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Evaluating Clinical Educational Learning Outcomes for a Changing Field: Utilizing a 2:1 Collaborative Learning Model in an Acute Care Setting for First Semester Speech-Language Pathology Graduate Students

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by

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ABSTRACT

Exploring clinical education models that may increase the number of clinical placements while improving learning outcomes is an important step in preparing competent entry-level speech-language pathologists. Placement shortages play an important role in the urgency of evaluating the efficacy of alternative clinical education models in SLP. The 2:1 collaborative learning model is a promising exemplar that has the potential to increase the number of clinical placements in practice settings twofold while simultaneously providing an excellent learning experience for students.

A retrospective, qualitative, descriptive, embedded case study design methodology was used. Recruitment was directed at both the first year SLP graduate students who have completed their first semester clinical rotation in an adult acute care setting (n=40) and the adult acute care clinical instructors employed by the academic medical center who have supervised the aforementioned students in their clinical rotation as well as supervised first year, first semester SLP graduate students previously utilizing a 1:1 model (n=8). An open ended survey instrument, focus groups, and a follow-up member checking survey were used as data sources.

The results of the study were overall positive, and the findings indicated that the 2:1 model is, at least, not inferior to the 1:1 model from the perspective of clinical instructors, that the 2:1 collaborative learning model has a positive influence on a student's confidence, and that having a clinical partner has a positive influence on a student's perception of their learning experiences and learning outcomes.

DEDICATION

I dedicate this work to my amazing family who inspire me in all that I do. I love you all and will always be thankful to call you all my family.

For my mother, Barbara, the smartest lady I know, who instilled deep within me the spirit of advocacy and taught me to use my voice for the voiceless and lift up the marginalized, in a spirit of non-judgment and love. My father, Frank, for always going for something big, even if it did not always work out. You gave me my sense of humor and the ability to laugh at myself. Without that, I never would have finished this project.

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CHAPTER 1: INTRODUCTION

The purpose of this study seeks to describe the experiences The field of speech-language pathology (SLP) has been changing rapidly, but the current model of education in graduate programs has not kept pace and has not had significant changes in almost 70 years (American Speech-Language-Hearing Association, 2020). The need for changes to the educational programming in SLP is not a novel idea. In 2018 an Ad Hoc Committee on Graduate Education for Speech-Language Pathologists (AHC-GESLP) was established to address three main questions relating to SLP graduate-level education programs (American Speech-Language-Hearing Association, 2020). Two of the three questions the committee was commissioned to explore pertained to the adequate preparation of entry-level clinicians (American Speech-Language-Hearing Association, 2020). There is increasing concern amongst key stakeholders that SLP graduate students may not be able to gain enough competency in graduate programs to enter the field as qualified entry-level clinicians using current educational models (American Speech-Language-Hearing Association, 2020).

Leaders in SLP expressed a sense of urgency for change recommending moving away from the ideology of what students should know based on knowledge and skill acquisition towards focusing on what the student should be able to competently do (American Speech-Language-Hearing Association, 2020; Wilson, 2021). When considering training a student in clinical competencies, one significant component of providing this training is rooted in the clinical education component. As a part of every SLP program in the US, clinical education is an integral and required element (Council for Clinical Certification in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association, 2018). Clinical rotations are significantly important when considering overall educational models because they

contribute to the acquisition of clinical competencies and the focus is on what a student can do with the knowledge and skill acquired in the classroom rather than what they know (Davenport et al., 2018; Irby, 1986).

The American Speech-Language-Hearing Association (ASHA) Council for Clinical Certification (CFCC) currently mandates that the graduate student clinician must accumulate 400 clinical hours (25 guided observation and 375 of direct client contact) to be eligible for licensure and eventually certification (Council for Clinical Certification in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association, 2018). The Council on Academic Accreditation (CAA) in Audiology and Speech-Language Pathology (2016) also requires academic programs to provide placements in diverse clinical settings which might include an in-patient acute care hospital, outpatient hospital center, inpatient rehabilitation hospital, private practice, skilled nursing facility, and schools. The clinical hours should also expose students to a variety of clinical populations, and sites should have the necessary resources and equipment needed to appropriately treat patients or students. Finding clinical placements often does not come easy.

The difficulty in securing enough clinical rotations is a substantial barrier to improving educational outcomes (American Speech-Language-Hearing Association, 2020; Briffa & Porter, 2013; Wilson, 2021) as clinical rotations opportunities are not created equally. In SLP, there are at least six clinical areas that are difficult to secure placements in and acute care is one of these practice settings (American Speech-Language-Hearing Association, 2020). Some SLP graduate students may not have the opportunity to ever experience this practice setting even if they are interested. Often this clinical rotation is seen as a placement reserved for the best students who have this specific career goal in mind and is often reserved for the end of a graduate program.

This then can potentially create a problem that students may be missing out on an important learning experience along with the opportunity of discovering if this setting may be a career goal or choice for them. Another scenario is that many students are not sure about this practice setting, since clinical rotations in this area are selective, and they never even try to secure a placement thus missing out on a potentially ideal career setting. Furthermore, students who begin a graduate program with a career goal of an acute medical setting and must wait until the end of their program to experience this rotation may discover that this is not the setting for them and then may have missed out on other clinical placement opportunities forfeiting essential experience. Without exposure to a broad range of clinical experiences, a student may not be able to acquire the necessary skills to become a well-prepared entry-level clinician across the scope of practice.

Placement shortages play an important role in the urgency of evaluating the efficacy of alternative clinical education models in SLP. Exploring clinical education models that may increase the number of clinical placements while improving learning outcomes may be critical to continuing to prepare competent entry-level speech-language pathologists upon graduation (Briffa & Porter, 2013). The 2:1 collaborative learning model in clinical education occurs when there are at least two students concurrently participating in a clinical rotation under the direction of the same clinical instructor (Briffa & Porter, 2013; Markowski et al., 2021). The 2:1 collaborative learning model is a promising exemplar that has the potential to increase the number of clinical placements in certain settings twofold while simultaneously providing an excellent learning experience for students.

While the model's potential to increase clinical placements is exciting, developing a body of evidence and determining if this model efficaciously facilitates learning is of even greater

importance. Balance between the administrative need for an increase in clinical placements along with sound educational methods is critical as the field of SLP continues to evolve and grow. An understanding of alternative clinical education models in the preparation of SLP graduate students in an acute care setting may serve as an avenue to increase clinical rotation opportunities while simultaneously contributing to the evidence base of clinical education and improvement of educational programming in SLP.

Problem Statement

In SLP, clinical education is a key aspect of the preparation of future SLPs, however, there is a shortage of placements in some practice settings and there is limited evidence supporting learning in alternative models of clinical education.

Nature of the Study

of clinical instructors and first year, first semester speech-language pathology students during their clinical rotation utilizing a 2:1 collaborative learning model in an adult acute care setting. The collaborative learning model is referred to by several different names in the literature as there is much variability in this model and it is used in multiple health care fields (Briffa & Porter, 2013; Forber et al., 2016; Markowski et al., 2021). For the purpose of this study, it will consistently be referred to as the 2:1 collaborative learning model. More details regarding the methodology of this study can be found in chapter three.

The research questions guiding this study include:

Research Question One: How does a 2:1 collaborative learning model impact a clinical instructors' perception regarding the learning outcomes of first year, first semester graduate students in an acute care medical setting compared to a 1:1 model?

Research Question Two: How does a 2:1 collaborative learning model influence a student's confidence level in an adult acute medical setting practicum during the first year, first semester practicum?

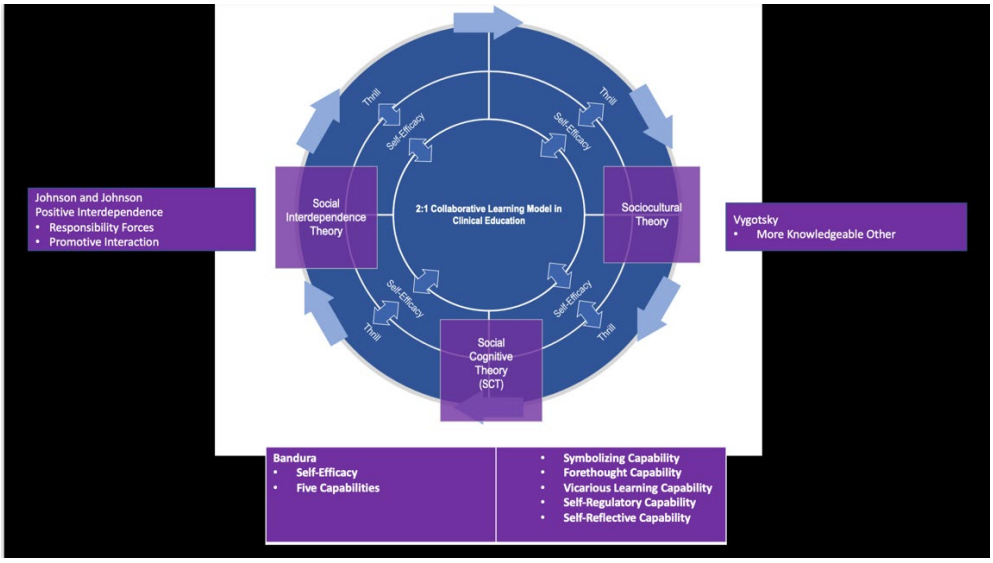
Research Question Three: How does having a clinical partner influence students' perceptions of their learning experience and learning outcomes in a 2:1 collaborative learning model?

Conceptual Framework

Utilizing learning theories as a lens to investigate clinical education models in speech-language pathology is a reasonable starting point in developing evidence-based practices in this area. Learning theories have gained credibility when applying them to improved outcomes in clinical education; especially in the field of medicine (Burford, 2012; Conn et al., 2012; Mann, 2004; Omer, 2020). Therefore, a conceptual framework, based on foundational theories, can serve as the groundwork for research projects as reasoning and support for why a study matters and should continue along with helping to frame the research questions (Ravitch & Riggan, 2017). Three foundational theories provide excellent support for this study and are used as the bedrock for this conceptual framework: sociocultural theory, social cognitive theory, and social interdependence theory which are supported by the thrill of learning and self-efficacy which will frame this research study. See Figure 1 for a graphic representation of the conceptual framework.

Figure 1

Graphic representation of the Conceptual Framework



These three theories are fundamental in the development and application of the conceptual framework and provide a rationale for the use of a collaborative learning model in clinical education. Along with the formal theories, the initial layer of this conceptual framework, thrill of learning, is taken from Hattie and Donoghue's Model of Learning (2016). The thrill component of this model offers insight into the clinical rotation experience as students tend to view clinical experiences as enjoyable and provide a source of motivation for learning and contribute to the overall interaction of the theories (Rapillard et al., 2019a). The second overall layer is self-efficacy which is an important facet of SCT. Thrill and self-efficacy encase every facet of this conceptual model.

The critical components derived from the aforementioned learning theories that all work synergistically is sociocultural theory's, more knowledgeable other (MKO), SCT's five capabilities, and positive interdependence which are all supported by individual self-efficacy,

and the foundational thrill of learning in a clinical setting which envelops all components. Additionally, the overarching values that are woven throughout this process highlight the importance of individual motivation and self-efficacy in clinical education, which is then reinforced through social constructivism and positive social interdependent learning experiences. All three components are instrumental in a successful clinical learning experience which leads to the development of adequate entry level competencies for graduate student clinicians.

Hattie and Donaghue's Model of Learning

It feels natural to utilize social learning theories to support the benefits of the 2:1 collaborative learning model in clinical education (Markowski et al., 2021). While they are a prominent feature of this conceptual framework, the convergence of the thrill component of Hattie and Donoghue's model of learning may offer additional insight into clinical learning (Hattie & Donoghue, 2016). Utilizing Hattie and Donoghue's model of learning, specifically the component of thrill, to support the use of a 2:1 collaborative learning model in clinical training makes sense as motivation plays a major role in education.

Model Overview

The model has three input components, skill, will, and thrill which lead to three output or desired outcomes of the learning activity, skill, will, and thrill. The skill input involves the prior knowledge that a student brings to the table before they begin a learning activity. The will can be likened to the student's attitude toward learning, and the thrill component describes a student's incentive to learn the task (Hattie & Donoghue, 2016). The model also contains two additional components, knowing success and environment. If the goals of the learning endeavor are explicit (knowing success) and the student is fully aware before they begin the task, this in turn will lead to the student demonstrating behaviors that are goal oriented (Hattie & Donoghue, 2016).

Moreover, the environment where the learning takes place may play a role in successful learning. Within the input and output parameters of skill, will, and thrill, there are the five stages of acquisition of learning: surface, surface consolidation, deep, deep consolidation, and transfer.

Thrill

The input and output component of the model, thrill, is very relevant in clinical education as students tend to view clinical experiences as enjoyable and students in health fields, including SLP graduate students are extremely driven to help others and arrive to academic programs with some degree of motivation to gain competency as a speech-language pathologist (Rapillard et al., 2019). Additionally, students in SLP graduate programs pursue success vigorously and attentively (Rapillard et al., 2019). This motivation is likened to the thrill of learning in the clinical education experience as it is an opportunity for students to witness in person what they are learning about in the classroom. Clinical rotation experiences are extremely meaningful as they are experiential in nature and allow students to make sense of what they are learning in the classroom in a real-world environment, construct meaning from the experience, and create their own ideas that stem from the experience which is consistent with the thrill input and output component from Hattie and Donoghue's model of learning (Hattie & Donoghue, 2016; Irby, 1986). The excitement that students have for the opportunity to practice in a real-world scenario what they are learning in the classroom may enhance the cognitive and social benefits of clinical learning and may drive their belief that they will be successful.

Sociocultural Theory

Vygotsky (1978) believed that it was not possible to detach learning from a social context and that learning is a shared and not individual experience which is constructed through interactive social experiences. Regardless of the model, clinical education is social in nature as

there are at least three individuals involved, the student, the clinical instructor, and the patient. In fact, the very core of clinical practice for any health care provider is a social enterprise involving countless interactions between all stakeholders. In the field of medicine and nursing, the sociocultural learning theory has gained credibility with educators (Omer, 2020; Spouse, 2001; Swanwick, 2005; Yardley et al., 2012). The notions of the more capable peer, which is better known as more knowledgeable other (MKO), and the zone of proximal development are important ideas when conceptualizing how sociocultural theory can further support the credibility of a 2:1 collaborative learning model in SLP (Vygotsky, 1978).

More Knowledgeable Other

In a collaborative learning model, the MKO is typically thought of as the teacher or superior who is helping the student to improve their skills, but The MKO can also be a peer, or any other person involved in learning that is more capable (Vygotsky, 1978). In the 2:1 collaborative learning model, both the clinical instructor and the clinical partner can act as the MKO and the roles between students can be reciprocal and interchangeable (Vygotsky, 1978). Depending upon the content, one student may be more advanced than the other and then the roles may reverse where there can be mutual support (Vygotsky, 1978). The role of the MKO is to help the student move from what they can do independently to what they can only do with assistance. This area of growth is referred to as the zone of proximal development (ZPD) (Vygotsky, 1978). Vygotsky considered the ZPD very important and felt that instruction should occur to help the student achieve the maximum benefit from the instruction (Vygotsky, 1978). When learning a new skill, the MKO uses scaffolding strategies with the student, and this teaching can happen between peers (Wass & Golding, 2014). While these concepts were originally applied to children in the developmental school years, they can be applied to students

as they develop and learn new concepts which is consistent with applying them to a situation where new learning is occurring (Kantar et al., 2020; Spouse, 2001; Wass & Golding, 2014). Theoretically, these concepts support students depending more on their peers as well as their clinical instructor. The social environment of clinical education may also contribute to the individual cognitive growth of the student.

Social Cognitive Theory

The Social Cognitive Theory (SCT) has its roots in the field of psychology and was first introduced by psychologist, Dr. Albert Bandura in 1986 (Bandura, 1986). The SCT model has three reciprocal components, the individual, environmental influences, the individual behavior, and the reciprocal nature reinforces the interdependence of the three components (Bandura, 1986). The cognitive component of SCT relates to the way that individuals process their thoughts and how these thoughts impact their individual motivation, frame of mind, and actual behaviors (Bandura, 1986). This cognitive component builds a bridge which provides a reciprocal pathway from the individual, leading to the social component, and back again to the individual as humans are influenced by what they observe their environment (Bandura, 1986). However, every individual will react uniquely based on their own cognitive processing of the information and then potentially influence others in a social capacity (Bandura, 1986). SCT offers an explanation as to how the social forces influence an individual's cognitive growth and then how that person can in turn influence others in a reciprocal fashion.

