) surviving and thriving, and d) falling in love with sonography. Consistent with hermeneutic phenomenological analysis, these themes relate to ontological experiences (i.e., activities or states of being) rather than concepts, facts, or things (Dibley et al., 2020). They represent participants’ ways of being-in-relation with their teachers and allude to various aspects of a complex, multifaceted phenomenon.

For example, *stumbling through the darkness* suggests that sonography students experienced learning setbacks and negative emotions in the absence of caring and supportive educational relations. *Shutting down and shutting up* suggests that when students did not feel cared for or listened to by their teacher, they experienced decreased motivation to learn and were less willing to reach out for help. *Surviving and thriving* suggests that although sonography education is challenging, students not only fared better
emotionally in the presence of teacher care and support, but they also thrived academically in these conditions. Lastly, falling in love with sonography suggests that students were more motivated to learn and more passionate about what they were learning when they experienced caring and supportive educational relations. These themes will be illustrated using composite narratives, which are interpretive forms of representation used to express phenomenological insights (Wertz et al., 2011).

In this chapter, I begin by providing an overview of composite narratives. I demonstrate their connection to hermeneutic phenomenology and their fit with my research questions. I explain why they were chosen as a representational method for this study and describe in detail how interview excerpts were selected and crafted into composite narratives of various forms. I then present the composite narratives that I created to depict my thematic findings and illuminate the phenomenon. Crafting narratives is a way of working with the data that honors the participants’ experiences, remains close to the phenomenon being explored, and vividly brings forth the phenomenon in a concise and readable format (Crowther et al., 2017). To enhance understanding and trustworthiness, I contextualize and support the themes and composite narratives using theory and literature from Chapter 2 and continue to weave reflexivity throughout my interpretive analysis and representation of the data.

**Narratives as a Representational Form**

Narratives are a useful method of representing data in hermeneutic phenomenological research because of their ability to grab readers’ attention, connect with readers, and move readers, helping them to see the phenomenon in a new or different light (van Manen, 1997b). According to Crowther et al. (2017), both the
philosophical underpinnings and the purpose of hermeneutic phenomenological methodology support the use of narratives as a representational form. By using data provided by participants to craft rich, evocative narratives, researchers are able to shed light on participants’ experiences and reveal the phenomenon of interest. Because they offer a powerful and compelling way to convey meaning and enhance understanding, narratives are commonly used to present hermeneutic phenomenological research findings (e.g., Caelli, 2001; Crowther et al., 2017; Smythe, 2011; van Manen, 1997b).

Composite narratives differ from traditional narratives in that with composite narratives, data provided by multiple participants are combined to create an amalgamated representation of participants’ lived experience with a phenomenon; the researcher crafts this composite narrative using a singular point-of-view that is based on multiple participants’ accounts (Johnston et al., 2023; Wertz et al., 2011; Willis, 2019). Composite narratives are a cohesive way to present varied accounts from multiple participants while honoring the unique perspectives and experiences of those participants (Johnston et al., 2023). Like traditional narratives, they have the power to resonate with readers, leading to new and different understanding. This thinking and understanding are only possible through language; it is our mode of interpreting the world and the experiences of those within it (Gadamer, 1975/2013, 1976/2008; Heidegger, 1927/1962). The participants’ words, which represent their lived experience, are interpreted by the researcher and crafted into a meaningful composite that is shared with and interpreted by readers.

A key benefit of composite narratives is that by combining participants’ accounts, the researcher is able to reduce the likelihood of participants or others associated with the data being identifiable in the report (McElhinney & Kennedy, 2022; Willis, 2019). Such
additional protection was necessary in this study due to the sensitive nature of the topic, the small sample drawn from a familiar research setting, and my personal and professional connections to the participants and the research context. The use of composite narratives to represent the data thus came about largely as an ethical consideration to protect the identities of participants and non-participants (i.e., the teachers discussed in the participants’ experiential accounts) and to research from an ethic of care. As demonstrated in Chapter 3, ethical concerns must be considered when deciding on a representational form (Kuntz, 2010).

Ellis (2007) identified the use of composite characters as a strategy for writing about others in an ethically responsible way. Additionally, Tracy (2010) identified the use of creative data conflation as a strategy for protecting participants’ identities. In crafting my composite narratives, I created a composite character student to represent all participants as well as two composite character teachers to represent the teachers discussed in the participants’ experiential accounts. By creating a composite character student and composite character teachers, I was able to share participants’ lived experiences in relation with their teachers in a way that would not link back to individual participants or faculty members. The composite narratives I developed are my attempt at honoring the participants’ authentic experiences while also honoring my ethical responsibilities as a researcher, teacher, colleague, and friend.

Creation of composite narratives that represent the underlying data in a meaningful way requires prior knowledge of the phenomenon, a familiarity with the research context, and rigorous reflexivity (Wertz et al., 2011; Willis, 2019). My prior understandings and familiarity with the research context and participants made it possible
for me to better understand their experiences. However, because of my prior knowledge and subjectivity, shaping the data into composite narratives was an intensely reflexive process. I had to constantly examine how my prejudices, pre-understandings, and presuppositions were informing my emerging understandings and representation decisions so that I could remain open to how the phenomenon showed itself and reveal it in its genuine form. Furthermore, because composite narratives are a relatively uncommon form of data representation in phenomenological research, it is important to be transparent about how they are developed (Johnston et al., 2023; Willis, 2019). In the next section, I provide a detailed account of how I crafted composite narratives so that readers can trust my interpretations and can begin to see and understand the phenomenon in a new way.

**Creation of Composite Narratives**

I created two composite narratives to present the lived experiences of sonography students in relations with their teachers. I began the creative process by selecting interview excerpts that demonstrated each theme. Many participants expressed similar accounts; in these instances, I selected quotes containing evocative and impactful language—language that I felt revealed the most insight into their experience with the phenomenon and would resonate with readers. I ensured that multiple quotes were chosen from each transcript because I wanted all participants to have a voice in each narrative. Furthermore, I selected interview excerpts that were vivid but also general enough as to not pose an identification risk to participants or non-participant faculty members. Data involving particular course subjects or specific conversations were deemed as personally
identifiable and therefore not included in the narratives. This did of course limit the available data to use in the narratives, but I felt it was a necessary ethical decision.