SCT provides a theoretical pillar that enables the relationship between behavior, cognition, and learning to be applied to clinical education and shows that the individual human behavior within an organization is a powerful one (Austin & Jones, 2016). SCT theorizes that human beings don't make decisions based solely on external influences found in the

environment, but instead take into account all of their experiences that formulate their cognition or thinking processes, behavior, and social encounters from the environment which shapes their decision making (Bandura, 1986). SCT is a complex theory, but of specific importance to this study are self-efficacy and the five capabilities: symbolizing capability, forethought capability, vicarious learning capability, self-regulatory capability, and self-reflective capability (Bandura, 1986). Self-efficacy and these capabilities, when utilized in clinical education have the potential to help SLP graduate students develop strong cognitive abilities that may continue to drive self-efficacy and clinical competence.

Self-Efficacy

The social nature of learning is very important, but self-efficacy is an integral individualized component of a student's success (Bandura, 2001). The perception of self-efficacy is an individual's ability to believe that they are capable of achieving goals in life by executing the correct behavior needed for that particular accomplishment (Bandura, 1986). The cognitive processes associated with self-efficacy can be either positive or negative depending on the beliefs of the individual (Bandura, 1989). When overall academic success is considered, self-efficacy of the student can be considered foundational when it comes to the student's underlying beliefs about their education in general (van Dinther, et al., 2011). Students tend to have a belief in what they can feasibly accomplish, and they often will not even attempt a goal that they are not confident they can achieve. An individual's confidence in their abilities also influences the level of motivation in which they work for a goal (Bandura, 1988). So, if a student lacks self-efficacy, they may have low motivation even though high levels of motivation are required to be successful in their studies. This is an important realization because for any student to be successful in completing their academic program, they must believe that they are fully capable of

doing so. In addition to the motivation needed to work to achieve a certain goal, self-efficacy is essential in the student's ability to continue to try and achieve goals in light of impediments (Bandura, 1988). Individuals tend to steer clear of goals that they don't feel they are capable of achieving (Bandura, 1988). With self-efficacy, it is not just an individual's knowledge of what they have to do to accomplish a goal, but instead, it's the relationship between their thoughts (they believe they can do it), the influence of the environment, and the behaviors that they execute that will help them be successful.

Symbolizing Capabilities

Throughout the human experience, people face an exponential number of experiences that they creatively deal with that causes them to accumulate symbols or visualizations that represent moments of their lives. These symbols can help the person work through issues they are facing, of varying importance, and serve as an internal regulating system that helps shape their behavior and actions related to the environment (Bandura, 1986). Humans possess the ability to use this collection of experiences that culminate as symbols in their everyday reactions to external stimuli. Individuals think through decisions by accessing these symbols and work through scenarios at hand and this symbolization can even help the individual come up with new ideas based on this collection of symbols they possess (Bandura, 1986).

Understanding symbolizing capabilities when considering clinical education is important because each student will have their own experiences in life leading up to each educational experience and regardless of how standardized the process is, any educational process cannot be perfectly homogeneous because of this variability. With a 2:1 collaborative learning model there will be a benefit of having the combined symbolizing capabilities of more than one person which may contribute to the overall success of both clinical partners. Both partners may benefit from

the different perspectives of their clinical partner. The life experience of one clinical partner can help influence the other clinical partner and vice versa having a positive effect on the learning experience.

Self-Regulating and Forethought Capability

The behavior of human beings is not contingent upon the pleasing of others, but instead individuals use self-regulation to shape their actions to be able to be comfortable with themselves (Bandura, 1986). In some way, individuals come up with an internal check and balance system and incentivize themselves so that they can keep going to achieve a particular objective (Bandura, 1988). This can contribute to the ability for students to use this capability to help them think about the future or to use forethought to help steer their behavior. There are different ways that individuals use forethought. They can use it to weigh potential positive or negative consequences of their behavior, to create goals in different areas of their lives, and to develop a plan for their future to accomplish the goals (Bandura, 1986). Forethought relates back to symbolization as it is the symbols that humans possess and can use to create a symbolic visualization of what is to come by the achievement of goals and anchor to that visualization and bring the goal to fruition (Bandura, 1986).

Vicarious Learning Capability

In clinical education the goal is for the students to have an opportunity to experience the clinical application of what is being taught in the classroom. Many times, this involves observing a clinical instructor or other professional carry out a task which is consistent with vicarious learning capability. Vicarious learning capability states that humans can learn by observing the actions of others and this form of instruction serves as a direct experience of the learner (Bandura, 1986). Students may not have to learn from their own mistakes as learning from

another's errors can be just as influential without the individual having to make the mistakes themselves (Bandura, 1986). This is important as the support of the model is not only dependent on peer learning through peers who are more advanced as in Vygotsky's MKO (Vygotsky, 1978), but also though witnessing peers making mistakes. Vicarious learning capability makes a lot of sense in clinical education as clinical instructors, other members of the clinical team, as well as peers can serve as models (Bandura, 1986). Vicarious learning capability supports the notion of collaborative learning models in clinical education as working alongside a peer offers an educational benefit of someone else modeling the behavior for the first time. Being paired with another novice graduate may aid in the potential for vicarious learning and clinical partners may have the opportunity to model one another in addition to other professionals they encounter.

Modeling

Modeling has been shown to increase learning objectives (Bandura, 1986). Theoretically speaking, the beginning strategy used to develop skills in individuals is modeling and having easy contact with capable models is a wonderful way to build new abilities in individuals (Bandura, 1988). In many ways, this is a form of positive peer pressure which is consistent in a 2:1 collaborative learning model and lends additional support to the importance of MKOs, the ZPD, and scaffolding. Modeling in general is a good idea when it comes to mastering skills, but it is thought to be even more effective when the mentee recognizes a likeness to the models and can relate to them on a more personal level (Bandura, 1988). This supports how beneficial peer learning is as students are very likely to be able to relate to their fellow student easier than their clinical instructor. The clinical partners can exchange their roles as partners from time to time and learn by watching what their partner does to accomplish their goals. Also, the student can

potentially learn from the mistakes that their clinical partner may make without having to make the mistake themselves.

Self-Reflective Capability

Bandura (1986) states, “If there is any characteristic that is distinctively human, it is the capability for reflective self-consciousness" (p. 21). Humans are equipped to reflect upon their thoughts and actions and use this reflection to drive their future behavior and use the reflections to make improvements. Self-reflection brings about self-appraisal, and positive self-appraisal can help to establish self-efficacy (Bandura, 1986). Of course, people do have free-will and control over choices in their life and self-reflection can help the student consider their actions (Bandura, 1989). By reflecting upon their experiences in clinic, the student can create goals that are more aligned with how successful they would like to be. There can be formal or informal means to teach students self-reflection. Formally, a journal can be used for the student to reflect upon their experiences, and they can have the option of sharing it with their advisor. Informally, encouraged conversations between the student with their clinical team member or their clinical instructor or other faculty member may also help develop these skills. Self-reflection can be an important component of learning in a clinical environment.

Social Interdependence Theory

Sociocultural theory provides support for the importance of learning in a social atmosphere and social cognitive theory provides support for the reciprocity between an individual’s cognitive function and the environment. Both play an important role in the development of clinical skills. Social interdependence theory states that outcomes for an individual are affected not only by their own actions but by others in the group as well and has become one of educational psychology’s prevalent models (Johnson & Johnson, 1989; Shimizu

et al., 2020). In social interdependence theory, there are three key factors of interdependence: outcome, means, and boundary (Johnson & Johnson, 1989). Outcome interdependence relates to the focus on the goals and potential rewards of the group. Means interdependence relates to more logistic aspects of the group such as resources and roles and the divvying up of required tasks for each group member. Boundary interdependence relates to the group dynamic and how the group functions with both internal members and external forces (Johnson & Johnson, 1989). The original theory of social interdependence evolved from the work of Kurt Lewin who described a group as one whole and hypothesized that a change in any member can affect change in any other member of the group and that common goals in a group are what creates the interdependence (Johnson & Johnson, 2009). Morton Deutsch expanded on Lewis' theory by theorizing that there are both positive and negative types of interdependence (Johnson & Johnson, 2009). Positive interdependence can play a key role in the 2:1 collaborative learning model as there is evidence that group membership in and of itself does not affect achievement, but the necessity of positive interdependence is obligatory (Hwong et al., 1993; Johnson & Johnson, 2009).

Positive Interdependence

Positive interdependence is thought to yield responsibility forces within groups (Deutsch, 1949, 1962; Johnson & Johnson, 1989, 2009). Responsibility forces relate to the feelings of group members in what they feel like they should do in order to contribute fairly to the group's outcomes (Deutsch, 1949, 1962; Johnson & Johnson, 1989, 2009). Individual and group accountability can increase responsibility forces (Johnson & Johnson, 2009).

Positive interdependence is also thought to yield promotive interaction within groups (Johnson & Johnson, 2009). Promotive interaction arises when there is encouragement between group

members helping other members to accomplish the goals of the group (Johnson & Johnson, 2009). The concepts of responsibility forces and promotive interaction support the 2:1 collaborative learning model and support students working together in a clinical education setting rather than individually.

Sociocultural theory, social cognitive theory (SCT), and social interdependence theory provide excellent theoretical support for investigating collaborative learning in clinical education. The overarching values of SCT's five capabilities, zone of proximal development, more knowledgeable other (MKO) along with positive interdependence, which are all supported by the foundational thrills of learning and an individual student's self-efficacy in a clinical setting, support the belief that collaborative learning can be efficacious in clinical education. This conceptual framework provides support that a 2:1 collaborative learning model can be an effective exemplar for SLP clinical education. This model can potentially lead to an increase in clinical placements and more importantly, provide a successful clinical learning experience which can then contribute to the development of well-prepared entry level speech-language pathologists.

Operational Definitions

The following list contains additional terminology that will be used in the study that may aid the reader in understanding.

1:1 clinical learning model. The clinical education model that has one clinical instructor and one student (Briffa & Porter, 2013).

2:1 collaborative learning model. The clinical education model where there are two or more students and one clinical instructor (Briffa & Porter, 2013).

Administrators. Hospital coordinators or managers who oversee the business end of hospital operations.

Adult acute medical setting. Denotes an inpatient hospital setting with an adult population.

Allied health fields. Health care fields outside of medicine and nursing usually including physical therapy, occupational therapy, respiratory therapy, etc.

Clinical education. The educational component of a graduate program where the students are placed in a real-world clinical setting to gain clinical experience and the required clinical hours and experience.

Clinical partners. Refers to the two or three students assigned to the same clinical instructor during a single clinical rotation.

Clinical Setting. A medical practice location, for example, a hospital.

Clinical teams. Refers to four or more students assigned to the same clinical instructor during a clinical rotation.

Clinical instructor. The speech-language pathologist responsible for teaching the graduate student in the clinical environment.

Clinicians. Practicing speech-language pathologists in a clinical setting.

University program. The academic unit, belonging to a college or university system, where students attend didactic classes and will earn their degree.

Peer. Another student with equal seniority in the program.

Practice setting. The type of setting that a clinical rotation occurs in. For example, a hospital is a practice setting.

Assumptions

The assumptions regarding this study are that both students and clinical instructors will respond to both the survey and focus group questions openly and honestly. The format of the focus group will provide participants the support they need to participate with their honest thoughts and opinions. Additionally, the participants will have an opportunity to voice their opinions in a private survey method before participating in the focus group interview which allows them an avenue to give a private opinion. It is also assumed that most if not all of the individuals asked to participate in the study will join in as this will be an opportunity to share their opinions about the program. This survey will also provide an opportunity for the researcher to identify additional questions, that were not previously thought of, but may be beneficial to ask the groups.

Limitations

One key limitation of this study is that it is an unusual scenario and is not the norm for clinical education in SLP. Some speech-language pathologists may have strong opinions that align with more traditional models. The participants that will be asked to participate are a part of a cohort (for students) and an employee of the same hospital system (clinical instructors) that will all be participating in a clinical educational experience in the same practice setting. This scenario is not the norm for academic programs in SLP. Another limitation is that the researcher is also the director of clinical education and oversees the clinical education program at the university. Also, this was the students first clinical rotation, so they do not have another clinical education model to compare this experience against.

Scope

In SLP, change in the field is happening, but the educational methods including clinical education have not kept pace, yet they are imperative in the adequate preparation of future SLPs. Finding clinical placements in certain practice settings can exacerbate the problem as it limits programs in providing well rounded clinical experiences. This study seeks to investigate and describe the experiences of clinical instructors with experience supervising first semester, first year SLP graduate students in an acute medical setting in a 1:1 model as well as first semester, first year speech-language pathology students after the completion of a clinical rotation which utilized a 2:1 collaborative learning model in an adult acute care setting. The effects on learning as well as confidence levels in students while participating in this study will be described from the perspective of clinical instructors and graduate students.

Delimitations

I have limited the scope of this study to clinical education for speech-language pathology graduate students during their first semester, first year clinical practicum in an acute care setting. I have also limited the clinical instructors that I will ask to participate in the focus groups to those who formerly worked with the previous cohort of students, during their clinical practicum utilizing a 1:1 model. By adding this limitation, I hope to capture their opinions regarding the differences in educational benefits between the two different clinical models.

The Significance of the Study

In SLP, there is a dire need for research that evaluates clinical education models and best practices in clinical instruction (Dudding et al., 2017). There are some studies that have looked at 2:1 collaborative learning model in SLP, but nevertheless, a systematic review looking at collaborative clinical education models revealed that there is much variability in each study and

additional research is needed to determine the efficacy of this model in SLP (Briffa & Porter, 2013). Gaining a better understanding of this model in SLP clinical education may also provide it more credibility and prompt stakeholders to try utilizing a 2:1 collaborative learning model in their own practice setting. This model may be able to be replicated in academic programs that are housed in an academic medical center. For academic programs that are not a part of an academic medical center, this model may be replicated by establishing relationships with nearby hospitals.

Additionally, this study may provide stakeholders in clinical education in and outside of the field of SLP with an awareness that 50% of the practice of speech-language pathology occurs in a medical setting. It can potentially provide a level of belonging in the health care scene as many health care fields consistently have multiple students present during clinical interactions. More attention to this model may also stimulate interest in further research. Furthermore, clinical education is the cornerstone of SLP graduate programs and there are many practice settings that are difficult to obtain placements such as acute care. Acute care in general is often seen as the holy grail of practice settings and many SLP graduate students will not have the opportunity to ever experience this practice setting without creative practices such as 2:1 collaborative learning models.

Conclusion

The urgency in finding efficacious and enough clinical placements in SLP is apparent. The learning theories, sociocultural theory, social cognitive theory, and social interdependence theory along with the thrill of participating in a clinical setting provide theoretical support for the study of the 2:1 collaborative learning model in SLP. The opportunity to gather information from clinical instructors and graduate students regarding their experiences with this model is a unique opportunity that can help advance the field of SLP to be seen as a health care field. This study

may also contribute to more frequent opportunities for graduate students to be able to experience this practice setting as a part of their regular clinical rotations.

CHAPTER 2: LITERATURE REVIEW

Chapter two will provide a comprehensive review of the literature intended to support the purpose of this study. I begin with an overview of clinical education in SLP highlighting its importance and the connection it has to building competencies in future clinicians. I will then review the positive aspects of a 2:1 collaborative learning model in SLP and how it can enhance the clinical educational experience for students. Next, I will then look at how the 2:1 collaborative learning model may contribute to the acquisition of soft skills and clinical competence. Then, I will provide a review of the literature as it pertains to the shortage of clinical placements and the barriers that the 2:1 collaborative learning model may help to alleviate. I will tie in components of the conceptual framework throughout the literature review emphasizing the connections. Finally, I will discuss the methodology that will be used in the design of this study.

Introduction

To date, there is limited literature regarding clinical learning models in speech-language pathology and most literature is derived from other healthcare fields such as medicine and nursing with a smaller representation that includes other allied health fields. However, even in fields like medicine, clinical education is considered to lack structure, be opportunistic, and without a theoretical underpinning (Omer, 2020). For many practicing speech-language pathologists, the idea of clinical rotations likely paints a very isomorphic picture in their minds which probably involves a few semesters in the university clinic followed by a few external placements in the community culminated with the full-time externship experience in the final semester. Considering the lack of change in overall academic programming in SLP, it is not

difficult to believe that clinical education has also not evolved much. The need for more clinical placements and evidence of efficacious models is apparent.

Currently, stakeholders in SLP are concerned about whether the current model of education is adequately preparing students as well qualified entry level clinicians (American Speech-Language-Hearing Association, 2020). The overall education of speech-language pathologists relies heavily on quality clinical placements and stakeholders are concerned that these placements are difficult to obtain (American Speech-Language-Hearing Association, 2020; Wilson, 2021). Clinical placements are opportunities for students to get real-world hands-on experience in making the connection of what is being learned in their didactic classes and the clinical application of these skills when working with patients. For academic programs in SLP, securing an adequate amount of well-rounded clinical experiences is a requirement for accreditation (Council on Academic Accreditation in Audiology and Speech-Language Pathology, 2016).

In addition to accreditation, clinical education programs are essential for the development of qualified future health care workers and healthcare in general. This practical experience allows students to apply the information gained from their academic coursework, make connections, and generalize that knowledge into applicable clinical setting skills (Irby, 1986). Learning in the classroom is formal and focused on the student but learning in the clinical setting is focused on the patient's outcomes (Irby, 1986). Learning in the clinical environment is not achieved by textbook examples and lectures but by undertaking the clinician or teacher's role and practicing academic knowledge (Irby, 1986). The clinical education portion of a student's education is integral in developing the required skill set needed to meet the respective field's competencies (Davenport et al., 2018). Clinical education allows for an opportunity to

experience the environment where there is real-world application of the knowledge and skills acquired in the classroom that will eventually be needed in clinical practice.

Collaborative Learning in Clinical Education

Clinical education is social and collaborative regardless of the specific model. The beliefs of many educational psychologists support that learning is constructed via social collaboration and is a cooperative experience (Black & Allen, 2018; Mann, 2011; Vygotsky, 1978). SCT considers human behavior and the influence of interactions with the environment, including individuals in the setting which may include peers, to have an effect on individual cognitive development (Bandura, 1986; Kezar & Eckel, 2004; Mann, 2011; Nickerson, 2022). Social interdependence theory supports that positive interdependence in groups can be beneficial for all members involved (Johnson & Johnson, 2009). In the realm of clinical education, it is not possible to remove the social learning aspect even when there is a 1:1 model. The process of clinical rotations are social in general as they are conducted in natural environments such as a hospital setting. In a traditional 1:1 model, a student is influenced by their environment as in healthcare, professionals don't work in a silo, and they are often intertwined with other professionals and of course patients and their families. Even with a 1:1 model, the student is in a social environment because they are working alongside their clinical instructor, other professionals, and with patients. Historically, the 1:1 model where there is one clinical instructor and one student and has been predominately used in allied health fields (Briffa & Porter, 2013; Rodger et al., 2009). However, even though a 1:1 model seems adequate, a 2:1 collaborative learning model can further enhance the social nature of the clinical education experience as it also allows the additional component of peers influencing each other.

Collaborative clinical models, often referred to as 2:1 models, are used less frequently, especially in SLP, and occur when there are two or more students simultaneously participating in a work placement under the direction of the same clinical instructor (Briffa & Porter, 2013; Markowski et al., 2021). There is evidence that both models (1:1 and 2:1) can be efficacious in clinical education (Conn, et al., 2012), but the 2:1 collaborative learning model provides promise in the increase of clinical placement opportunities as it can double the number of students each clinical instructor can supervise at one time. It also offers promise to the educational outcomes secondary to its social nature. Sociocultural theory and social interdependence theory offer much support of the utilization of a 2:1 collaborative learning model because it offers explanations for the benefits of students working in a team or group (Johnson & Johnson, 2009; Vygotsky, 1978). In a traditional 1:1 clinical education model, students do have the interactions with their clinical instructor and others involved, but in a 2:1 collaborative learning model, in addition to the relationship with the clinical instructor, patients, and other professionals, students have the relationship with their clinical partners. Currently, there is not existing literature regarding a 2:1 collaborative learning model in SLP investigating first semester, first year graduate students in an adult acute care setting.

The 2:1 collaborative learning model is of importance as it potentially offers a twofold benefit, first it can double placement capacity for students while having the potential to facilitate learning in a clinical setting. When considering the 2:1 collaborative learning model in SLP clinical education, the social and collaborative learning component takes center stage. Many educational psychologists believe learning (knowledge, skills, and competencies) and skill acquisition is constructed through social collaboration and is a collective experience (Black & Allen, 2018; Mann, 2011; Vygotsky, 1978). The social nature and frequent collaboration of any

clinical education model supports social constructivism as a key feature of this education model and in medicine, doctors learning has always revolved around the social context through necessary collaboration and the observation of actions and practices (Shimizu et al., 2020; Torre et al., 2006). During the past 70 years, cooperative learning has been one of the most successful educational practices used in teaching (Johnson & Johnson, 2009).

The literature supports the value that the 2:1 collaborative learning model brings to clinical education across various healthcare disciplines yet there is much to be discovered (Briffa & Porter, 2013). Sociocultural theory, social cognitive theory, social interdependence theory as well as the thrill of learning and self-efficacy are educational theories that support the credibility of investigating collaborative learning models in clinical education. This model has the potential to increase the number of clinical placements twofold and contribute to the preparation of well-prepared entry level clinicians. Models of clinical education that allow for greater of numbers of students to experience the practice setting while still providing high quality learning are needed in allied health (Briffa & Porter, 2013). In addition to the collaborative learning model appeal of increasing clinical placements it may also enhance learning potential in a clinical environment.

Historically, in medical education, the most significant influence for learning is the student's desire to help and hands-on interaction with patients provides this chance (Hirsh, et al., 2007). This can lead to a thrill of learning and motivation to learn. When considering clinical learning, in my own experience as a director of clinical education, students are excited about starting clinic and this aspect of a student's education tis something they look forward to. The experiential nature of clinical rotations provides the opportunity to witness the connection of the content being taught in the classroom to its clinical significance which allows students to gain meaning and form their own ideas related to the experience, which the thrill input and output

component from Hattie and Donoghue's model of learning supports (Hattie & Donoghue, 2016; Irby, 1986). Although this aspect of a student's education is seen as exciting and motivating, it can also be daunting, and students may experience stress which can have a negative effect on learning.

Student Comfort in Clinical Rotations

Clinical learning can be intimidating and health care students in a clinical setting report feeling pressure when performing in a new clinical setting (Ehrgott & Silberer, 2014; Stenberg & Carlson, 2015). This pressure can contribute to increased stress in the student which can then have a negative effect on their learning potential. The 2:1 collaborative learning model has been shown to decrease stress and provide a safety net for students in their clinical rotation especially when it is a new practice setting (Stenberg & Carlson, 2015; Stone et al., 2013; Zwedberg et al., 2021). Having a clinical partner also helped students to feel less anxious when meeting other members of the clinical team and when faced with challenges in clinic (Stenberg & Carlson, 2015). In a study by Stenberg and Carlson (2015), students reported that the best part of the collaborative learning model was the level of support students provided each other which decreased their stress levels in a novel clinical setting. This support, which aids in the success of all members of the team, corresponds to positive interdependence and the concept of promotive interaction, where members help and encourage other members to achieve group goals, which is supported by the social interdependence theory (Johnson & Johnson, 2009).

Self-Efficacy

There is substantial evidence in the literature revealing that collaborative learning may contribute to students developing self-efficacy, self-reliance, and proficiency in their skills while lessening anxiety; peers may also act as clinical role models and support the enhancement of

clinical expertise (Carey et al., 2018; Markowski et al., 2021; Price & Whiteside, 2016; Stenberg & Carlson, 2015; Tai et al., 2015; Zwedberg et al., 2021). Collaborative learning has also been known to contribute positively to self-efficacy in clinical environments (Tolsgaard et al., 2103, Tolsgaard et al., 2016; Zwedberg et al., 2021). Self-efficacy can be understood as an underlying foundation that contributes to a student's overall success. Ideally a student will begin a clinical placement with a level of confidence in their abilities, but this literature suggests that clinical learning in a collaborative model can enhance their belief that they will be successful which is consistent with Bandura's (1988) SCT theory. This is critical information as the thrill for learning in a clinical environment may provide a means of motivation for students and this motivation is thought to also strengthen self-efficacy. Of importance, an individual's confidence in their abilities also influences the level of motivation in which they work for a goal (Bandura, 1988). This supports the placement of thrill and self-efficacy as the aspects of the conceptual framework that permeate every other facet of the model because if a student lacks self-efficacy, they may also lack motivation which can be detrimental to their education as high levels of motivation are required for successful learning (Bandura, 1988).

Thrill of learning and self-efficacy are critical in a student's learning journey and are reciprocal as motivation can strengthen self-efficacy and vice versa and the 2:1 collaborative learning model in and of itself may also contribute to an increase in self-efficacy which can then continue to drive thrill and motivation (Tolsgaard et al., 2103, Tolsgaard et al., 2016; Zwedberg et al., 2021). Overall, there is a sense that students perceive a collaborative learning model positively (Stenberg & Carlson, 2015). Sociocultural theory supports learning to occur as a part of a collaborative group, regardless of the stage of learning, as it is posited that learning is a shared experience and will enhance learning at all levels (Vygotsky, 1978). In addition to

decreasing stress, increasing motivation, and self-efficacy, the 2:1 collaborative learning model has the potential to improve learning outcomes for students.

Clinical Competencies

SLP leaders have conveyed the necessity for change by advocating moving away from the ideology of what students should know based on knowledge and skill attainment towards focusing on what the student should be able to competently do (American Speech-Language-Hearing Association, 2020; Wilson, 2021). A collaborative learning model can facilitate critical thinking in settings where competencies are expected which is consistent with clinical education scenarios (Johnson & Johnson, 1975; Ladyshewsky, 1993). In line with Vygotsky's (1978) MKO, one study revealed that students felt their own learning was heightened when they had an opportunity to teach their clinical partner as it contributed to them having a sense of duty to make sure their own understanding of knowledge and skills were adequate (Stenberg & Carlson, 2015). Additionally, consistent with Bandura's (1986) philosophy regarding vicarious learning capability and modeling, when one student is observing the other student during a clinical activity, the inactive student was able to learn from the experience even though they were not actively involved (Zwedberg et al., 2021). It has been reported that its maximum effect has been shown to be with novice students (Stenberg & Carlson, 2015). Nevertheless, in a study published six years later, Zwedberg et al. (2021) reported an overall positive effect of a collaborative learning model with nurse midwife students in the final semester of their education.

Additionally, in collaborative clinical learning models, students who have stronger clinical skills can provide support for students who are weaker (Ladyshewsky, 1993). These examples are also consistent with Vygotsky's (1978) concept of a MKO where a peer may act as a teacher when they have more advanced skills and is also consistent with the theoretical

implications that vicarious capability and modeling play in learning (Bandura, 1986). In one study involving physical therapy students, the collaborative learning model not only allowed students to attain clinical competence in all areas, but this competence seemed to be enhanced through this model (DeClute et al., 1993). The nature of a model that has at least two students paired together for a clinical rotation allows there to be two sets of prior learning and experiences to draw from.

Connections

One important aspect of clinical education is for students to have an opportunity to experience clinical application of what they have been learning in classes (Irby, 1986). Aspects of Vygotsky's MKO and Bandura's (1986) SCT's symbolizing capabilities may be strengthened in a collaborative model as students also found that their partner helped them to make connections between what was experienced in clinic and classroom content (Zwedberg et al., 2021). Evidence showed that critical thinking in clinical scenarios was accelerated when students worked collaboratively (Abercrombie, 1964; Ladyshewsky, 1993). The reasoning for this was thought to be related to students collectively sharing their experiences which benefitted every student in the group (Abercrombie, 1964; Ladyshewsky, 1993). This collective thought process is consistent with Bandura's (1986) theory of symbolizing qualities. The 2:1 collaborative learning model has the potential to improve learning concepts and competencies for students but can also strengthen student's soft skills which are also integral in the educational development of a future clinician.

Soft Skills

One aspect of clinical education that is not always considered when determining competencies is soft skills. The expectations of success in the workforce include individuals to

be able to communicate well, collaborate, and solve complex problems and educational programs will need to consider the importance of training students in these soft skills in addition to the training of traditional knowledge and skill competencies (National Association of Colleges and Employers, 2019; Shollenbarger, 2019; Volkers, 2019). The 2:1 collaborative learning model offers promise in the development of necessary skill sets, as in health care, where errors have the potential to be devastating, collaboration is crucial (Dinh et al., 2021; Flin & O'Connor, 2017; Hekmat et al., 2015; Kossaify et al., 2017; Poulin & Straut, 2016; Valaitis et al., 2022).

Because the 2:1 collaborative learning model offers more opportunities for social interaction, there is a strong likelihood that students involved in this model will have a greater opportunity to develop and practice soft skills while working together. The soft skills that the 2:1 collaborative learning model have shown to enhance are reflection and discussion as students felt they could discuss things more openly with their peers compared to their clinical instructor (Morris & Stew, 2007; Stenberg & Carlson, 2015; Zwedberg et al., 2021). This provides an incredible opportunity for students to say more because if they were in a 1:1 model, they may choose to not enter into discussion with their clinical instructor and would not have the chance to practice this skill as frequently.

Discussion

The 2:1 collaborative learning model can serve as an introduction to the team approach of health care delivery because in health care, collaboration is a key aspect of practice (Shimizu et al., 2020). The social nature of the 2:1 collaborative learning model also contributes to dialogues between students regarding the patients they are treating. The ability to dialogue is a key element of collaboration, and an important component of clinical education as it is thought to contribute to the overall education of students (Atkinson & Claxton, 2000; Morris & Stew, 2007; Stanley &

Ramage, 2004). Collaborative skills are not a specific clinical skill and are seen as soft skills, yet they are still essential for providers to demonstrate in health care settings and necessary for workplace competence (Murphy, n.d.). When considering the importance of collaboration between students, there is evidence to support that the 2:1 collaborative learning model contributes to its development (Zwedberg et al., 2021). Reflection can also be enhanced by the 2:1 collaborative learning model (Morris & Stew, 2007; Stenberg & Carlson, 2015; Zwedberg et al., 2021). Reflection is an important aspect of learning as it allows a student to freely speak about their practice with the simultaneous support from their peer and apply meaning to the experience (Atkinson & Claxton, 2000; Morris & Stew, 2007; Stanley & Ramage, 2004). The ability to discuss can contribute to the ability to reflect and self-reflection plays an important role in learning.

Reflection

Reflection is an important cognitive skill and Bandura theorized that self-reflection is an innately human skill that brings awareness and allows the individual to make necessary changes to their thought process as necessary (1986). Self-reflection practices, one of Bandura's (1986) five capabilities, is a student's ability to reflect upon their past and current experiences. This level of self-awareness can lead a student to developing awareness of their shortcomings which is an important aspect of learning. The reflection and dialogue between students, while considered soft skills, can help to increase their understanding of content, and sharpen their clinical skills (Morris & Stew, 2007). Self-reflection is what helps human beings to learn about themselves and their function in the environment (Bandura, 1986). This is a meta-cognitive skill as self-reflection in a sense is thinking about thinking. Self-reflection may also play a role in

decision making, another soft skill, and any cognitive skill that aids in this ability has the potential to improve the course of self-improvement for that individual (Bandura, 2001).
It is also an important capability of humans as it helps individuals make judgements of their actions, how hard they should work to achieve future goals, how decisions of how much time and effort they should exert to achieve goals, how much adversity they should withstand before they give up, and the level of confidence they can face a task with (Bandura, 1986). Self-reflection also draws in facets from self-regulatory and forethought capabilities as self-reflection can aid in the desire to make changes to the environment to achieve individual success (self-regulatory capability) and also to be able to take this knowledge and apply it so that future success can be achieved (forethought capability) (Bandura, 1986). Increasing reflection and discussion between students, while essentially are considered soft skills, are an important aspect in the building of clinical competencies.

Also, self-reflection helps individuals to keep track of their ideas and to know when to put them into action, it aids in self-regulation and forethought and is helpful for students to predict positive or negative consequences, and finally, self-reflection helps individuals to make changes to their thought process if necessary (Bandura, 1986). Self-reflection capabilities may help develop another important soft skill as self-reflection practices may potentially help students to take responsibility for their own education (Bandura, 2001). Discussion and reflection may contribute to the ability to self-reflect and develop forethought.

Forethought

Forethought capability, relating specifically to students, is a particularly useful capability in terms of clinical education as it is what exemplifies the ability for individuals to be motivated to achieve their goals by anticipating the steps, they need to take to achieve them (Bandura,

1986). Also, of importance in clinical education, forethought is necessary as it is an important component of clinical decision making. The ability to inference and foresee the potential consequences, positive or negative, of a clinical decision allows an individual to make a good decision. Forethought also allows an individual to conceptualize and determine what will be necessary for success in any situation, as well as to think ahead to what pitfalls may hinder their success. When students are able to utilize the concept of forethought capability, they start to think ahead and become aware of potential problems, and this may help them to create a personal plan for themselves. Self-regulatory capability is a concept that is consistent and seems to go hand in hand with forethought as this concept supports that even within a group setting, individuals are capable of adjusting their environment for individual success (Bandura, 1986). This is of particular importance for first semester graduate students as they are entering into the unknown situation which can be intimidating and stressful, and they do not have a previous symbol in their cognitive repertoire of learning in this setting to draw from. The positive aspects of the 2:1 collaborative learning model, in addition to it providing sound evidence for quality clinical education experiences, and the development of necessary and important soft skills, may also offer positive benefits in increasing clinical placements outside of its ability to automatically double placements.