I combined the participants’ words into two composite narratives, each of which depicts two interpretive themes. One narrative, in the form of a series of biweekly journal entries, represents the *stumbling through the darkness* and *shutting down and shutting up* themes. The other narrative, in the form of a letter to a teacher, represents the *surviving and thriving* and *falling in love with sonography* themes. Both narratives are written from the perspective of a composite character student (representing the participants) either *about or to* a composite character teacher (representing the teachers discussed in the participants’ experiential accounts). In the journal entries narrative, the composite character student is writing about their negative relational experiences with a composite character teacher. In the letter narrative, the composite character student is writing to a composite character teacher about the positive relationship they shared. The format of these narratives allowed me to represent the data in an effective and engaging way while also offering a realistic and plausible interpretation of how sonography students may choose to express their thoughts about the teacher-student relationship.

Both composite narratives were created using direct quotes from participants, and both narratives include multiple quotes from all eight participants. Except for adjustments to verb tense and pronouns, all of the language in the six journal entries came directly from participants. I created each journal entry by combining quotes from multiple participants and attempted to convey a temporal sequence in the series of entries. Through this arrangement, I was able to offer an interpretation of how the composite character student’s thoughts and feelings progressed throughout a series of interactions.
with a composite character teacher. A fictional date (shown in bold font) was added to each entry to demonstrate this chronology. In addition, I underlined one sentence or phrase from each entry that captures the essence of the entry; these sentences and phrases add another interpretive layer to the narrative and were chosen to stimulate further thinking about the phenomenon.

In the letter narrative, I added a greeting and closing (shown in bold font) as well as two short phrases (shown in italic font) to develop flow and enhance readability of the letter format. With the exception of these additions and adjustments to verb tense and pronouns, all other language in the letter came directly from participants. I crafted the letter as if it were written toward the end of the composite character student’s educational journey. This format allowed me to offer an interpretation of how the composite character student was influenced by their relationship with a composite character teacher during their time together. In the next section, I will introduce the composite character student, present both composite narratives, and offer further interpretation of what these narratives reveal about the phenomenon.

Presentation and Interpretation of Data

As described in the previous section, I created two composite narratives, both written from the perspective of a composite character student who is representative of all participants in this study. The composite character student’s name is Aletha. While the Greeks and many philosophers used the term aletheia to refer to truth and correctness, Heidegger (1972/1977) used it to refer only to unconcealment, the clearing through “which Being and thinking and their belonging together exist” (p. 445). As Heidegger (1972/1977) explained, aletheia “may not be equated with truth. Rather, aletheia ...
grants the possibility of truth” (p. 446). In other words, *aletheia*, or unconcealment, does not guarantee truth; it makes it possible for truth to reveal itself through an openness to thinking and understanding. Thus, my composite character, a sonography student named Aletha, is going to create a clearing—an opening—so that the phenomenon can reveal itself to readers. Through this unconcealment, the teacher-student relationship in sonography education will become present and near, as readers come to understand the phenomenon in a genuine way (Gadamer, 1975/2013; Heidegger, 1954/1968).

Figure 1 shows the first composite narrative, presented in the form of a series of biweekly journal entries written by Aletha about her relational experiences with her teacher, a composite character created from the data. In this narrative, the *stumbling through the darkness* and *shutting down and shutting up* themes are illustrated. This composite narrative was crafted to represent what it was like for participants while in the midst of a challenging educational experience in which they were not receiving the emotional and cognitive support that they needed. Figure 2 shows the second composite narrative, presented in the form of a letter written by Aletha to a different teacher, also a composite character created from the data. In this narrative, the *surviving and thriving* and *falling in love with sonography* themes are illustrated. This composite narrative was crafted to represent what it was like for participants when they did form close, supportive bonds with their teacher during their time together. I acknowledge that these themes and composite narratives are not the only ways to represent the data or the only stories to tell with the data. However, they do represent my interpretation—my understanding—of how the participants in this study experienced the teacher-student relationship in sonography education.
Aletha’s Journal

September 18
I just don’t know what she expects, and I don’t know how she expects me to read her mind. I’m here, I’m willing to give her all I’ve got. But what does she really want from me?!! She’s not telling me; she’s not showing me. She just says that we should be able to get it. But I’m not getting it, I don’t know what I’m doing, and I don’t know what I’m supposed to do to get better. It’s like pulling teeth trying to get help from her in lab, and that’s making it really hard to learn—really, really hard. Maybe I’m doing something wrong, but I just feel so defeated and don’t even know what to do at this point.

October 2
I feel like I’m in a maze, and I don’t know which way to go or which way to turn. I’ve done everything that I know to do in order to be successful in this class, but nothing is working. I don’t feel like I can talk to her, and I don’t feel like she wants to help me. The connection just isn’t there. It’s confusing and frustrating and exhausting. I get so irritated trying to study that I want to throw my computer at the wall. I’m not soaking things in because everything is so jumbled; it’s just chaos. I genuinely want to learn this stuff, but I just don’t think I can do it.

October 16
I don’t know if she realizes that the way she treats us—the way she is as a teacher—makes us feel like we don’t matter as students or as people. I asked a question in class today, and she basically blew me off. She made no attempt to find out what I wasn’t understanding or to explain it in a different way, and that showed that she doesn’t really care whether I learn the material or not. She says that she cares, but she doesn’t show that she cares. The care isn’t there in her actions, and that’s making it hard for me to care about learning.

October 30
I have so much anger built up that it’s carrying over into my personal life. I’m snappy all the time, constantly on edge and just angry, so freaking angry. I’m losing sleep over content that I’m not grasping and that she’s not helping me grasp. I don’t feel heard. I don’t feel respected. It’s like it’s her world, and we’re just living in it. I’m not understanding the information and I can’t get the support I need, so what’s the point? I know I’m not gonna succeed, so what’s the point?! I’m not mentally checked in; the whole class feels like wasted time and wasted stress.

November 13
I tried talking with her and letting her know how stressed out I am, but she doesn’t seem to care. If I’m struggling with something, I don’t think it’s too much to expect for my teacher to try to help me understand why I’m not learning. But she made me feel like I was beyond help, like there’s nothing she can do to help me if I don’t already understand. It’s like it never occurred to her to think, “maybe there’s something that I’m doing that’s making things confusing for students. Maybe there’s something that I could do to help them learn better.” She wants us to be better students. But does she ever think about how she could be a better teacher?!!