Shortage of Clinical Placements

The difficulty in recruiting and retaining clinical instructors has been difficult for the field of SLP and other health professions disciplines that require students' clinical training (Briffa & Porter, 2013; Gildon et al., 2018). Difficulty in finding enough high-quality clinical rotations is a precarious situation to be in because academic programs rely on clinical placements and clinical instructors outside of the academic program. Outside of university clinics, community

speech-language pathologists provide this instruction to graduate students, and even though payment is not considered unethical, most clinical instructors fill this role without compensation (American Speech-Language-Hearing Association, n.d.). Without excellent clinical sites and clinical instructors, academic programs could not gain American Speech-Language-Hearing Association accreditation and operate as viable programs (Council on Academic Accreditation in Audiology and Speech-Language Pathology, 2016). Considering the importance of clinical placements, academic programs must continue to work on not only finding and retaining clinical placements, which can prove to be difficult, but ensuring the quality of learning in such placements. With the clear emphasis on clinical rotations and difficulty in finding quality clinical placements in certain practice settings, there is also a lack of literature which highlights and emphasizes evidence-based clinical educational practices in SLP.

In addition to preparing students for competent clinical practice, having an adequate number of clinical placements is a key factor in the decision of how many students can be admitted into graduate academic programs. This difficulty in finding clinical placements exacerbates the problems associated with the shortage of speech-language pathologists and other health professionals. Graduate schools may be able to accommodate more students in the classroom, but if there is a struggle to find appropriate clinical placements, qualified applicants may be turned away (Mancinelli & Amster, 2018; Squires, 2013). Difficulty with finding clinical placements for SLP graduate students is a contemporary issue in the field that deserves attention because securing clinical education placements is a core component of administration tasks in academic programs.

Placement shortages play an important role in the urgency of evaluating the efficacy of the 2:1 collaborative learning model in SLP. Stakeholders in SLP feel that a significant barrier to

adequate clinical education is that clinical placements are not readily available and easy to obtain (American Speech-Language-Hearing Association, 2020; Briffa & Porter, 2013; Wilson, 2021). SLP is not alone in this struggle as recruiting and retaining clinical instructors has been difficult for many health profession disciplines that require students' clinical training (Briffa & Porter, 2013; Gildon et al., 2018; Ladyshewsky, 1995). During the global pandemic caused by COVID-19 which contributed to significant hardship in securing clinical placements, the fields of occupational and physical therapy identified the 2:1 collaborative learning model as a viable option to maximize student placements (Barlow et al., 2020). This is a precarious situation to be in because academic programs rely on clinical instructors to provide this instruction to graduate students in their programs and graduate students need this experience to become adequately prepared and competent practitioners. Without clinical instructors and clinical sites, academic programs could not gain American Speech-Language-Hearing Association accreditation and operate as viable programs (Council on Academic Accreditation in Audiology and Speech-Language Pathology, 2016). Considering the importance of clinical placements, academic programs must continue to work on finding and retaining clinical instructors which can prove to be difficult.

Barriers to Clinical Placements

Clinical placements, which provide the setting for clinical education, are integral to the preparation of future speech-language pathologists and can potentially contribute more clinical placements in the field of SLP. The 2:1 model seems logical as it can double the available clinical placements, but in addition to providing this seemingly instant benefit, the theoretical underpinnings that support the model to provide a higher quality of clinical education may also contribute to clinical instructors working with SLP graduate students more favorably.

Understanding what barriers exist that hinder clinicians from becoming clinical instructors provides a lens to understand how the 2:1 collaborative learning model can contribute to a solution.

Many clinical instructors report barriers that may prevent them from wanting to be a clinical instructor, make the job of clinical instructor more challenging, or cause them to stop working as a clinical instructor altogether (Eta et al., 2011; Mupawose et al., 2021; Peleg-Oren & Even-Zahav, 2004; Wisener et al., 2020). Historically, the needs of the clinical instructor have not been given priority when considering evidence based clinical education even though their role is integral and has also changed with increased demands over the past ten years (DeRuiter & Ginsberg, 2020). The types of barriers that interfere with the desire of clinical service providers to become clinical instructors or contribute to their attrition are extremely important for all administrators in academic programs to understand especially in the case of issues that may be possible for the program to help decrease or alleviate. The barriers for clinical instructors transcend across crucial stakeholders in the field, students, academic programs, and clinical sites. Each stakeholder contributes to how the clinical instructor feels about their role in clinical education. The 2:1 collaborative learning model will not singlehandedly remove all barriers but may play a role in the solution. Negative experiences that occur with students are one barrier that may be improved with utilization of the 2:1 collaborative learning model.

Clinical Instructor and Student Interaction

In a didactic setting in higher education, the teacher does not spend prolonged amounts of time with students, let alone in a one-on-one scenario as is the case for clinical instructors. Clinical education is different with students and clinical instructors because they spend a majority, if not all, of their time together during the clinical day and often in confined spaces.

This can be taxing to the clinical instructor and contribute to students playing a negative role in the possible barriers clinical instructors face when engaging in clinical instruction (Eta et al., 2011; Mupawose et al., 2021; Rodríguez et al., 2019; Wisener et al., 2020). A deterrent to becoming or continuing as a clinical instructor may occur when students present with a bad attitude or are underperforming and not meeting the expectations of the clinical instructor (Eta et al., 2011; Mupawose et al., 2021; Rodríguez et al., 2019). This type of interaction is often challenging, and some clinical instructors feel that a consistent absence of positive interactions in the relationship between student and clinical instructor can also pose a challenge (Peleg-Oren & Even-Zahav, 2004).

If time and time again the experiences with students are negative, the clinical instructor may eventually begin to lose interest in working with the clinical education program. While most students will act with professionalism, there are at times students who lack those skills. Academic programs cannot control the behavior of the student but with a collaborative model, Stenberg and Carlson (2015) found that there was potential for positive competition between students with a continual comparison between themselves. Having this positive peer pressure may add a level of accountability for the students and prompt them to exhibit more professional behavior. The theoretical underpinnings of sociocultural theory's MKOs, and SCT's vicarious learning capabilities and modeling support the benefit of having positive peer pressure between the students in a clinical setting because if professional skills are underdeveloped, having a model with appropriate level of professionalism may help the underperforming student learn the correct way to behave. In addition to interactions with students another barrier that plays a role in the number of clinical placements has to do with the professional duties of clinicians. The 2:1 collaborative learning model has the potential to increase positive interactions between students

and their clinical instructors and may increase clinical instructors having a more positive regard for students.

Practice Settings

In addition to barriers associated with students and academic programs, clinical instructors face barriers within their own employment setting (Eta et al., 2011; Gildon et al., 2018; Mupawose et al., 2021; Ryan et al., 2013; Wisener et al., 2020). These barriers may pose the biggest obstacle to finding clinical placements as academic programs have little to no control of how individual organizations are run. Time constraints for clinical instructors were a barrier in clinical instructor's desires to participate in clinical education as the demands for their job duties left little time for them to interact with their students (Eta et al., 2011; Gildon et al., 2018; Ryan et al., 2013; Wisener et al., 2020). Working as a clinical instructor takes a substantial amount of time as clinicians are typically expected to complete the functions of their job description, while simultaneously teaching a student. This is a vital issue as clinical instructors often are not given extra time from their employer to devote to students and clinical education, and this added work (especially when there is no compensation) may influence their decision to take a student.

There is evidence that the 2:1 collaborative learning model may provide more time for the clinical instructor due to an increase in student interaction which has shown to have an inverse effect and cause students to rely on each other instead of relying solely on their clinical instructor which may decrease the overall dependence they have on their clinical instructors (Briffa & Porter, 2013; Currens & Bithell, 2003; Ladyshewsky, 1995; Moore et al., 2003; Morris & Stew, 2007; Nygren & Carlson, 2017; Roberts et al., 2009; Rodger et al., 2009; Secomb, 2008; Solomon & Sanford, 1993; Tiberius & Gaiptman, 1985; Zwedberg et al., 2021). This provides continued support for sociocultural theory's concept of the MKO and that a peer can contribute

to the education of other peers, and this has the potential to help students who are not yet at the same level improve their skills without having to involve their clinical instructor (Vygotsky, 1978). In addition, this also supports concepts from SCT's vicarious learning capabilities and modeling which has theorized that students learn from observing others and may not have to go through as many cycles of trial and error themselves, but instead can experience the activity by watching another, seeing their mistakes, and learning from them (Bandura, 1986).

In a study conducted by Currens and Bithell (2003) clinical instructors voiced that having two students didn't feel twice as hard as having one student, even though it might seem that way, and that having two students is easier as they help each other and contribute to their own learning. In the same study, clinical instructors also relayed that there were pros and cons of the collaborative learning model, but the pros outweighed the cons and preferred having two students (Currens & Bithell, 2003). In another example from a study involving the clinical instructors experience with students in a collaborative learning model, clinical instructors felt that collaboration and trust between the students also contributed to them being able to surrender some control from the students and freeing up their time (Kjällquist-Petrisi & Hommel, 2021).

A decrease in dependence on the clinical instructor and additional time may also be seen as favorable in the eyes of hospital administrators who play a role in welcoming students to their site. They will likely be more supportive of students completing clinical rotations at their institution if a student does not take as much time away from the clinical instructor especially if being a clinical instructor will not interfere with productivity and/or patient safety and satisfaction. Administrators and clinical instructors may be concerned that too many students might cause negative feelings in patients and their families, but one study investigating whether a collaborative learning model used with nurse midwifery students during childbirth (two students

and one clinical educator) posed a problem for couples found that parents found having both students present contributed to a positive experience (Zwedberg & Barimani, 2022). Although this is an isolated finding, it is promising as childbirth is a very intimate time and the positive feedback from patients and their families may generalize to other health care scenarios. Because this model is shown to increase time for clinical instructors, and there is some evidence that patients accept more than one student participating in clinical education, this can have a positive effect on the attitude towards students of the hospital administrator and overall culture of a clinical site which may prompt a buy in to welcoming students. This is especially true for academic medical centers where multiple students present for many medical disciplines are the rule and not the exception. The 2:1 collaborative learning model has the potential to decrease the barriers to the number of available clinical rotation in SLP.

Methodology

The method I chose to help answer the research questions and to analyze the data will be a qualitative, retrospective, embedded case study design. In educational research, the use of case study methodology has been used commonly (Budiyanto et al., 2019). An important consideration when choosing a methodology to use in research relates to the research questions. Using research questions to help determine the appropriate method for a study is good practice. Case studies lend themselves well to research questions that ask “how” and “why” and is how I started considering that a case study would be the best methodology to use in my study (Yin, 2017). There are five rationales for using single-case methodology in research studies and they include that a case that demonstrate a: “critical, unusual, common, revelatory, or longitudinal” nature (Yin, 2017, p. 49). Case studies can be used as a qualitative methodology and typically concentrate on real-life, single units that occur within the same context over time and are worthy

of investigating, along with meeting one of the aforementioned conditions (Baxter & Jack, 2010; Creswell & Poth, 2018; Saldana & Omasta, 2022). One hallmark of case studies is that they utilize comprehensive data collection with data obtained from many different sources that will be used for analysis (Creswell & Poth, 2018; Yin, 2017). Mertens (2020) asserts that case studies are one choice that can be used in qualitative research, however, Yin (2017) states that the complex nature of case studies drive them to extend beyond qualitative methods. Case studies should also meet these three conditions: In-depth inquiry, conditions over time, and contextual conditions (Yin, 2017). Another distinguishing feature of the case study is that the data included in a case study will involve many conditions that are related to the case yielding a lot of information (Yin, 2017). A common error in case study methodology is for the researcher to attempt to tackle a topic that is too far-reaching (Baxter & Jack, 2010; Creswell & Poth, 2018; Yin, 2017). One technique used to ensure that the case does not have too many aims to consider is binding the study (Baxter & Jack, 2010; Creswell & Poth, 2018; Yin, 2017). Creswell and Poth (2018) suggest a boundary by time and place, which in the case of this study will be the first semester clinical rotation in an adult acute medical setting.

Case studies can be exploratory, descriptive, explanatory, or a means of evaluation (Yin, 2017). Exploratory case studies seek to explore an interesting case, descriptive case studies typically provide an avenue to explain a rare circumstance, explanatory case studies are used to help make sense of the results of a quantitative inquiry, and evaluation case studies are useful in assessing a case (Yin, 2017). Case studies begin with the identification of a specific case or phenomenon that will be explained and examined thoroughly (Creswell & Poth, 2018). It is important to note that case studies do not always consider individuals to be the case studied and fields like education consider other units as a case (Yin, 2017). In the case of my research, the

case that will be studied is not an individual, but a 2:1 collaborative clinical rotation in an adult acute care setting with first year, first semester SLP graduate students.

Case studies can be single, single with embedded units, or there can multiple cases (Baxter & Jack, 2010). The rationale for choosing an embedded case design for this study was related to first, the study will focus on a 2:1 collaborative learning clinical rotation, in an adult acute medical setting, which is a unique case, and second, there are two subunits to study, first semester SLP graduate students and clinical instructors who have previously supervised students in the same capacity using a 1:1 model. Having more than one unit of study stemming from the same case makes this an embedded case study (Yin, 2017). Embedded, single-case studies have some benefits when analyzing data because of the ability to analyze subunits separately or make connections between the subunits which can produce a prosperous analysis (Baxter & Jack, 2010). A researcher can also choose to use a holistic design which would only analyze the big picture without differentiating, comparing, or making connections between subunits (Yin, 2017). The researcher has to be careful when utilizing the embedded design though to make sure that in addition to analyzing the subunit they also analyze the actual case. Another rationale that caused me to choose a single-case study design was that in the case of my study, it is an unusual opportunity for a clinical coordinator to have the ability to place an entire cohort of first year, first semester graduate students in clinical rotation in an acute care practice setting, let alone, that placement incorporating a 2:1 collaborative learning model.

There are historical reservations regarding using case studies as a research method including whether a case study can have enough rigor, their confusion with case studies used for non-research purposes, whether case studies can be generalized, they require a seemingly impossible amount of labor, and that they do not stand up to other experiments such as

randomized control trials (Yin, 2017). Although case study research is challenging to do well, thankfully, with good case study research, these problems can be alleviated (Yin, 2017). Sadly, even though research utilizing case study methods is a distinguishing method used in the social sciences, many researchers hold a negative bias relating to case study research (Yin, 2017). With these reservations stated, case studies continue to be a common viable method used in educational research that is beneficial when there is a single case or phenomenon that deserves exploration.

Conclusion

This chapter provided a thorough review of the literature pertaining to 2:1 collaborative model in clinical education in SLP. Despite the 2:1 collaborative model's potentially positive impact on clinical rotations, we know little about how it will influence the clinical education experience in an acute care setting for first semester SLP students and clinical instructors. This chapter has provided a rationale regarding the importance and potential impact of this study. Evidence was provided regarding how a 2:1 collaborative learning model in SLP clinical education can improve the educational experience for students and potentially contribute to an increase in clinical placements in ways that go beyond the seemingly almost instant doubling effect. Chapter three will explain the chosen research design, role of the researcher in data collection, research questions, ethical consideration, plans for participants, the setting of the study, data sources, plans for data collection, and finally, plans for data analysis.

CHAPTER 3: METHODOLOGY

Chapter three provides a detailed explanation of the methods used in this study. Included in this chapter are first, the rationale for choosing the research method and paradigm will be discussed along with the rationale for using the chosen research method. Next, the role of the researcher in the data collection, data collection, participant selection, along with ethical considerations will be discussed. Finally, the methods used for data analysis, triangulation, and trustworthiness will be explained.

Introduction

This study used a retrospective, qualitative, descriptive, embedded case study design. A qualitative design was chosen because as to date there is not a well-developed body of knowledge that focuses on clinical education models in SLP in acute care settings and my goal was to describe how the 2:1 collaborative learning model influenced the educational experiences, and confidence levels for graduate students and also to describe how clinical instructors felt this model impacted their perception of its educational efficacy in first year, first semester graduate students. Qualitative research seeks to assign meaning to a specific question or problem stemming from any number of human experiences (Creswell & Poth, 2018). Additionally, a descriptive case study is a beneficial method when the case being presented is considered uncommon and this method was chosen as this case is a rarity in the field of SLP which, according to Yin (2017), provides a suitable rationale.

The rationale for choosing a case study design for this study was related to the phenomenon being studied is an unusual contemporary scenario in SLP, a semester long clinical rotation for an entire cohort (n=40) of first semester graduate student utilizing a 2:1 collaborative learning model in an acute care setting. Exploring a unique phenomenon is an appropriate

rationale for utilizing a single case design (Yin, 2017). Additionally, the research questions steered me towards this design as they are all "how" questions and "how" and "why" questions relate appropriately to a case study methodology (Yin, 2017). The retrospective aspect of this study relates to the fact that it was an event that occurred prior to the research design and data collection. The embedded component of the case study design involved the fact that there was indeed one unique case, a semester long clinical rotation utilizing a 2:1 collaborative learning model in a clinical education rotation for an entire cohort of first semester SLP graduate students in an acute medical clinical setting, but there are two embedded units of analysis relating to the one case: Subunit One which included the first semester SLP graduate students and Subunit Two which included the clinical instructors who have previously experienced supervising graduate students in a 1:1 model (Yin, 2017). This research method allowed me to discover important global information relating to the abovementioned case while also allowing me an opportunity to describe the unique qualities of each embedded unit and to make connections between them.

Role of Researcher

I am a speech-language pathologist with over 16 years of experience and have been employed by two different large academic medical centers for 15 of those years. I have worked in a clinical capacity, and for more than eight years have been a faculty member of two different universities and served in the administrative role as the director of clinical education. I have 11 years of clinical experience working as a clinician in a hospital outpatient clinic affiliated with a large academic medical center, and in this setting, I have acted as the clinical instructor to many SLP graduate students in various stages of their education. In the role of the director of clinical education, I have coordinated clinical placements for SLP graduate students at two universities housed in large academic medical centers. Both university programs I have worked for did not

have an on campus SLP clinic. Additionally, my role as the director of clinical education is to oversee the clinical education of the graduate students and to find clinical placement opportunities for them. I have personally experienced the desperation of finding quality clinical placements, especially acute care placements. My role also involves teaching in the program and I taught two classes that the entirety of the participants were enrolled in; Ethics and Clinical Didactic I. Additionally, each semester, I teach a professional issues course that is related to SLP, and a clinical didactic course designed to support the clinical rotation experience which acts as a bridge between the theoretical concepts taught in the classroom and the clinical application of these concepts in a real-world clinical environment. Every student in the cohort must register and pass these courses as a part of their graduation requirements.

In this capacity, I was committed to demonstrate the upmost professionalism and maintain neutrality when interacting with all participants regardless of the information they provided. Additionally, I maintained confidentiality and adhered to the protocol established in the Institutional Review Boards (IRB) for recruitment, survey and focus group protocol, and confidentiality. Additionally, for confidentiality, I deidentified the transcripts by assigning a unique study identification number. I was clear in explaining my role in the research to the participants and all were made aware that there was no obligation to participate and could withdraw from participation at any time. All participants were made aware that their participation would not affect their standing in the program if they were a student, or their employment if they were a clinical instructor.

Research Questions

The following research questions guided this study:

Research Question One: How does a 2:1 collaborative learning model impact a clinical instructors' perception regarding the learning outcomes of first year, first semester graduate students in an acute care medical setting compared to a 1:1 model?

Research Question Two: How does a 2:1 collaborative learning model influence a student's confidence level in an adult acute medical setting practicum during the first year, first semester practicum?

Research Question Three: How does having a clinical partner influence students' perceptions of their learning experience and learning outcomes in a 2:1 collaborative learning model?

Ethical Procedures

IRB approval was obtained from the Medical University of South Carolina where I am employed as a faculty member on January 19, 2023. The IRB identification is: Pro00125547. Per the IRB protocol, I recruited participants by sending out emails to each of the graduate students and clinical instructors. After the initial emails were sent, I sent three follow up emails to any possible participants who did not respond in five-day increments (See Appendix A for the student email and Appendix B for the clinical instructor email). Additionally, per the IRB protocol, I made an announcement in class to potential participants and after the first announcement I did this weekly three additional times (See Appendix C).

In both the student and clinical instructor emails, I provided a link to the survey which indicated the student's and clinical instructor's intent to participate in the study. Once the survey was opened there was an information statement, which by IRB protocol, acted as the consent for the study and provided details regarding informed consent (See Appendix D). Once the survey was completed by both the students and clinical instructors, per the IRB protocol, I contacted

survey participants to organize focus group meetings. Additionally, per the IRB protocol, before each focus group, an information statement was read to all of the participants which acted as the informed consent, and reiterated the voluntary nature of participation, that participation would not constitute an element of their standing in the program if they were a student, or their employment if they were a clinical instructor, and that they could discontinue participation at any time. (See Appendix E). To preserve confidentiality, once recordings were transcribed, they were deleted, and all participants were assigned a unique study identification number.

Participants

Due to the nature of single case methodological design, which is bound by the context of this unique case, only the individuals involved in the case were recruited to participate. This type of participant sampling is referred to as purposive sampling and in qualitative inquiry, is quite useful as it allows the investigator to intentionally select participants that are involved with the case being studied (Saldana & Omasta, 2022). Recruitment was directed at both the first year SLP graduate students who have completed their first semester clinical rotation in an adult acute care setting (n=40) and the adult acute care clinical instructors employed by the academic medical center who have supervised the aforementioned students in their clinical rotation as well as supervised first year, first semester SLP graduate students previously utilizing a 1:1 model. Because of the resignation of a clinical instructor shortly after the semester began, one clinical instructor volunteered to supervise students utilizing a 3:1 collaborative learning model. The decision was made to also include this clinical instructor and students in the recruitment efforts as these participants were likely able to provide insight to the overall collaborative nature of supervising more than one student simultaneously for clinical instructors and being a part of a collaborative group for students. After all recruitment attempts were exhausted per the IRB

protocol, the final number of participants included: students who completed the open-ended survey (n=34), students who completed the open-ended survey and participated in the focus groups (n=33), clinical instructors who completed the open-ended survey (n=6) and clinical instructors who participated in the focus group (n=5). The students were randomly assigned partners and randomly assigned to a clinical instructor. The only matching involved was that all students were first year, first semester SLP graduate students.

Setting

The site is a newly established SLP graduate program that is a candidacy for accreditation through ASHA's Council on Academic Accreditation (CAA) and is housed in a large academic medical center in the southeast. The program offers a six semester Master of Science degree with an emphasis in medical SLP. This program does not offer an on-campus SLP clinic therefore relies on clinical instructors from outside of the university program faculty for all clinical rotation opportunities. The first clinical rotation for all students enrolled is in an adult acute medical setting with the associated university hospital speech-language pathologists who are also affiliate clinical faculty.

This clinical rotation is based upon the program's model which involves a lock step relationship between the clinical rotations and the didactic coursework for the first four semesters for the entire cohort. During the first semester, all coursework is adult medical focused and included: Adult Swallowing, Adult Neurogenic Language Disorders, Cognitive Communication Disorders, Evidence Based Practice, Ethics, Clinical Rotation Didactic 1, and Clinical Rotation 1 (which is the adult acute care placement mentioned in this study). The cohort who participated in the 2:1 collaborative learning model were the second cohort in the program.

Data Sources

Multiple sources of data were collected to align with a qualitative case study methodological design (Creswell & Poth, 2018; Yin, 2017). Data was collected to align with the three research questions. For research question one, at the end of the semester, clinical instructors who supervised the students in their clinical rotation utilizing the 2:1 (and one case of a 3:1) collaborative learning model as well as supervised first year, first semester SLP graduate students previously utilizing a 1:1 model were invited to complete a survey, including open ended response options (See Appendix F). The clinical instructors who participated in the survey were then invited to participate in a focus group to further capture data relating to their experiences. The focus group utilized open ended, semi structured questions with clinical instructors (See Appendix G).

Data for research questions two and three also included two different types of data. First, the students, at the end of the semester, were also invited to complete a survey, including open ended response options (See Appendix H). The students who participated in the survey were then invited to participate in a focus group which utilized open ended, semi structured questions to further capture data (See Appendix I).

Since focus groups were being utilized for both units in this case, students and clinical instructors, the surveys also provided an opportunity for participants to share their opinions privately with the researcher to guard any potentially important but sensitive information they might not otherwise feel comfortable sharing with the entire group. Survey questions as well as focus group questions for both students and clinical instructors were originally created utilizing the conceptual framework of the model, a thorough review of the literature, and the research questions.

Data Collection

All clinical instructors who provided clinical instruction during this clinical rotation utilizing the 2:1 (or 3:1) collaborative learning model, as well as supervised first year, first semester SLP graduate students the previous year utilizing a 1:1 model were invited to complete a survey that included open ended questions. Following the IRB protocol, all attempts were made to include all eight clinical instructors, however, only six clinical instructors completed the survey. Once the survey was submitted, participants were then invited to participate in a focus group. All six clinical instructors were contacted so that a focus group could be scheduled. Multiple attempts were made to come up with a day and time where everyone could participate, however, one participant who completed the survey did not attend the focus group. Five out of eight clinical instructors fully participated in the study.

All 40 students in the cohort participating in the 2:1 collaborative model were invited to complete a survey that included open ended questions. Following the IRB protocol, all attempts were made to include all 40 students, however, only 34 students completed the survey. Once the survey was submitted, participants were then invited to participate in a focus group. All 34 students were contacted so that focus groups could be scheduled. Four days and times were offered with the goal of having two groups with eight participants and two groups with nine participants. Multiple attempts were made to schedule the focus groups, however, one participant who completed the survey did not respond to any attempts and did not attend the focus group. Thirty-three out of forty students fully participated in the study.

The data obtained in the initial surveys for both the students and clinical instructors were used as an independent data source providing descriptive statistics and open-ended data which contributed to the overall development of themes, but the survey also served as a mechanism that

identified any additional needed data to achieve data saturation. In qualitative inquiry, data saturation is a concept used to determine if enough data has been collected to the point of not being able to generate any novel information (Saunders et al., 2018).

Once survey data was received, it was deidentified and a study identification number was assigned to each participant. After an initial brief analysis of the survey data, focus group questions were updated to attempt to capture any additional data needed to answer the research questions and provide support or rebuttal to the conceptual framework. All deidentified data from the survey and focus groups were linked via the unique study identification number to increase triangulation within the study confidentiality.

Surveys were created and survey data was collected via Redcap. All focus groups were conducted via Microsoft Teams and were recorded and transcribed within the Microsoft Teams Platform. There were a total of five focus groups. One focus group included the clinical instructors, and four focus groups included the students. Attempts were made to separate clinical partners during the focus groups, however, due to scheduling, one focus group included both partners from one clinical partnership. Both partners, 1007 and 1032 did not report any negative information in their survey responses regarding their partner and both fully participated in the focus group and did not demonstrate any behavior that would indicate they were uncomfortable, such as not sharing. The MP4 recordings from Microsoft Teams were sent to a transcription company, Ubiqus on Demand, which was approved by the IRB.

When the completed transcripts were received, the researcher, listened to the recordings while checking the transcripts for accuracy and deidentified by applying the study identification number. Once the transcripts were rechecked for accuracy the Microsoft Teams recordings were deleted. A linking document was created and is kept in a separate and a secure location. The

linking document associates the study identification number to the participant as well as data in case it is needed during the course of the study to rematch the data to the participant. None of the research data was stored with identifiers. The deidentified data and linking document have been stored separately on password-protected network storage. Finally, four main principles of data collection (Yin, 2017) were utilized in the data collection for this study. First, multiple sources of evidence were used including survey data, and data from focus groups from both subunits (clinical instructors and students), second, a database was created using Microsoft Word and Microsoft Excel, and a separate chain of evidence was maintained, separately (See Appendix J) and finally, no data from social media sources was used (therefore the fourth principle, proceeding with caution when using data from social media was not applicable).

Data Analysis

Survey results were briefly analyzed first to determine if the focus group questions needed to be adjusted to remove redundant questions and to collect novel data. Survey results, both descriptive statistics and answers to open ended questions, transcripts from focus groups, were analyzed using an inductive strategy which indicates that the data was analyzed from the bottom up not relying on propositions made before the study was designed. In Vivo coding techniques were used for the first-round coding. In Vivo coding is a suitable for any study that utilizes a qualitative methodology and is particularly useful for novice researchers who are beginning coders (Saldana, 2021, 2022). In Vivo means, “in life” in English which is meaningful as In Vivo coding honors the language of the participants and uses their own words in the analysis of data (Saldana, 2022). In Vivo coding is appropriate for analyzing data irrespective of the methodology or research questions (Saldana, 2021). This coding technique was useful in capturing the voices of both units of study, the clinical instructors and students, who were the

most involved in the case being studies. This coding method allowed me to discover important detailed information that ultimately led to the development of more global categories and themes relating to the abovementioned case while also allowing me to describe the unique qualities of each embedded unit and make connections between them.

First round coding using In Vivo methods with all data sources was the initial process of analysis. Pattern coding was used for second and third round coding which led to the discovery of categories and themes (Saldana, 2021). This qualitative analysis followed loosely with Creswell and Poth's (2018) "data analysis spiral" (p. 186). There are five components of the data analysis spiral that support using a first, second, and third round coding system. The five steps are: "managing and organizing the data, reading and memoing emergent ideas, describing and classifying codes into themes, developing and assessing interpretations, representing and visualizing the data" (Creswell & Poth, 2018, p. 187).

For example, step one is handling and arranging the data, so it is manageable. I accomplished this by creating a separate folder which contained all files containing data. All data was deidentified for confidentiality and all participants were assigned a unique study identification number. The files were kept on a secure network that is password protected. Original recordings were deleted. The transcripts from the focus groups were printed out for ease of coding. The survey data was not printed out. Second, evaluating and writing surfacing ideas can correspond with first round coding using the In Vivo coding technique where the actual words of participants are used as codes. I carefully went through all of the data and found excerpts of information that stood out from what the participants either shared in the survey or focus group and developed In Vivo codes. I also generated analytic memos and notes relating to the codes developed during this process.

The third step, converting codes into themes, corresponds with the pattern coding that was used in round two and three coding which led to the development of categories and eventually the themes that will be described further in Chapter Four of this study. I used pattern coding techniques for the second-round coding to develop categories, and pattern coding for the third-round coding where I developed themes. A data codebook was created where the final result of the three rounds of coding can be found (See Appendix K).

When themes were developed, an additional separate survey to the clinical instructors and students (See Appendix L for students and Appendix M for clinical instructors) to allow them an opportunity to see if they agreed with the themes developed and to provide commentary if they did not and also to allow them an additional opportunity for any other commentary. This member checking provided another source of triangulation and trustworthiness to the data interpretation.

Microsoft Word and Microsoft Excel were the sole means of data organization that I used. I went through the data again, organizing important excerpts of the transcripts, as well as analytic memos and applied those excerpts to the appropriate theme. This provided a greater organization of the data which allowed a more structured synthesis of information. I then fell back to steps four and five of this spiral and created explanations that emerged from the themes, and finally, corresponding to step five, the findings can be found in chapter four of this document and chapter five where a full description of the data analysis relating back to the research questions, conceptual framework, and literature review can be found.

For round one coding, I used lone wolf coding and coded the data independently as this research study is also the requirement of my dissertation. I developed the initial In Vivo Codes and the start of the categories independently. During coding and analysis in round two and three,

another researcher and I went through the initial codes again and agreed upon chosen categories and themes. When the final codes were decided, the second coder and I developed a follow up, member checking survey. I used member checking to contribute to triangulation and trustworthiness of the study and the interplay between the multiple data sources also contributed to this (Creswell & Poth, 2018; Yin, 2017). To ensure that my analysis was of high level, I followed the four guidelines recommended by Yin (2017). First, I determined that I reached data saturation and my analysis demonstrated that I utilized every bit of possible evidence, second, I made sure that I examined all conflicting explanations, third, I made sure that in my analysis, I emphasized the most noteworthy feature of the study, and fourth, I bring to this study a level of expertise regarding the prevalent views about the topic of my research (Yin, 2017, p. 199).

Summary

Chapter three of this retrospective, embedded, single case study design provided an overview of my role in the research, the research questions, ethical procedures taken, participants in the study, study setting, sources of data, collection of data, and data analysis procedures. In the next chapter, I will report all processes involved with data collection, how the data was organized, and how this data organization contributed to a thorough analysis of the data which then led me to find patterns and eventually overall themes. I will also discuss discrepant cases and non-confirming data as well. Findings of the study will be structured around the research questions and conceptual framework. Finally, I will discuss the evidence of quality of this study and what procedures were in place for triangulation so that trustworthiness and believability were increased.

CHAPTER 4: FINDINGS

The overarching purpose of this descriptive case study sought to describe the experiences of clinical instructors and first year, first semester speech-language pathology students during their clinical rotation utilizing a 2:1 collaborative learning model in an adult acute care setting. This study focused on the perceptions of clinical instructor's and first year, first semester speech-language pathology graduate students regarding learning and confidence in an adult acute care clinical placement utilizing a collaborate learning model. For clinical instructors, the focus was to describe their perception of learning outcomes for first year, first semester speech-language pathology graduate students during a clinical rotation utilizing a collaborative learning model in an acute care setting compared to a traditional 1:1 model. An additional focus related to first year, first semester speech-language pathology graduate students' confidence and perception of their overall learning outcomes in a collaborative learning model during a clinical rotation in an adult acute care setting during their first semester in graduate school.

In this chapter, I will discuss all processes involved with data collection, how the data was organized, and how this data organization contributed to a thorough analysis of the data which then led me to find patterns and eventually overall themes. Findings of the study will be structured around the research questions and conceptual framework. Finally, I will discuss the evidence of quality of this study and what procedures were in place for triangulation so that trustworthiness and believability were increased. The research questions guiding this study include:

Research Question One: How does a 2:1 collaborative learning model impact a clinical instructors' perception regarding the learning outcomes of first year, first semester graduate students in an acute care medical setting compared to a 1:1 model?