November 27
I know I’m not learning this material like I should be, and I feel anxious about all of it, every single bit of it. I’m just trying to get by, just trying to get through each week and get the minimum grade needed to pass the class and be done. Anything that we say to her goes in one ear and out the other, and that just screams that she doesn’t care. Our concerns get brushed off, and our ideas get shot down. It’s just not a conducive learning environment. I dread going to class and am on edge the whole time I’m there. I can deal with a lot of things, but this is just over the top. I literally hate this class.

Figure 1
Journal Entries
Dear Teacher,

You have made such a difference in my life, and I wanted you to know how much I appreciate you for supporting me, caring for me, and building my confidence. I’ve never had a teacher like you, and I honestly don’t think I would have fallen in love with sonography like I have if it weren’t for you.

It was always evident that you cared about your students. You cared about us as people, and you cared about us learning the information. Of course we had to do the work, but if we had any questions, you were always willing to explain what it was we were missing. Teachers don’t always do that, and it really does make a huge difference. It showed that you cared about me and making sure I knew the material so that I could take great care of my patients. And because of that, I started learning the information and grasping it in a way that I never thought I would.

You also made me feel welcomed and like I belonged. I could come to you about anything because you never made me feel stupid. I felt like you were there to help me get better, not to judge me for what I wasn’t understanding or wasn’t doing well. That set me up for success because I knew that I had help available if I ever needed it, and I wasn’t ashamed to ask for it. You genuinely listened and offered advice, and you had a way of making me feel important, like I mattered. I felt like you saw me as a human first and a student second, and that has meant the world to me.

When I came into the program, I doubted that I was as good as everybody else. I struggled with self-confidence, but you made me feel like I was just as capable as everybody else. Your faith and confidence in me made me believe that I could do better and made me truly want to do better. Even when I was struggling, I knew I could get through it if I just put in the work, and that was because you believed in me. You helped me to feel competent in what we were learning, and you made me feel like I could master the content. That made class and lab fun, and it made me want to challenge myself to scan more and learn more.

You were stern when you needed to be, but you also allowed there to be a relaxed, comfortable relationship where it didn’t feel so pressured. It wasn’t like you just had a job to do and you were there to do it and get it over with. You were very particular and would tell me if I was slacking, but I appreciated that because I always knew it was coming from a place of care. It also motivated me because I wanted to live up to your expectations and make you proud. I’m so excited to become a sonographer, and that has so much to do with the way you are, the way you taught, and the way you helped me succeed! Thank you for encouraging me to be the best that I can be for myself, the doctors, and the patients.

With love and gratitude,
Aletha

Figure 2
Dear Teacher Letter

These composite narratives reveal the relational nature of sonography education, with teachers and students existing in ways that are profoundly connected. Being-in-relation is a way of being-with others, of connecting with others. Heidegger (1927/1962) described being-with others as a constituent element of being-in-the-world; thus, our relationships (i.e., our being-in-relation with others) are a vital part of how we are living.
in and experiencing the world. It is evident in both narratives how much educational relations influenced participants’ ways of being and experiencing the learning environment. From a relational pedagogical perspective, learning happens in and through meaningful, positive, caring teacher-student relationships, and learning is inhibited without these types of supportive relationships (Bingham & Sidorkin, 2010; Hinsdale, 2016; Margonis, 1998; Pranjic, 2021). Both teaching and caring are ways of being-in-relation with students (Aspelin, 2021; Biesta & Stengel, 2016; Noddings, 2003, 2005, 2013).

**Research Question 1**

To shed further light on participants’ perceptions of the teacher-student relationship, I begin by exploring the quality or character of the teacher-student relationship expressed in each composite narrative. According to Sidorkin (2023), teacher-student relationships are grounded in student well-being but are focused on student growth and development, and the quality of the relationship can be represented as the balance between these two dimensions. Concepts from both of these dimensions were infused throughout each narrative, including comfort, security, acceptance, validation, recognition, and care from the well-being dimension and challenge, motivation, direction, thinking, learning, and becoming from the growth dimension. Closely related to Sidorkin’s well-being and growth dimensions are Hagenauer and Volet’s (2014) affective and support dimensions. Concepts from these dimensions were apparent in the narratives as well, including care, respect, connectedness, and closeness from the affective dimension and approachability, availability, encouragement, challenge, clear expectations, and high standards from the support dimension.
In the journal entries composite narrative, there were multiple instances in which Aletha, the composite character student, felt a lack of recognition, comfort, acceptance, connectedness, validation, care, closeness, and respect—all concepts from the well-being/affective dimension. Additionally, there were multiple instances in which Aletha expressed a lack of clear expectations, direction, motivation, approachability, availability, and learning—all concepts from the growth/support dimension. With these crucial components missing from both dimensions of the teacher-student relationship, the relational quality was compromised, and the devastating effects on Aletha’s emotions, motivation, engagement, and learning were glaringly evident.

Conversely, in the letter composite narrative, there were multiple instances in which Aletha did feel a sense of care, acceptance, comfort, validation, recognition, security, connectedness, and closeness. In addition, she experienced encouragement, challenge, direction, thinking, approachability, availability, motivation, learning, clear expectations, high standards, and becoming. With the overwhelming presence of concepts from both the well-being/affective and growth/support dimensions, the relational quality was exceptional. The essential elements of a meaningful, positive, caring teacher-student relationship were felt, and this had clear and uplifting effects on Aletha’s emotions, motivation, engagement, and learning.

Research Question 2

Regarding whether and how the relationships with their teachers provided participants with emotional support, the composite narratives provide insight into this as well. In the journal entries narrative, Aletha’s emotions can be seen to progress throughout the series of entries, from feeling discouraged and defeated; to confused,
frustrated, exhausted, and irritated; to insulted, neglected, and apathetic; to angry, disrespected, and hopeless; to stressed, overwhelmed, and disappointed; to anxious and demoralized. Due to the poor quality of the teacher-student relationship, the participants did not receive the emotional support that they needed. As expressed in the narrative, the connection was not there, and this led to Aletha developing a hatred for the course.