Research Question Two: How does a 2:1 collaborative learning model influence a student's confidence level in an adult acute medical setting practicum during the first year, first semester practicum?

Research Question Three: How does having a clinical partner influence students' perceptions of their learning experience and learning outcomes in a 2:1 collaborative learning model?

Data Collection

Participants

The voices of the participants were the most important aspect of data collection. Their responses to questions along with their other opinions and ideas captured in either the survey or focus groups allowed me to gain, as much as is humanly possible, the opportunity to experience the clinical rotation through the lens of the participants. The participants were recruited utilizing purposive sampling due to the nature of the single case methodological design. Purposive sampling is useful in case studies as it allows the researcher to include participants that are directly involved with the case being studied (Saldana & Omasta, 2022). Recruitment was directed at both the first year SLP graduate students who have completed their first semester clinical rotation in an adult acute care setting (n=40) and the adult acute care clinical instructors employed by the academic medical center who have supervised the aforementioned students in their clinical rotation as well as supervised first year, first semester SLP graduate students previously utilizing a 1:1 model (n=8).

One clinical instructor resigned shortly after the semester began, and one clinical instructor volunteered to supervise students utilizing a 3:1 collaborative learning model. The decision was made to also include this clinical instructor and students in the recruitment efforts

as these participants were likely able to provide insight to the overall collaborative nature of supervising more than one student simultaneously for clinical instructors and being a part of a collaborative group for students. This additional dimension to the project allows for the unique opportunity to discern the nuances of a 3:1 model, which has the potential to yield even a greater number of clinical placements in this hard to place clinical practice setting.

After all recruitment attempts were exhausted per the IRB protocol, the final number of participants included: students who completed the open-ended survey (n=34), students who completed the open-ended survey and participated in the focus groups (n=33), clinical instructors who completed the open-ended survey (n=6) and clinical instructors who participated in the focus group (n=5). All attempts were made to schedule every participant into a focus group, but after a certain amount of time of no response from one student, the decision was made to move ahead with the groups secondary to time constraints to finish this project. All clinical instructors indicated they would attend the focus group; however, one clinical instructor did not attend.

Data Collection Instruments

All participants completed an open-ended survey and after completion of the survey all participants were invited and scheduled to participate in a focus group which utilized semi-structured, open-ended questions. After the data was analyzed and themes were developed, a follow up survey was sent to all participants who both completed the survey and attended a focus group. This was done to allow participants an opportunity to indicate agreement with the themes developed an opportunity to provide any additional information if they did not agree with any theme, and an opportunity to provide any additional information they deemed important to share.

Survey

The purpose of the survey was twofold. First, it allowed participants a private means of sharing information they may not have been comfortable sharing as a group. Second, it allowed an opportunity for the researcher to refine the focus group questions to ensure data saturation. Both survey instruments contained 51 total questions (including one question for the participant names), 33 closed ended, yes, sometimes, and no questions, and 18 open ended options to offer any explanations for the responses to the closed ended questions. The closed ended questions provided a quick look at the overall nature of the data, and one means of triangulation as they could potentially corroborate support for any open-ended responses on both the survey and in response to the questions in the focus group. The surveys for both subunits mirrored each other with appropriate distinctions made for each group. The survey instrument for graduate students can be found in Appendix H and the survey instrument for clinical instructors can be found in Appendix F. Once all attempts at recruiting participants per the IRB protocol were exhausted, the participants were contacted to schedule a time to participate in a focus group. The estimated time to complete the survey was 30 minutes. Once the surveys were completed, a second coder joined to assist in the initial analysis. The focus group questions that were proposed prior to the study were reviewed and those that were highly redundant with answers already acquired from the surveys were deleted. This allowed for additional information from the surveys to be explored by adding to the focus group questions.

Focus Group

Graduate students and clinical instructors were placed in separate focus groups. Separating subunits provided three benefits. First, it allowed both groups to speak freely without the fear of upsetting anyone. Although the students had completed the clinical rotation, it is

likely for several of them to have another clinical rotation or complete an externship with these clinical instructors in the future. This could potentially cause the students to be apprehensive about sharing open and honestly about their experience to avoid any reprisal for negative responses. Second, it also allowed clinical instructors the same benefit, although there is a power differential between the two groups with the clinical instructors being in a place of power, it can be uncomfortable to share negative feelings and experiences. Third, it allowed me to make some clear distinctions early on regarding the analyses for both subunits.

While defining student focus groups, the goal was to assign students to focus groups that did not include their clinical partners. Although the results of the survey only revealed a few students who reported negative experiences regarding collaborating with a partner, the rationale for separating partners during focus group sessions was to continue to provide as much of an opportunity for students to share freely about their experience. Because of this, every attempt was made to separate clinical partners during focus groups, however, due to the complexity of scheduling times for this many students, taking classes, current clinical rotations, and work schedules into consideration, where everyone could meet, one set of partners did end up participating during the same focus group. The nature of their interaction was positive as reported on the survey data, therefore this pair being in the same focus group was unlikely to have influenced what they shared.

The surveys and focus groups yielded enough data to where data saturation was met as there was redundancy in information provided and due to the purposive and bounded nature of participant recruitment for this case study, it was not possible to gain additional information from other participants. These multiple sources of data allowed for a rich analysis, added a dimension of triangulation, and is consistent with case study methodology (Creswell & Poth, 2018; Yin,

2017). After the data was analyzed and themes were developed, a separate survey was sent to both subunits for member checking to further contribute to triangulation and trustworthiness of the study. Each focus group lasted approximately one hour. For clinical instructor focus group questions, see Appendix G. For student focus group questions see Appendix I.

Member Checking Follow Up Survey

The follow up survey for both the graduate students and clinical instructors contained eight total questions including one question for the participant's name. It was designed with a constructionist epistemological stance as there was an opportunity for participants to add commentary which could potentially contribute to more data. Six of the questions provided the theme, and the categories involved with creating the theme. Each question also contained at least one quote supporting each category. The student version provided student quotes taken from the survey and focus groups. The clinical instructor version provided quotes from clinical instructors with the exception of one category, "practice" in which there were only student quotes, so a student quote was used. The participant was then asked if they agree with the theme and could answer yes or no. The rationale behind providing a detailed explanation of theme development was that the themes developed were somewhat abstract in comparison to the original data set and the inclusion of the rationale and quotes were needed to provide adequate information for an informed decision to be made. If the participant did not agree with the theme, and answered no, there was an opportunity for them to provide an open-ended explanation regarding their response. The final question was optional and gave the participants the opportunity to share if there were themes they expected that were missing and/or if there was anything they wanted to share pertaining to the accuracy and relevance of the main themes captured. The survey for member checking for Subunit One, graduate students, can be found in Appendix L. The survey

for member checking for Subunit Two, clinical instructors, can be found in Appendix M. The follow up survey was estimated to take approximately five minutes to complete.

Data Organization

Well organized data was foundational to the overall data analysis process. The amount of raw data was large as it included closed-ended and open-ended responses from both survey instruments, transcripts from approximately five hours of focus group discussions, and the data from the follow-up survey. To maintain organization, a data chain of evidence list was created. This chain of evidence provided a visual of the entire process of data analysis and acts as a detailed record of the data analysis process. This document can be found in Appendix J.

All three rounds of coding were done manually utilizing Microsoft Word and Microsoft Excel to help organize as well as visualize data. A folder was created in password protected network storage labeled, “Deidentified Data Collaborative Model” to keep the data sources together. Survey data was kept in a Microsoft Excel document. Descriptive statistics were calculated, and initial In Vivo Codes were determined and kept in this same Microsoft Excel file. Analytic memos were made and included any discrepant cases and non-confirming data needing to be explored. Focus group transcript data was initially analyzed in Microsoft Word in a table format to allow for the transcripts to be in one column, In Vivo Codes in another column, and the final column to be used for analytic memos regarding any important topics I wanted to discuss along with any discrepant cases and non-confirming data that also deserved further exploration and description.

The initial codes from both the survey data and focus group data were transferred and combined into a single Microsoft Excel document so I could utilize the sorting and grouping features which were helpful for the visualization of emerging patterns among the entire data set

which helped the refine the data for second and third round coding. After all three rounds of coding were completed in Microsoft Excel, three final files of the data were created. One for the cross-case analysis, which included data from all participants, one for Subunit One, and one for Subunit Two. After all of the data was sorted by themes in Microsoft Excel for all data sets, the final data set was transferred in table format into a Microsoft Word Document and a Data Codebook was created (See Appendix K to view the Data Codebook).

Data Analysis

First Round Coding

Open ended survey responses and focus-group transcripts were initially coded during the first-round coding using In Vivo Coding techniques. I thoroughly read through the open-ended survey responses and the final transcripts two times and on the third pass, I extrapolated excerpts from the participants own words that stood out to me. The data for the survey during round one was kept in a Microsoft Excel file. For the focus groups, the data was initially organized in a table with three columns in Microsoft Word. Transcripts were in the first column, In Vivo Codes in the middle column, and the last column was used for analytic memo writing. I created a word cloud to visualize the final In Vivo Codes. I removed common words, function words, and numbers (See Figure 2 for a Word Cloud Representation of In Vivo Codes).

Second Round Coding and Category Development

Once first round coding was completed, second round coding, utilizing Pattern Coding began. To begin this process, I did a few different things to conceptualize patterns. First, I created a word cloud with all In Vivo Codes as mentioned in the last step. This helped me to notice any words that really stood out and occurred frequently. In creating this word cloud, the program I used, Word Art, also provided me with a word count for each word used in descending

order. I removed common words, function words, and numbers (See Figure 2 for a Word Cloud Representation of In Vivo Codes). Next, I alphabetized all in vivo codes which then helped me to group like words together. I then looked for similarities in words to see if common words had a shared category. Once I could see the patterns, the development of initial category labels followed. Some of the In Vivo Codes were very closely related and fell into a pattern, but they also had subtle differences that I felt were important to capture. Once I had established an initial set of categories, to increase the trustworthiness of this study, the second coder and I collaborated to further develop and define the categories.

Figure 2

Word Cloud Representation of In Vivo Codes

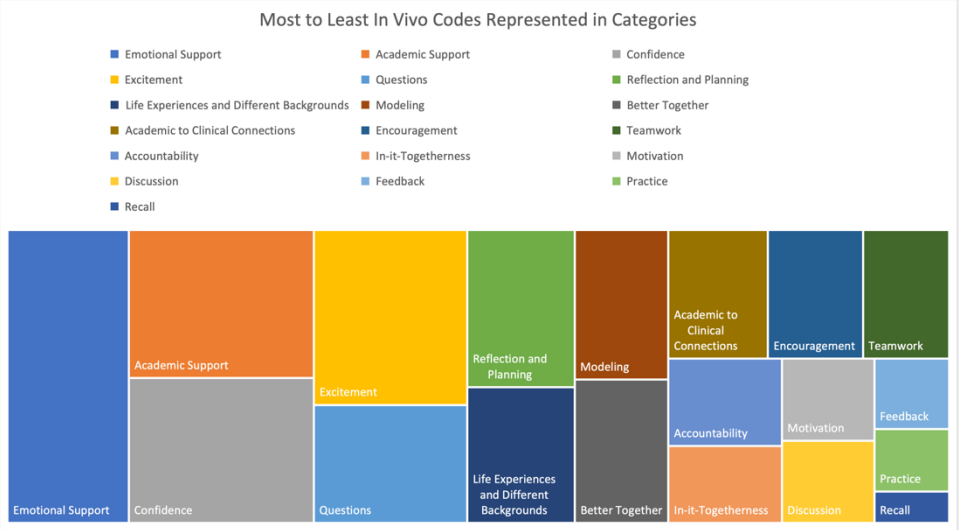
Categories Developed

The final categories developed were confidence, excitement, motivation, questions, reflection and planning, academic to clinical connections, teamwork, accountability, feedback, encouragement, academic support, better together, recall, practice, modeling, emotional support, in-it-togetherness, and life experiences and different backgrounds. Most categories included In

Vivo Codes from both the Subunit One and Subunit Two data sets. The only exemption and category that did not involve data from both subunits was practice. The category practice did not have any contributing In Vivo Codes from the Subunit Two data set which makes sense as the clinical instructors were not privy to all of the thing's students were doing outside of their clinical schedule. The categories developed provide a good sense and representation of the overall data set. The rationale for the development of each category is provided below. (See Figure 3 for Most to Least In Vivo Code Representation in Categories).

Figure 3

Most to Least In Vivo Codes Represented in Categories



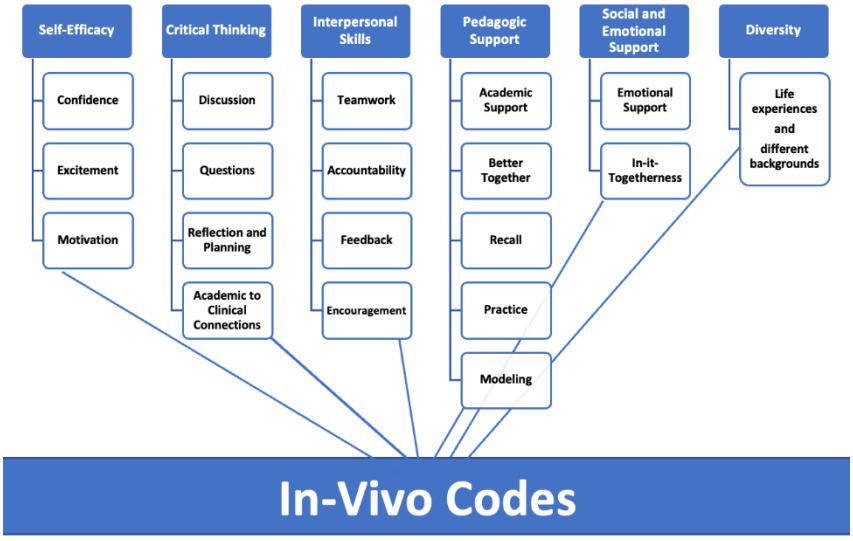
Third Round Coding

Pattern Coding was again used in third round coding to further examine the data and to condense it even further. This round of coding helped to determine if the categories could be further broken down and grouped into more abstract and condensed themes. After a detailed analysis of initial codes and categories, five possible schemas classifying the In Vivo Codes and categories into more abstract themes were considered. Both coders reviewed all possible schemas to determine the final themes chosen, and after careful and simultaneous inquiry

between both coders, the fifth schema, containing six final themes, was found to capture the voices of the participants most appropriately. Once both coders agreed regarding the best match of codes to categories to themes, the coding process was completed (See Figure 4 to see how the categories were sorted into themes).

Figure 4

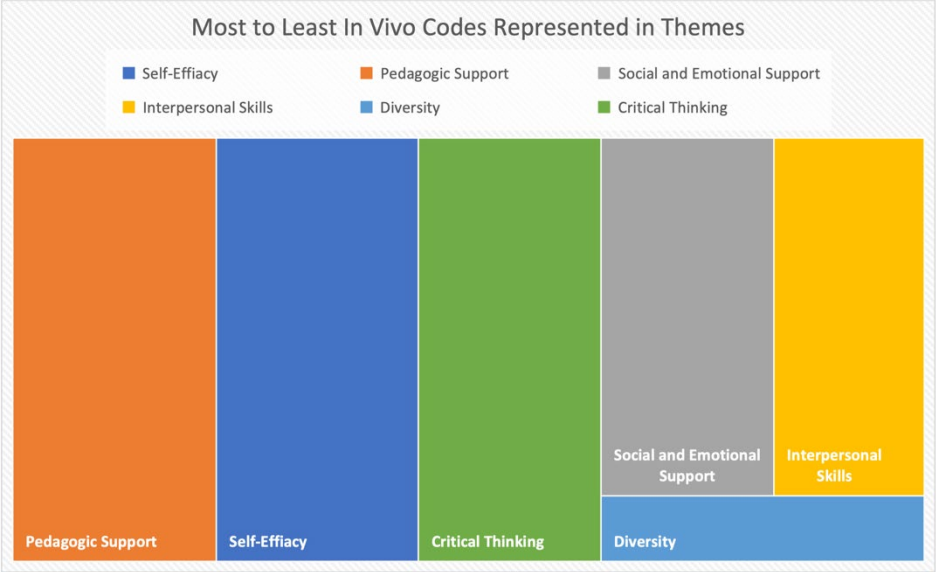
Schema Depicting In Vivo Coding to Categories to Theme Development



There were the most In Vivo Codes used in the theme of Pedagogic Support and the least number of In Vivo Codes used in the theme of Diversity (See Figure 5 to see the allocation of In Vivo Codes used in each theme from most to least).

Figure 5

Most to Least In Vivo Codes Represented in Themes



Member Check Follow Up Survey

All participants in Subunit Two responded to the follow up survey and all indicated agreement with all themes developed. None of the participants from this group provided additional commentary. A vast majority of the student participants responded to the follow up survey and all indicated agreement with every theme except for one student who indicated non agreement for the theme of interpersonal skills. She offered an explanation regarding her specific experience, which is considered a discrepant case, and will be discussed in greater detail in chapter five.

Findings

The entire data set including surveys for both subunits, focus groups for both subunits, and follow up surveys for both subunits were included in the analysis. This qualitative analysis was related to step three in Creswell and Poth's (2018) data analysis spiral.

Six themes emerged from the data analysis: self-efficacy, critical thinking, interpersonal skills, pedagogic support, social and emotional support, and diversity. The themes consistently emerged throughout all of the data set. The six themes provided the overall structure to answer each research question.

Theme One: Self-Efficacy

Self-efficacy is of upmost importance when it comes to being successful in many of life's endeavors including academics (Bandura, 1986). We must believe in ourselves and our own abilities, but we can make improvements to our individual self-efficacy with the influence of others in a social situation. The theme of self-efficacy was developed from the categories of confidence, excitement, and motivation. These categories are all involved with a student's overall feelings of self-efficacy. Confidence and excitement promote motivation to learn, which in turn stimulates self-efficacy and self-efficacy can then increase motivation (Bandura, 1986). Thrill and motivation are considered individualistic, as is self-efficacy, however, the social nature of the 2:1 collaborative model contributed to the construction of confidence, excitement, motivation which are captured well in the theme of self-efficacy.

There was a lot of support from the data related to benefits of the 2:1 collaborative learning model related to student confidence. One student shared, "Working with a partner skyrocketed my confidence and comfort in clinic." From the perspective of a clinical instructor, "I think student's feel more confidence with a partner rather than experiencing the clinical setting alone." Both subunits provided support for the 2:1 collaborative learning model contributing to confidence. There was also a great deal of explicit evidence from both subunits regarding excitement. Excitement depicted how students feel about any aspect of the clinical rotation. The data revealed much support from both subgroups regarding excitement in the clinical rotation

which can be looked at as thrill or motivation. Motivation is an individualistic emotion and is not necessarily influenced by having a clinical partner, however, motivation or thrill of learning is closely related to confidence and is influenced by confidence (Bandura, 1986). One student shared, “I was so excited to go into acute care” while a clinical instructor relayed, "All of them [clinical partners] expressed excitement." In general, clinical rotations tend to be an aspect of the overall graduate program that students look forward to and this was captured in the data as excitement for learning was clearly shown in the data.

Students clearly expressed how they either motivated their clinical partner or were motivated by their clinical partner. Motivation was shown in the data to contribute to self-efficacy as it captured how having a clinical partner can help create a source of motivation for a student to come out of one’s comfort zone. One student shared, “Us together as a team helped with like motivation in general." The motivation gained from clinical partnerships was also noticed by clinical instructors, one clinical instructor stated, "[The students] motivated each other and could talk further about their experiences.” The theme of self-efficacy permeated throughout all of the data. Almost all examples regarding the overall effect the 2:1 collaborative learning model regarding the theme self-efficacy were very positive. Though, one student did report that she felt better without anyone watching her and one clinical instructor also noted that one of her students seemed to feel more nervous with an additional audience.

Theme Two: Social and Emotional Support

Social and emotional support is an aspect of clinical education that isn’t thought of very frequently, but it’s importance and positive influence on the student’s experience in their clinical rotation was well supported in the data from both subunits. The theme of social and emotional support was developed from the categories of emotional support and in-it-togetherness. Both

emotional support and in-it-togetherness provide important aspects of the types of social and emotional support clinical partners were able to provide to each other. Emotional support was how the student's helped each other through difficult experiences and were directly related to helping each other share feelings and talk through difficult emotions. One clinical instructor shared, "They help each other when needed." The code was related to an overall response from the clinical instructor survey question asking if they thought clinical partners provided comfort to students during the clinical rotation. Another example of this is shared in a sentiment from a student, "So having a partner for your first, like – it was both of our first acute settings, it was something that was like – we were seeing, like, patients die, like things like that." Another student shared:

> So, it was something that we would kind of after clinic we would kind of just, like, go back to her house, debrief, 'cause we'd be by ourselves. Just like something that was good, like, emotionally so we weren't, like, emotionally draining ourselves to keep it all in because they were like, don't talk to anyone.

Being in an acute care setting can expose a student to a lot of very intense and sad situations for fellow humans. For many students in a medical setting, this may have been the first time they ever experienced death or witnessed another person going through a serious illness. The following sentiment was shared by a clinical instructor, "For patient situations that were difficult to observe, students appeared to better handle such situations by having a peer to discuss with." A clinician is not privy to discuss these types of issues with just anyone, so having a clinical partner provided a safe person to speak with about feelings without violating the laws of HIPPA. There were the most In Vivo Codes in all of the data relating to the category of emotional support.

In-it-togetherness, the other category used to make up the theme of social and emotional support is closely related to emotional support; however, it leans more towards the kind of emotional support needed for feelings associated with being new at something and feeling inadequate. One student shared, "When my partner messed up, it made me feel better when I messed up as well." This category was similar to emotional support but had the added distinction of a form of emotional support that relates to feelings of inadequacy when beginning as a new student or starting anything new. It is not per se, misery loves company, but more like, misery feels better and more secure knowing that it is not alone. One student shared how realizing her clinical partner was not “perfect” actually increased her ability to be more hands on in clinic:

> I was a little bit more, like, reserved and my partner was, like, not as reserved, so, like, seeing my partner, like, do something and, like, mess up or not do it, like, perfect, it just made me feel like – I'm like, okay, like this is fine, like we're both gonna mess up. It made me, like, more willing to speak up and like, try more things.

The theme of social and emotional support encapsulates the support clinical partners provide to one another in the form of helping each other process very difficult emotions after seeing and experiencing devastating situations in clinic. It also captures the emotional support that clinical partners provide to each other inadvertently by realizing they are not alone in being a novice with clinical skills, and that everyone makes mistakes.

Theme Three: Critical Thinking

Critical thinking is an important and common concept that most people associate with when they think of learning. The theme of critical thinking was developed from the categories of discussion, questions, reflection and planning, and academic to clinical connections. These categories all relate to the clinical partnership, and all contributed to critical thinking in students.

Questions as a category was very straightforward as there were many references to questions made in both the survey instruments as well as the focus groups. The question category includes examples of how the clinical partnership influenced either how the students' asked questions or answered them. One student shared "[Having a clinical partner] made it easier to ask questions that I usually might have felt dumb asking!" A clinical instructor expressed, "[Students were] more willing to ask questions in a 2:1 model." Another shared, "Students appeared more comfortable asking questions if they saw their peers doing the same." In addition to students asking and answering more questions is a positive effect of the collaborative model. The data showed that students in the 2:1 model facilitated discussion.

The Discussion category conveys how the clinical partnership was shown to support more discussion between students. A few clinical instructors noted that there was some "chit chat" outside of clinical discussions, but it was typically easily redirected. This category had many explicit examples. A student shared, "We [clinical partners] often have spontaneous conversations connecting it to clinical experiences." Another example from a clinical instructor includes, "[Students were] more open to verbal discussion." This dialogue was very positive as it was essentially related to relevant information. The data also showed that clinical partner collaboration also had positive implications regarding reflection and planning.

The reflection and planning category represents how students benefit from having a clinical partner when it came to reflecting on their time in clinic or planning for their next clinical day. One student shared, "We [clinical partners] talked about our day and things that we did and what we want to do next time." A clinical instructor mentioned, "They [students] continued to talk about their experiences outside of the practicum." These quotes represent how having a clinical partner contributed to reflection and planning. The students had a clinical

reflection and goal setting assignment each week in their clinical didactic class. Students were required to “reflect” and set goals, however, there are many examples of how their reflection and planning happened outside of planned opportunities in class. Questions, discussion, reflection and planning paved the way for the clinical partnership to facilitate the important connections between the theoretical constructs learned in an academic setting and the practical application of that information in a clinical setting.

The category of academic to clinical connections is distinct in that it represents how the clinical partners influenced each other to make important academic connections. One student shared, "Having a clinical partner was helpful to make connections from class." One clinical instructor noted, "[Students] discussed observations at bedside with information they were receiving in class." Another clinical instructor shared, “Sometimes they [students] discussed what they have learned in class, relating it to clinical information; however, students still needed an explanation of how the information was related.” Clinical partners also helped each other recall information.

Critical thinking has many different components, and, after careful analysis of the data, the aforementioned categories, questions, discussion, academic to clinical application, and reflection and planning, provided many examples of how these categories contributed to the overall theme of critical thinking and how the benefits the clinical partnership had on questions, discussion, reflection and planning contributed greatly to the development of critical thinking skills.

Theme Four: Pedagogic Support

The theme of pedagogic support was developed from the categories of academic support, better together, recall, modeling, and practice. Descriptions of the categories and how they

correspond to the overall theme are described below. The theme of pedagogic support captured how the clinical partnership added a positive facet to a student's learning experience. Being in a new academic environment such as graduate school and then an entirely new learning situation such as clinical education contributes to a huge increase in a student's cognitive load.

The data provided many examples relating to how having a clinical partner was a source of academic support. One student expressed, "We [clinical partners] confirmed with each other things we learned." This example is powerful as the data showed how clinical partners influenced maximizing the connection between the student's academic coursework and their clinical rotation. This provides a glimpse of how having a clinical partner may have helped reduce the cognitive load of students. One clinical instructor also noted, "[Students] learned how to help each other during the session." This example also demonstrates the benefit of having a clinical partner to help a student navigate through learning experiences. Having a clinical partner also helped students to complete tasks related to their clinical rotation.

The category of better together, is similar to academic support, however, the key difference is that it depicts the benefits of clinical partners have on task completion, such as a chart review, when there is more than one person involved. Specific benefits of having more than one person involved when completing a task relating to clinic. One student shared, "I definitely would have missed details without my partners." A clinical instructor shared, "Having a partner helped to improve their chart reviews." A key aspect of this level of support was the benefit of having a clinical partner to help recall important information.

The category recall is very explicit. It captures how clinical partners helped each other to remember important details and that the recall abilities of one partner may benefit the other partner. One student expressed, "We [clinical partners] were able to remind each other of things

we had learned outside of clinical." One clinical instructor shared, "Communication between the two of the students improved their ability to recall important." Another clinical instructor, when describing how her students helped each other remember details shared, "Remember we talked about this?" or "Remember when we tried this? so kind of prompting the point of reference for learning, um, to help the other one kind of connect some of that information a little bit better." The students also benefitted from seeing each other perform clinical tasks.

The category of modeling was very significant. Students reported benefits from observing their partner. One student expressed, "I learned so much by watching my clinical partner." One clinical instructor, shared, " They learned more from another – watching another student do something versus me verbally instructing sometimes" In addition to benefitting from the modeling of clinical partners, a similar category emerged that relates pedagogic support, and that is practice.

In classes, the students are often asked to practice clinical skills on each other. The data revealed that students practiced on each other unprompted outside of class and clinic. The category of practice illustrates of how having a clinical partner is beneficial when it comes to practice in skill development. In this category, there were only examples from students. One student expressed, "We did practice outside of class." Another student shared, "Having a partner was helpful because we got to practice on each other." The theme of pedagogic support was well represented in the data. It provided one label to capture many different aspects of how the collaborative learning model provides an overall level of support in the academic environment.

Theme Five: Interpersonal Skills

Interpersonal skills are imperative skills that aren't always included in formal curriculum, yet they are necessary skills for students to be able to grow into supportive team members that

will have the soft skills to be an asset to not only their patients, but their fellow colleagues. The theme of interpersonal skills was developed from the categories of teamwork, accountability, feedback, and encouragement. Being able to give and receive feedback is a skill that has immeasurable benefits.

Many people struggle with feedback as they may see it as criticism, but if an individual can learn to receive feedback, honestly take in what was offered, and if it has meaning apply it so that behaviors can be changed it can contribute to individual growth. In addition, feedback can be difficult to give. Some individuals may see giving feedback as confrontational and choose to never offer feedback as to not insult someone else. The feedback category represents how the clinical partnership contributed to either giving or receiving feedback. One student expressed, "We [clinical partners] gave each other constructive feedback and learned from each other's example." A clinical instructor stated, "[Students] provided feedback to each other on interactions with patient." Another clinical instructor made a comparison of how the clinical partnership influenced students' skills with feedback. Along with feedback, the data showed that the clinical partners were encouraging to one another.

The category of encouragement involved how students encouraged each other in a positive way to promote success. One student shared, "We would say encouraging things to each other throughout." A clinical instructor mentioned noticing her students were, "Encouraging, like saying, "Yeah, you can do this." One student shared this about encouragement, "[Clinical partners] we all hyped each other up when one of us did something new that day in clinical and it was a very friendly atmosphere."

In addition to encouragement, the data supported that the clinical partnership contributed to the development of teamwork skills. There were examples of how clinical partners came

together as a team and used their partnership to support each other, lean on each other, and even making sure that each partner had an opportunity to participate with certain clinical tasks hand-on. An example of this from a student includes, "We would work together and share the task." It was also noted by a clinical instructor regarding the partners making sure they both had ample opportunities for hands on skills, "Keeping track of, like, who – who did what." Another example of how clinical partners learned how to communicate through their differences is captured in this student's comment:

> We work at different paces as people. You know, we get things done. I'm a get it done now, you know, she's a little bit more of a, well, we'll do it later, you know? And so, balancing all of that out was difficult, but we learned how to communicate and express like, you know, this is how I look at it, how do you look at it?

This level of communication to work through individual differences for the betterment of the team is evidence of the partnership providing opportunities for students to develop these important interpersonal skills. The divvying of tasks and looking out for one another was also shown in the category of accountability.

The category of accountability is very straightforward and includes ways in which clinical partners held each other accountable. One student expressed, "We would make sure that we keep each other on top of things." A clinical instructor commented, "Consistently reminded each other to complete tasks." Students, as a part of their clinical didactic class, had to complete a chart review before clinic each week and choose one patient to write a SOAP note on each afternoon. These tasks were encouraged to be completed together. One student spoke of how having a clinical partner helped them to be more accountable, "Due to working together on chart

reviews, SOAP notes, and other clinic related materials, we could plan for working on it before and after clinic which held us accountable to complete it immediately."

Theme Six: Diversity

The theme of diversity was developed from the category of life experiences and different backgrounds. The category includes life experiences represents how the different experiences and backgrounds of clinical partners was influential in a positive way. I spent a lot of time thinking about this theme as it was not related to racial diversity, or traditional diversity, but there was a clear theme of how different life experiences and backgrounds influenced and benefitted the clinical partners, and I felt it important to be represented as its own theme as speech-language pathology is known for being a field that is vehemently not diverse. The different life experiences shared involved learning how to respect another's perspective. One student stated, "I was seeing it from her perspective." A few other examples included clinical partners sharing their own experiences of illness or death with a family member. A clinical instructor shared:

> One of my students had recently had – lost a family member, and so that definitely impacted how she interacted with patients and families, from being on the other side. Um, and it was a good learning opportunity for both of them.

This particular example was a part of a longer story that involved learning boundaries with patients and their family members. Another clinical instructor shared this about how the past life experience of one of the clinical partners, who had experience with a family member in the hospital helped that partner to explain a diagnosis:

> I think one thing that might've been helpful is if – sometimes, you know, it sticks differently when I say it versus maybe their classmate talks through their thought process,

> um, because for me it's something that's, like, a well-established knowledge versus maybe, um, if they have someone in – in their group who's more willing to kind of talk through it or whatever, um, or make a guess and then we talk about why that is correct or not. Um, then I think that that likely helped some certain concepts stick for the person who wasn't quite there.

One student shared that even after she felt that she didn't need the support of her clinical partner any longer because she grew in confidence, she appreciated learning from another's perspective, "So, it shifted, like during this semester, it went from a support shifting to a like maybe we didn't need the support, but the benefits were still really big because of, um, the other person's perspective and questions." These examples from the data demonstrating the benefits of clinical partners having different perspectives and life experiences contributes to an overall theme of diversity. It honors individual differences and stories, and how even though, every student is at the precise same setting, at the precise same time in their level of education and field of education, they all come to the table with different experiences and this theme captured the essence of the value in everyone's differences and everyone's story.

Evidence of Quality

For triangulation and trustworthiness of this study, several steps were taken. First, a system of analysis was followed which aligns with Creswell and Poth's (2018) data analysis spiral. Second, there were multiple sources of data allowing for triangulation of results. Third, I kept a detailed "Data Chain of Evidence" that can be found in Appendix J. Fourth, during the second and third round of coding, there were two coders in agreement for the development of categories in round two coding and themes in round three coding. Both coders agreed on all categories and themes and carefully reviewed the distribution of In Vivo Codes. Fifth, I created a

data codebook with a detail of all In Vivo Codes, and the Pattern Coding analysis for rounds two and three corresponding to the categories and themes developed. This can be found in Appendix K. Sixth and finally, I sent a member checking survey to all of the participants to allow them an opportunity to agree or disagree with the themes developed. The participants were also afforded an opportunity to give their explanation in an open-ended manor if they disagreed with any of the themes, and then were given an additional opportunity to provide any other information they wanted to share. All participants in Subunit Two completed the survey and indicated agreement with all themes developed. A vast majority of participants in Subunit One completed the survey and only one participant indicated disagreement with one theme and offered an explanation that her situation may have been an abhorrent situation and has been mentioned in the description of themes and will be discussed further in chapter five.