In the letter narrative, Aletha’s emotions are at the other end of the spectrum. Participants felt grateful, valued, enthusiastic, accepted, encouraged, worthy, confident, hopeful, joyful, interested, comfortable, driven, excited, and inspired due to the relational bonds that they formed with their teacher. The positive relational quality and resulting emotional support led to Aletha developing a love for the content and profession, a stark contrast to the hatred expressed in the journal entries narrative. These findings align with the current higher education literature, in which students felt encouraged, joyful, hopeful, enthusiastic, and valued in the presence of caring and supportive teacher-student relationships and stressed, anxious, frustrated, and discouraged in the absence of caring and supportive teacher-student relationships (Anderson et al., 2020; Guzzardo et al., 2021; Kurtz, 2022).

Research Question 3

The composite narratives also provide insight into whether and how the relationships with their teachers provided participants with cognitive support. It is evident in both narratives how the relational quality impacted the participants’ thoughts about learning. Beginning with the journal entries narrative again, Aletha, the composite character student, was “not getting it” and did not know what to do to get better. She did not feel like the teacher wanted to help her or that the teacher cared. She was finding it
hard to learn and hard to care about learning. She was “struggling,” “not soaking things in,” not grasping the content, “not mentally checked in,” and not learning the material like she felt she should have been. It was “not a conducive learning environment” without the cognitive support provided by a meaningful, positive, caring teacher-student relationship.

On the other hand, in the letter narrative, Aletha was learning the information. She felt like the teacher cared about her learning and wanted to help her learn, so she was not ashamed or afraid to ask for help. She felt “motivated,” “capable,” and “competent,” and she wanted to live up to the teacher’s expectations and make the teacher proud. She achieved success and attributed her success to the teacher’s care, support, and encouragement. With the cognitive support provided by this meaningful, positive, caring teacher-student relationship, Aletha became the best sonographer that she could be for herself and her patients. These findings also align with the current higher education literature, in which students were more motivated to learn, more engaged in their studies, and more willing to reach out for help when they experienced caring and supportive teacher-student relationships (Anderson et al., 2020; Guzzardo et al., 2021; Kurtz, 2022; Miller & Mills, 2019; Parnes et al., 2022; Pychyl et al., 2022).

Discussion of Findings

In light of what all of these data reveal about participants’ experiences in relations with their teachers and how these relational experiences influenced their emotions and learning, it is important to consider why meaningful, positive, caring teacher-student relationships are not always formed. Teachers, through the relationships they form with students, create circumstances for belonging and meaningfulness (Bingham, 2011). They
must acknowledge and respect students’ unique identities, needs, and opinions so that students are open to the teacher challenging, motivating, and pushing them in a particular positive direction (Bingham, 2010; Sidorkin, 2000). As revealed in both narratives, whether Aletha felt welcomed, like she mattered, listened to, and respected had profound effects on her perception of the relational quality, her thoughts about the teacher, and her thoughts about learning.

Teaching is a way of being-in-relation with students (Aspelin, 2021; Biesta & Stengel, 2016; Noddings, 2003). Because the character of the relationship is what makes learning possible (Margonis, 1998), teachers must consider how they are being-with their students. Being-with others “maintains itself between the two extremes of ... that which leaps in and dominates, and that which leaps forth and liberates” (Heidegger, 1927/1962, p. 159). The student’s perception of the teacher’s power, of how the teacher exercises their influence, can cause the relationship to either flourish or deteriorate (Bingham, 2010). In the journal entries narrative, Aletha did not feel heard or respected; she felt like it was the teacher’s world and she was just living in it, implying that Aletha had no say in the relationship. She wondered if the teacher realized that how they were as a teacher (i.e., their way of being-in-relation with students) made students feel like they did not matter as students or as people. In the letter narrative, however, Aletha felt important and like she mattered to the teacher. She recognized that the way the teacher was (i.e., their way of being-in-relation with students) helped her to succeed and made her excited to become a sonographer.

Caring is also a way of being-in-relation with students, and teachers create conditions for caring relations to flourish by connecting with students in meaningful ways
(Noddings, 2003, 2005, 2013). But why is it that caring relations are not always formed, even when the teacher does in fact care? This is a question that I repeatedly considered when analyzing the data because I know that all of the faculty in my program (i.e., the teachers discussed in the participants’ experiential accounts) do truly care about their students. So how are there such discrepancies in the participants’ relational experiences with their teachers? According to Noddings (2016), “a person earns the label ‘caring’ by regularly establishing caring relations, and a caring relation requires that the cared-for recognize the caring” (p. 341). The attitude of the one-caring is conveyed to the cared-for by actions; the one-caring has to show that they care, not just say that they care (Noddings, 2013).

Furthermore, without engrossment and motivational displacement, teachers fail to be present in their interactions with students, and caring relationships are not formed (Noddings, 2013). Engrossment is an attentiveness or receptivity to the student’s needs, and motivational displacement is a shifting of motive energy toward meeting those needs (Noddings, 2013). There were many mentions of care (either its presence or absence) in all of the interviews, and it is evident in both narratives that caring relationships were formed in some cases but not others. In the journal entries narrative, Aletha did not experience a caring relationship with the composite character teacher. Like Noddings, she recognized that care is conveyed through actions, not words. Aletha did not feel that the teacher was attentive or receptive to her needs and did not feel that the teacher cared about meeting her needs. On the other hand, in the letter narrative, Aletha stated that “it was always evident” that the teacher cared, implying that the teacher regularly
established caring relations and that the caring was in fact recognized; Aletha always knew the teacher was “coming from a place of care.”

“A relation is a shared understanding between two people of what they are to each other, and what kinds of interactions are expected, and what interactions are not acceptable” (Sidorkin, 2023, p. 53). Another possible reason why meaningful, positive, caring teacher-student relationships are not always formed is that there is a lack of communication preventing a shared understanding from occurring. To come to a shared understanding in which expectations are made clear, the teacher and student must be in continual dialogue. Both parties must open themselves to the other and accept the other’s point of view as valid; this requires rapport, trust, and a willingness to listen (Gadamer, 1975/2013). In the journal entries narrative, Aletha did not know what the teacher expected, did not feel that her expectations were being met, and did not feel recognized or validated; thus, the relational quality was poor. In the letter narrative, expectations were clear, and the interactions between the composite character student and teacher were positive, indicating that the participants’ expectations were met. Aletha felt recognized, validated, and supported, and this obviously affected the quality of the relationship in a positive way.

Yet another thing to consider is what sonography students want and need out of the teacher-student relationship. How do they want their teachers to be-in-relation with them? According to Noddings (2013), every student wants to be cared for, but the caring that each student yearns for is unique to their needs and desires. Thus, there is no “recipe for caring” (Noddings, 2013, p. 17), no steps a teacher can follow to form caring relationships with their students. And just like there is no recipe for caring, there is no
recipe for teaching (Biesta & Stengel, 2016). This is because they are both relati
onal. They are both participant- and context-dependent; therefore, each teacher-student rela
relationship is unique. Students have complex ways of understanding influenced by their past experiences and present situation, and “the teacher’s distinctive role is in calling out those traits of every student which will strengthen each one’s intellectual engagement and enhance each life” (Margonis, 1998, p. 254). In the journal entries narrative, Aletha wondered whether the teacher ever thought about how they could be a better teacher, implying that she did not think that the teacher was fulfilling their role. However, in the letter narrative, Aletha could not speak more highly of the teacher, stating that she has never had a teacher who impacted her life in such a positive way.

I contend that a relational pedagogical approach is the solution to connecting with students in meaningful ways—ways that strengthen their intellectual engagement and enhance their lives. Adams (2018) defined relational pedagogy as “the intentional practice of caring teachers interacting with students to build and sustain positive relationships that cognitively and emotionally support their students throughout their journeys together” (p. 2). This study showed that when positive relationships were not formed, participants did not receive the emotional and cognitive support that they needed. They were left stumbling, encountering multiple obstacles to their learning and existing in darkness—in a world of negative emotions. In addition, they began to shut down, losing interest and motivation in learning, and shut up, feeling like there was no point in reaching out to the teacher for help. Conversely, when positive relationships were formed and participants did receive the emotional and cognitive support that they needed, they survived and thrived. They made it through the coursework and excelled in their learning.
because of the close and comfortable connection that they shared with their teacher. They also fell in love with sonography; they enjoyed learning and were motivated to learn, and this led to an intense passion for the field and the profession.

These findings are intended to offer both students and teachers a new understanding of the complex situations they encounter when being-with each other and to remind teachers of the importance of building and maintaining meaningful, positive, caring relationships with their students. These relationships are the preconditions for effective teaching and learning, so it is imperative that teachers honor educational relations, take relational dynamics seriously, and find the time and space to relate meaningfully to their students (Margonis, 1998, 2010). When meaningful connections are made, teachers are able to “awaken the desire to learn” (Gadamer, 1999/2001, p. 534) in students. As the data in this study have shown, the benefits of these meaningful connections to participants’ emotions as well as their learning were clear and impactful.

**Opening of Horizons**

In this chapter, I have presented interpretive themes and composite narratives to share the participants’ stories in a “‘thought-full’ [and] thought-provoking way” (Spence, 2017, p. 837). I have attempted to allow the teacher-student relationship in sonography education to show itself in its true and genuine form so that readers can come to see, think about, and understand the phenomenon in a new and different way. I have explored participants’ perceptions of the teacher-student relationship (Research Question 1) and whether and how those relationships provided them with emotional and cognitive support (Research Questions 2 and 3). I have offered insights into each of these questions but do not claim to have provided a definitive answer to any of them, for the research questions
in hermeneutical phenomenological research “cannot be ‘solved’ ... but can be better or more deeply understood” (van Manen, 1997b, p. 23).

According to Gadamer (1975/2013), “the essence of the question is to open up possibilities and keep them open” (p. 310). Gadamer typically referred to horizons in a historical sense (i.e., past and present horizons, with understanding occurring through a fusion of these horizons). But he also described horizons in a cognitive sense, speaking of a “narrowness of horizon, of the possible expansion of horizon, of the opening of new horizons, and so forth” (Gadamer, 1975/2013, p. 313). Through the phenomenological insights I have offered, I hope to have opened up possibilities for thinking and understanding so that new horizons can emerge. However, “every understanding is only ‘underway’; it never comes entirely to an end” (Gadamer, 1976/2008, p. 211). In the following chapter, I examine the significance of these findings for sonography education, highlighting the need for meaningful, positive, caring teacher-student relationships in order for students to reach their full potential as competent and caring sonographers. Thus, this hermeneutic phenomenological journey of exploration and thinking is still only underway.
Chapter 5: Conclusions

Throughout this journey of exploration and thinking, I have maintained a questioning and inquiring stance in search of genuine understanding, attempting to reveal, enhance, and extend understandings of the teacher-student relationship in sonography education. Both hermeneutic phenomenology and relational pedagogy provided the theoretical framework for these efforts, as I worked to achieve in-depth, interpretive understanding of the teacher-student relationship as experienced by sonography students. Hermeneutic phenomenology served as the overarching guide for understanding human experience, while relational pedagogy provided a more focused lens for understanding the connections formed between teachers and students. By combining these approaches, I have been able to provide insight into what it means for sonography students to be in-relation with their teacher.

Through my review of the literature, I identified the constitutive elements of meaningful, positive, caring teacher-student relationships in higher education and demonstrated the connections between these types of relationships and students’ emotions, motivation, engagement, and learning. The literature showed that an emotionally supportive environment in which teacher-student relationships are nurtured is essential for student learning and growth and that students who experience a meaningful, positive, caring teacher-student relationship are more likely to invest effort into their learning and achieve academic success. Teacher-student relationships are fundamental to teaching and learning and therefore must be understood, valued, developed, and nurtured.
Informed by theory and literature, I conducted hermeneutic phenomenological interviews with eight recent graduates from a diagnostic medical sonography program to learn about their lived experiences in relations with their teachers while enrolled in the program. I explored participants’ perceptions of the teacher-student relationship (Research Question 1) and whether and how those relationships provided them with emotional and cognitive support (Research Questions 2 and 3). The participants, through the stories they shared, made it possible for me to uncover meanings and understandings; their words, representing their lived experiences, have been an instrumental part of this hermeneutic phenomenological journey. I used hermeneutic phenomenological analysis to make meaning of the data gathered in these interviews and identified the following interpretive themes: a) stumbling through the darkness, b) shutting down and shutting up, c) surviving and thriving, and d) falling in love with sonography. These themes represent participants’ ways of being-in-relation with their teachers and allude to various aspects of a complex, multifaceted phenomenon.

I then created composite narratives to depict my thematic findings in a way that honors the participants’ authentic experiences while also honoring my ethical responsibilities as a researcher, teacher, colleague, and friend. These composite narratives were written from the perspective of a composite character sonography student named Aletha, who is representative of all participants in this study. Aletha created an unconcealment—a clearing or opening—so that the phenomenon could be brought to light and seen. The composite narratives, crafted in the form of a series of journal entries and a letter to a teacher, were my attempt at “producing a sense of nearness and intimacy
with the phenomenon” (van Manen, 2014, p. 249) so that readers can connect to the phenomenon and come to see and understand it in a new and different way.

These composite narratives showed that teachers and students may be together in the same space but not be truly connected. As demonstrated in the journal entries narrative, Aletha experienced a negative teacher-student relationship and did not receive the emotional and cognitive support that she needed. “The connection just [wasn’t] there,” and this had devastating effects on Aletha’s emotions, motivation, engagement, and learning. She was *stumbling through the darkness*, and eventually began *shutting down and shutting up*. Conversely, in the letter narrative, Aletha did receive the emotional and cognitive support that she needed. Aletha felt welcomed and cared for, and she felt like her teacher wanted to help her succeed, all of which had clear and uplifting effects on her emotions, motivation, engagement, and learning. She was *surviving and thriving* and in turn *falling in love with sonography*. According to Noddings (1988), it is important to report on both successful and unsuccessful attempts at forming meaningful, caring educational relations so that educators can learn from these experiences and become more aware of our own ways of being-with students.

“Sonography programs are highly demanding” (Penny, 2021, p. 9). Outside of regularly scheduled class, lab, and clinical hours, students must spend a large amount of time studying and improving their scanning skills, and this can be physically and emotionally exhausting. Because it is easy for students to become overwhelmed with the amount of work that must be completed in a sonography program, they need the emotional and cognitive support of their teachers if they are to be successful (Penny, 2021). The findings in this study support Penny’s assertion and support the need for a
relational and caring approach to teaching in sonography education. According to Freeman (2014), “as we construct an understanding of a complex topic, we are also actively engaging in a reconstruction, a possible configuration of how things could be, or of how this understanding could change the world” (p. 831). When interpreting the findings in this study, I urge readers to consider how things could be in sonography education and in the sonography profession if all students were to experience meaningful, positive, caring teacher-student relationships like the one Aletha wrote about in her letter.

**Significance of the Study**

This study highlights the centrality of educational relations to teaching and learning in sonography education. Sonography students need to experience meaningful, positive, caring teacher-student relationships in which they feel supported in their learning if they are to reach their full potential as competent and caring entry-level sonographers. As Margonis (1998) suggested, it is the character of the relationship itself that makes learning possible. Diagnostic medical sonographers must be educationally prepared, clinically competent, and committed to enhanced patient care (Commission on Accreditation of Allied Health Education Programs, 2020). Because the knowledge and expertise of the sonographer directly impact the quality of care they provide to their patients (Gornick, 2020; Kremkau, 2022), it is imperative that sonography students obtain a high-quality education. As the results of this study indicate, one of the ways that sonography educators can improve the teaching and learning process is through a relational pedagogical approach—through a focus on building and maintaining meaningful, positive, caring teacher-student relationships that support students both cognitively and emotionally.
When teachers honor educational relations, take relational dynamics seriously, and find the time and space to relate meaningfully to their students, “the relational prerequisites for good pedagogy” (Margonis, 1998, p. 254) are likely to emerge. Because good pedagogy depends on good relationships between teachers and students, teachers must recognize the relational nature of teaching and learning and prioritize educational relations. They must have a relational mindset (i.e., they must value the teacher-student relationship and consider relationship-building to be an important aspect of teaching and learning) and a relational intention (i.e., they must devote time to get to know their students and purposefully build meaningful relationships with students; Adams, 2018; Robinson, 2022). Teachers who have a relational mindset and a relational intention are “convinced of the educational value of caring relationships as ways to expand the fullest possible outcomes of the act of teaching” (Walker-Gleaves, 2019, p. 107). This study has shown that meaningful, positive, caring teacher-student relationships contribute immensely to improved student outcomes and behaviors in sonography education; thus, it is not only the students who benefit from these relationships but also their future patients.

Sonography educators are able to effect change in the sonography profession by preparing the next generation of sonographers (Penny, 2021). According to Adams (2018), the enactment of relational pedagogy requires not only a relational mindset and relational intention but also a purpose for teaching that aligns with student growth. By supporting the growth of their students, sonography educators have an opportunity to improve the quality of care that graduates provide to their patients, thereby impacting the sonography profession in a positive way. From my experience, most sonography educators already have a purpose for teaching that aligns with student growth and
improved patient care. However, some may not be as familiar with the benefits of relational and caring approaches to teaching. By opening up a broader understanding of the teacher-student relationship and its influence on student learning, I hope this research encourages all educators to adopt a relational mindset and relational intention and to embrace relational pedagogy in their classrooms.

Biesta and Stengel (2016) described education as “a practice constituted by its purposes” (p. 64), and two of the purposes they identified are especially pertinent to sonography education. One is the qualification of students (i.e., qualifying them to be able to work in a particular field, such as sonography). Another is the socialization of students (i.e., initiating them into a particular professional culture, such as the culture of sonographers). These are two extremely important purposes of sonography education, and they both align with student growth and improved patient care. Students must gain the knowledge and skills needed to pass difficult credentialing exams and perform highly complex tasks in the clinical setting. They must also learn what it means to be a sonographer; they must learn how to interact with other health care professionals and how to always put their patients’ needs first.

Several of the participants in this study who experienced a caring teacher-student relationship spoke about the impact this had on their ability to provide quality patient care. One participant described always knowing how much her teacher cared about her and her success. This caring teacher “instilled great things” in her, making sure that she “knew [her] stuff” and that she “knew that there’s someone on the other side who’s needing these exams done.” With all that is expected and required of sonography students, it is sometimes easy to lose sight of the person “on the other side.” But that
person (i.e., the patient) needs to be at the forefront of students’ minds when they are learning to become a sonographer. As a medical doctor and educator explained to his students almost 100 years ago, “the secret to the care of the patient is in caring for the patient” (Peabody, 1927, p. 882). This statement still rings true today, for both physicians and sonographers. Patients are human beings who need to be cared for, and students need to experience caring relations with their teachers so that they understand the importance of forming caring relations with their patients.

**Implications for Practice**

The participants in this study wanted to feel like they mattered; they wanted to feel like their teacher cared about them and wanted to help them learn. Their relationships with their teachers greatly influenced their ways of being and experiencing the learning environment, supporting Gadamer’s (1999/2001) assertion that relationships with others are “the key idea of any kind of education” (p. 531). Education is about human beings who are in-relation with one another, and it is important for teachers, students, and institutions to recognize the centrality of caring relations to the educational experience (Stengel, 2010). The relational nature of teaching and caring require attention not only to the actions and responses of teachers and students but also to the settings in which they are being-with one another (Noddings, 2001). In this section, I will present implications and recommendations for teachers, students, and institutions.

Advocates of relational pedagogy have suggested that college teachers have an obligation, or responsibility, to care for students and develop meaningful relationships that support students both cognitively and emotionally (Pranjic, 2021; Su & Wood, 2021; Walker-Gleaves, 2019). Ways that teachers contribute to meaningful, positive, caring
teacher-student relationships include listening to students, showing empathy, supporting students and their learning, setting high expectations for students, praising students when appropriate, getting to know students, showing concern for students' personal lives, reaching out to students who seem to be struggling, creating a safe and supportive learning environment, respecting students, and recognizing students as unique individuals who have something valuable to offer (Pranjic, 2021; Strachan, 2020). Although each teacher-student relationship is unique, these suggestions align with what the participants in this study seemed to want and need from the relationship. These recommendations are just some of the ways that sonography educators can establish and maintain a “climate of care” (Noddings, 2012, p. 777) and improve the teaching and learning that occur in their classrooms.

Due to the mutual and reciprocal nature of meaningful, positive, caring teacher-student relationships, students must also contribute to the relationship in significant ways (Aspelin, 2021; Hagenauer et al., 2022; Karpouza & Emvalotis, 2019). As discussed in Chapter 2, students, as the cared-for, must recognize and respond to the teacher’s caring; this response may include a smile, a nod, a question, an expression of gratitude, a courteous gesture, a progression toward a learning goal—some type of acknowledgement that the caring has been received (Noddings, 1988, 2001, 2005, 2013). According to Noddings (2013), it can be exhausting and demotivating for teachers when students do not seem to respond to their caring. Other ways that students contribute to meaningful, positive, caring teacher-student relationships include showing enthusiasm and interest, being diligent in their academic responsibilities, demonstrating a desire to learn,
respecting the teacher, and being open and honest with the teacher (Hagenauer et al., 2022; Karpouza & Emvalotis, 2019).

Although teachers and students are the primary parties involved in these educational relations, they cannot do this relational work on their own. They need the commitment and support of their college or university (Su & Wood, 2023). Institutional impediments to the formation and development of meaningful, positive, caring teacher-student relationships include heavy faculty workloads and large class sizes (Hagenauer et al., 2022; Walker-Gleaves, 2019). These impediments can lead to faculty fatigue and limit the time that faculty have with each student, making it less likely that meaningful, caring relationships will be established (Noddings, 2001). Ways that institutions can foster a culture of relationship-building include allocating funding for relational pedagogy professional development opportunities, factoring time into workload allocations for faculty to form meaningful relationships with students, and recognizing the commitment and efforts of relationship-focused faculty in salary and promotion considerations (Adams, 2018; Felten & Lambert, 2020; Su & Wood, 2023).

Gadamer (1999/2001) feared that the changing dynamics in American and English universities (i.e., the large class sizes leading to fewer opportunities for meaningful teacher-student interactions) would be detrimental to learning, noting that teachers and students could not truly be-in-relation without spending time together and getting to know each other. In sonography programs, the class sizes are relatively small compared to the large classes in many undergraduate programs. Additionally, students and teachers spend a lot of time together; depending on the program, students may be with the same teacher for up to 2 years. This is a luxury that not all teachers and students
have, so this time together should not be wasted. It should be used to get to know each other, to form meaningful, positive, caring teacher-student relationships that are grounded in student well-being and focused on student growth. Sonography teachers and students, as well as the administrators overseeing these programs, must work together to improve educational relations so that we can enhance the educational experiences of students and contribute to the sonography profession in a positive, impactful way.

**Future Research**

The major aim of educational research is the improvement of educational practice. “We do research to understand, [and] we try to understand in order to make our schools better places” (Eisner, 1993, p. 10). By thoughtfully examining how teachers and students are being-in-relation, we can gain a deeper understanding of the role that the teacher-student relationship plays in teaching and learning and apply this knowledge to improve educational practice. It is crucial to continue this line of research because the relations between teachers and students “affect and define teaching and learning ... [and because] meaningful education is possible only when relations are carefully understood and developed” (Bingham & Sidorkin, 2010, p. 2). This study has confirmed and extended the findings from a previous study (Kurtz, 2022) which showed that sonography students want to connect with their teachers on a personal level and that whether students feel cared for by their teacher has a tremendous impact on their thoughts about learning.

However, there is much more to understand about the teacher-student relationship in sonography education. One potential area for continued exploration includes looking at the cultural background, age, sex, and educational background of students and teachers when researching their relational experiences to determine if and how these personal
factors influence the relational quality. Another potential area for future research includes focusing on how students’ mental health is impacted by the quality of the teacher-student relationship. Mental health includes one’s emotional, psychological, and social well-being; it affects how a person thinks, feels, and acts and helps determine how they handle stress, relate to others, and make choices (Substance Abuse and Mental Health Services Administration, 2023). Well-being is the foundational dimension of the educational relations described by Sidorkin (2023), so it would stand to reason that the quality of the teacher-student relationship would impact students’ mental health. Due to the widespread increase in mental health challenges on college campuses (Nails et al., 2023), it is important to better understand if and how a relational pedagogical approach could support students’ mental health while they are learning.

Because this study included only eight participants from one sonography program, it would be helpful to replicate a study like this one at different institutions and with different participants. In addition, future studies could include students and teachers as participants to gather the perspectives of both members of this mutual, reciprocal relationship. Another method that would add to the current understanding of this phenomenon is to follow sonography students throughout their educational journey to learn about their relational experiences with teachers using a qualitative longitudinal approach (e.g., multiple interviews and/or written journal assignments). This would require considerable trust for participants to feel safe and secure expressing their honest thoughts while still enrolled in a program. But if done in an ethical way, it would greatly contribute to our understanding of how the interactions between teachers and students...
affect the quality of the relationship over time, and in turn how that relational quality impacts students’ learning.

**A Stopping (and Starting) Point**

This study has shown that when caring teachers form meaningful connections with students and get to know them in a holistic manner, they are able to provide students with the emotional and cognitive support that they need. Stress is inevitable in sonography education (Penny, 2021), but that stress can be mitigated when teachers adopt a relational pedagogical approach—when they honor educational relations, take relational dynamics seriously, and find the time and space to relate meaningfully to their students. According to Heidegger (1954/1968), the purpose of teaching is to let learning occur. The participants in this study thrived and excelled in their learning when they experienced meaningful, positive, caring teacher-student relationships, whereas they experienced obstacles and setbacks to their learning when they did not experience these types of relationships.

Sidorkin (2023) suggested that to improve the educational process, and ultimately student learning, educators need to think less in terms of doing and more in terms of being, of being-with their students and being-in-relation with them. This may require an openness to change—an openness to new ways of being-with students so that meaningful, positive, caring relationships can be formed. But it is a worthwhile and necessary step considering these relationships are the preconditions for effective teaching and learning. “As academics who are also human beings, we should consider breaking the bounds of silence concerning caring and its place within university teaching and learning, and acknowledge the possibilities that it may create” (Walker-Gleaves, 2019, p.
By adopting a relational and caring approach to teaching, sonography educators can better prepare competent entry-level sonographers with the cognitive, psychomotor (i.e., scanning), and affective (i.e., behavioral) skills needed to provide quality patient care. By demonstrating care for our students and their needs, we can instill a caring attitude in them that they will take into the clinical setting, thereby enhancing their ways of being-with patients.

With this study, I have attempted to place the teacher-student relationship in sonography education in the open, through my questioning and inquiring stance in search of genuine understanding. I have looked closely at participants’ lived experiences with the phenomenon in order to expand my thinking and understanding (i.e., my horizon) and hope to have opened up new horizons for readers through the phenomenological insights shared throughout this journey. While there is still much to say, I will stop here and offer this dissertation as a starting point, as an “ongoing dialogue [that] permits no final conclusion” (Gadamer, 1975/2013, p. 603). This is my invitation to readers—educators, students, administrators, and researchers—to continue to think about educational relations in light of their new understandings and to continue this dialogue with others who they find themselves being-with in the world.
References


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Substance Abuse and Mental Health Services Administration. (2023, April 24). *What is mental health?* https://www.samhsa.gov/mental-health


Appendices

Appendix A: Recruitment Email

Dear ________________,

I am writing to invite you to participate in a research study designed to learn about the teacher-student relationship in sonography education. Specifically, I am interested in learning how sonography students experience the interpersonal relationship with their teachers and how the teacher-student relationship provides students with cognitive and emotional support for their learning. This research is being conducted under the direction of my faculty advisor at the University of Memphis, Dr. Yeh Hsueh. You are being asked to participate because you are a recent graduate from the Diagnostic Medical Sonography Program at [name of university].

Should you agree to participate, you will be asked to participate in an interview. During the interview, I will ask you questions about your relational experiences in the sonography program and what those experiences meant to you as a student. The interview should take about 90 minutes of your time. The interview will be conducted virtually, via Zoom. It will be scheduled at a time that is convenient for you.

You are not required in any way to participate in this research study. I do hope you will consider participating because your experiences may help to improve the learning experiences of future students. If you are willing to participate, please email me to let me know. If you have any questions regarding the study, please do not hesitate to ask. I can be reached at akurtz@memphis.edu or [phone number].

Best wishes,
Abby Kurtz
Appendix B: Interview Guide

- **Main questions**
  - Potential follow-up questions asked depending on the depth, detail, and richness of the participant’s response to the main question

- Can you tell me about a positive learning experience you had while in the ultrasound program?
  - What was it that made that learning experience a positive one?
  - What role did the teacher play in making that a positive learning experience?
  - What emotions did you experience at the time?
  - Did this experience have any impact on your subsequent performance in that course? Can you please explain?

- Tell me about a time in class or lab when you felt encouraged by your teacher.
  - What was that like for you?
  - What led to this feeling of encouragement?
  - What impact, if any, do you think that this feeling of encouragement had on your learning?

- Describe the climate of a class or lab in which you felt like your learning was supported.
  - What teacher qualities or practices provided you with the most cognitive support?
  - What teacher qualities or practices provided you with the most emotional support?

- Tell me about a time when you felt as if you mattered to your teacher.
  - How did this make you feel?
  - What impact, if any, did this have on your motivation and learning in the course?

- Can you think of a time when you felt confident that your teacher cared about you?
  - What was it that made you feel cared for in that particular situation?
  - What impact, if any, did this have on your motivation and learning in the course?

- Think of a teacher who you had a good relationship with. Can you describe the relationship and tell me what made it a positive one?
  - How did your relationship with this teacher impact your thoughts and feelings about learning sonography?
  - Did your relationship with this teacher have any impact on your learning and performance in the course? How so?
• Think about a time when you really struggled with learning something in class or lab. Can you describe what that was like for you?
  o What emotions did you experience?
  o How did you overcome the challenge?
  o Did you receive any support from your teacher to help you overcome the challenge? Please explain.

• Can you tell me about a negative learning experience you had while in the ultrasound program?
  o What was it that made that learning experience a negative one?
  o What role did the teacher play in making that a negative learning experience?
  o What emotions did you experience at the time?
  o Did this experience have any impact on your subsequent performance in the course? Can you please explain?

• Describe the climate of a class or lab in which you felt like your learning was inhibited.
  o What teacher qualities or practices contributed to this climate?
  o How would you describe your relationship with this course instructor?

• Was there ever a time in which you did not feel as if you mattered to your teacher?
  o How did this make you feel?
  o How did it impact your motivation and learning in the course?

• Was there ever a time in which you did not feel that your teacher cared about you or your success?
  o What was it that made you feel that your teacher didn’t care?
  o How did that feeling impact your motivation and learning in the course?

• Did your experiences in relationship with your teachers affect how you felt about the content in their courses? How so?
  o What impact, if any, did this have on your decision to pursue a career in your chosen area of sonography? (e.g., general, OB, vascular, cardiac)

• What is one thing that you wish all teachers would do to form more positive and meaningful relationships with their students?

• If you were a teacher, what kinds of things would you do to create a positive learning environment for your students?

• Is there anything else about your relational experiences in the sonography program that you would like to share?
Appendix C: IRB Approval

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<td>6-13-2022</td>
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<td>University of Memphis</td>
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