CHAPTER 5: DISCUSSION

Overview of the Study

SLP, as a field, has been changing rapidly, however, the model of education used in graduate programs has not seen substantial changes in almost 70 years (American Speech-Language-Hearing Association, 2020). In 2018, an Ad Hoc Committee on Graduate Education for Speech-Language Pathologists (AHC-GESLP) was formed to address three main questions relating to SLP graduate-level education programs (American Speech-Language-Hearing Association, 2020). Of the three questions, two involved an exploration of the training and therefore adequate preparation of entry-level SLP clinicians (American Speech-Language-Hearing Association, 2020). Key stakeholders have increasing concerns that SLP graduate students may not gain the needed competency to properly enter the field as qualified entry-level clinicians using current educational models (American Speech-Language-Hearing Association, 2020).

Clinical education is an important and required aspect and provides invaluable learning experiences necessary in the preparation of future SLPs, however, it has become increasingly difficult to find placements in certain practice settings, but there is little exploration of alternative clinical education models that promote more placements. The shortage of clinical placements is the catapult of exploration into the efficacy of alternative clinical education models in SLP that can generate more placements. The exploration of clinical education models that increase the number of clinical placements that are, at least, not inferior to the traditional 1:1 model is an imperative course that is needed to contribute to improved and current methods in preparing competent entry-level speech-language pathologists upon graduation (Briffa & Porter, 2013).

The 2:1 collaborative learning model is a promising prototype in clinical education that offers double the clinical placements while also potentially increasing support for aspects of learning.

While the model's potential to increase clinical placements is exciting, the development of a body of evidence that first determines if this model is efficacious as far as learning is of greater importance. There is great importance in the balance between the administrative need for an increase in clinical placements along with evidenced educational methods as SLP continues to evolve and grow. An understanding of alternative clinical education models in the preparation of SLP graduate students in an acute care setting may provide an avenue to increase clinical rotation opportunities while simultaneously contributing to the evidence base of clinical education and improvement of educational programming in SLP. This study's purpose was to describe the experiences of clinical instructors and first year, first semester speech-language pathology students during a clinical rotation utilizing a 2:1 collaborative learning model in an adult acute care setting regarding perceived learning outcomes and student confidence. The following research questions have guided the study are:

Research Question One: How does a 2:1 collaborative learning model impact a clinical instructors' perception regarding the learning outcomes of first year, first semester graduate students in an acute care medical setting compared to a 1:1 model?

Research Question Two: How does a 2:1 collaborative learning model influence a student's confidence level in an adult acute medical setting practicum during the first year, first semester practicum?

Research Question Three: How does having a clinical partner influence students' perceptions of their learning experience and learning outcomes in a 2:1 collaborative learning model?

Summary of Findings

I was very excited to see how the responses to the survey and the responses to the focus group questions reflected the ideas of the conceptual model. The overall raw data and the raw data from both subgroups overwhelmingly supported the connection to the conceptual framework and literature review. Before formal data analysis, there were specific examples from the data from both Subunit One and Subunit Two regarding the overall positive experience of both the graduate students and clinical instructors. Two quotes, which I feel captures the heart of how the 2:1 collaborative learning model can positively influence confidence and the learning outcome of students are shared below. A clinical instructor shared:

> I think with having two students together in the same classes, going through similar experiences together in a clinical environment was extremely beneficial for their learning. At the beginning, they were able to connect with shared experiences of feeling comfortable with being uncomfortable (e.g., seeing trach patient for the first time, ICU patient, etc.) As the semester progressed, this evolved to sharing and exchanging information learned in class (with my support) and connecting it to the clinical setting. It evolved to asking questions and feeling comfortable asking questions they thought were "silly" because we had created an environment of comfort/safety for learning. I also think they felt more challenged, as they had to "perform" next to their peer.

A student expressed:

> My clinical partner made me feel much more comfortable and confident. We could put two heads together when figuring how to locate places, parking, etc. We could also support each other in clinic by bouncing off each other- if one of us forgot something the other could step in. This confidence made us better in clinic daily.

The entire data set including surveys for both subunits, focus groups for both subunits, and follow up surveys for both subunits were included in the overall data analysis to determine themes. This qualitative analysis followed Creswell and Poth's (2018) data analysis spiral.

When data analysis was complete, there were six themes that emerged: self-efficacy, critical thinking, interpersonal skills, pedagogic support, social and emotional support, and diversity. The predominant themes in the cross-case analysis were pedagogic support, self-efficacy, and critical thinking. See Figure 6 for the theme allocation relating to the cross-case analysis. The predominant themes in the Subunit One analysis were also pedagogic support, self-efficacy, and critical thinking which makes sense as there are considerably more participants in Subunit One and the results align more closely with the cross-case analysis. See Figure 7 for the theme allocation relating to Subunit One. The predominant themes in Subunit Two are critical thinking and self-efficacy. See Figure 8 for the theme allocation relating Subunit two. The themes consistently emerged throughout all of the data set and provided the overall support to answer each research question (See Table 1). All participants were sent a follow up survey and given the opportunity to agree or disagree with the themes that emerged and to provide them with an opportunity to add any additional input to increase triangulation and trustworthiness.

Figure 6

Theme Allocation Relating to the Whole Case Analysis

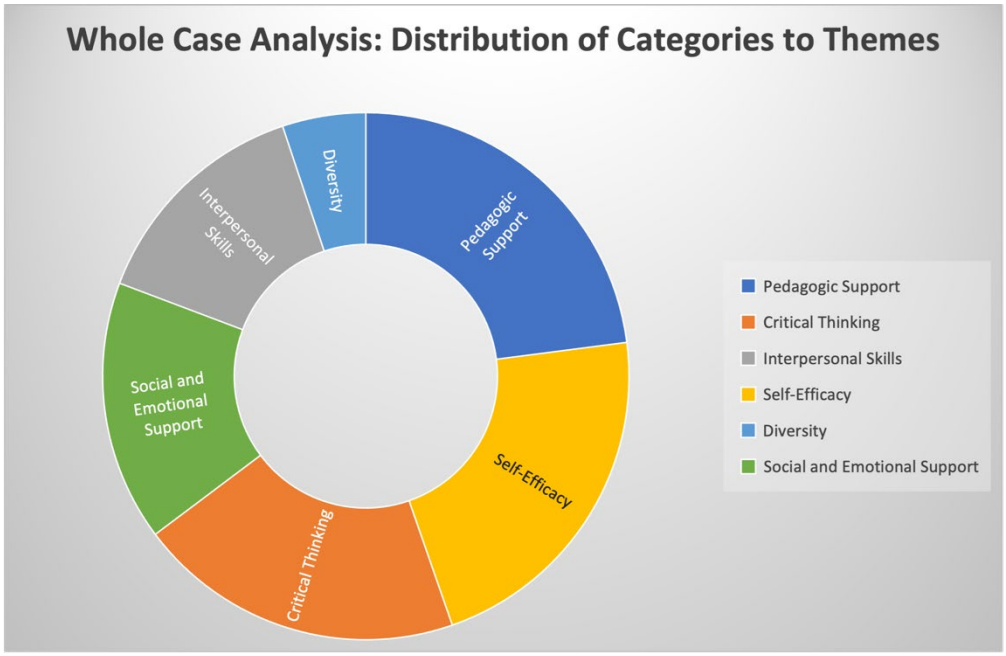


Figure 7

Theme Allocation Relating to Subunit One (Students)

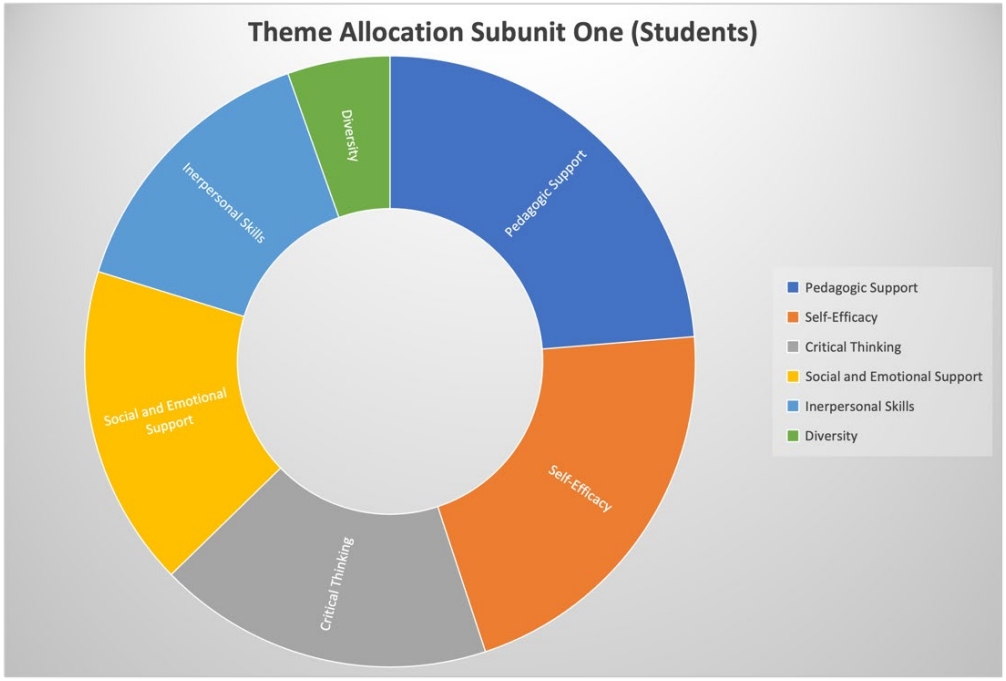


Figure 8

Theme Allocation Relating to Subunit Two (Clinical Instructors)

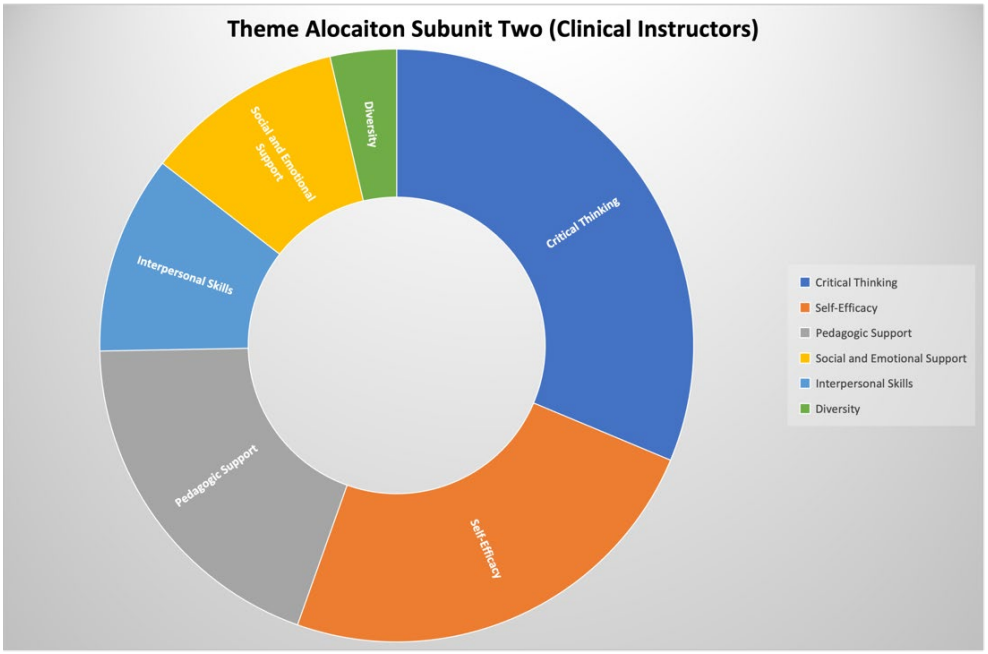


Table 1

Themes Providing Support to Answer Research Questions

	Research Question One: How does a 2:1 collaborative learning model impact a clinical instructors' perception regarding the learning outcomes of first year, first semester graduate students in an acute care medical setting compared to a 1:1 model?	**Research Question Two:** How does a 2:1 collaborative learning model influence a student's confidence level in an adult acute medical setting practicum during the first year, first semester practicum?	**Research Question Three:** How does having a clinical partner influence students' perceptions of their learning experience and learning outcomes in a 2:1 collaborative learning model?
Research Questions			
Themes Providing Support to Answer Research Questions	Critical Thinking Self-Efficacy Pedagogic Support Social and Emotional Support Interpersonal Skills	Self-Efficacy Social and Emotional Support	Self-Efficacy Social and Emotional Support Critical Thinking Pedagogic Support Interpersonal Skills Diversity

Interpretation of the Findings

Research Question One

How does a 2:1 collaborative learning model impact a clinical instructor's perception regarding the learning outcomes of first year, first semester graduate students in an acute care medical setting compared to a 1:1 model? Overall, the examples from the themes used to answer these questions, self-efficacy, pedagogic support, social and emotional support, and interpersonal skills were predominant in the clinical instructor data, and this question did not pertain to the

students, so for the sake of this discussion, I will focus solely on the data from the clinical instructors. This question was designed to determine if the clinical instructors who had experience with the previous cohort who they supervised on a 1:1 level perceived any differences in learning outcomes for the 2:1 cohort. The group of clinical instructors approached to participate in the study had experience with both groups and almost all of those clinical instructors participated in the study.

The clinical instructor's perception of learning outcomes for the graduate students in the 2:1 collaborative model compared to graduate students in the 1:1 model was determined by the clinical instructor data received from the open-ended survey as well as the focus group. All themes were represented in the data set from subunit two, but the predominant themes from this subgroup that provided the most support regarding the benefits of the 2:1 model in regard to learning outcomes for SLP graduate students were: critical thinking, self-efficacy, pedagogic support, social and emotional support, and interpersonal skills**.** These themes align with the conceptual framework's foundational theories; Hattie and Donoghue's model of learning, sociocultural theory, social cognitive theory, and social interdependence theory and their critical components, Hattie and Donoghue's input component of thrill in learning, Vygotsky's MKO, Bandura's self-efficacy and SCT's five capabilities, and positive interdependence.

Critical Thinking

Of great importance to learning outcomes for SLP graduate students, the data supported the clinical partnerships in the 2:1 collaborative learning model increased the opportunity for critical thinking. The literature supports the benefits of social constructivism in learning (Black & Allen, 2018; Mann, 2011; Vygotsky, 1978), for example in medical education, the social

context of learning through collaboration and observation has been common practice (Shimizu et al., 2020; Torre et al., 2006). The survey data indicated that many clinical instructors felt that the 2:1 collaborative learning model contributed to a student's ability to make academic to clinical connections and corresponded well to the literature indicating that a collaborative learning model provides benefits in the facilitation of critical thinking (Johnson & Johnson, 1975; Ladyshewsky, 1993). One clinical instructor shared:

> I think in my experience with the [students] partners I just saw a lot of, um, kind of talking to each other and saying, "Remember we talked about this?" or "Remember when we tried this?" so kind of prompting the point of reference for learning, um, to help the other one kind of connect some of that information a little bit better.

The survey data showed that all of the clinical instructors noticed the students having general, unprompted conversations with their clinical partners about clinical skills during the rotation. This is also consistent with the literature which suggested that students working collaboratively have an opportunity for sharing and discussion which helps students to make important connections and that critical thinking was accelerated when students worked together (Abercrombie, 1964; Ladyshewsky, 1993; Zwedberg et al., 2021). One clinical instructor shared, "Increased discussion of class content and bedside observations between [clinical] partners appeared to contribute to their ability to apply the information they were learning in class to a functional setting." Another clinical instructor shared, "After a session, if I was talking to a nurse about findings, they [clinical partners] would converse with each other about what they saw." These examples corroborate with the literature in how having more than one student can influence positive conversation that enhances learning and critical thinking. One clinical instructor shared a specific example of an important discussion between her students, "After

completing a FEES on a patient, where I had the students feed the patient, they [clinical partners] discussed ways in which to make the process more natural with one another." In addition to more discussion, the data showed that the students were more willing to ask and answer questions with a clinical partner, "Students tended to be more open to verbal discussion and appeared more comfortable asking questions with a clinical partner."

This data strongly supports that the 2:1 collaborative learning model contributed to students making more academic to clinical connections which at times was related to their increase in discussions. When I had written the literature review originally, I had discussion described as a soft skill, which is an appropriate label as it helps to develop to a student's ability to collaborate, which is a critical skill in healthcare outside of general competency development. However, while the data supported discussion as a soft skill, it also provided a glimpse of how this "soft skill" significantly contributed to critical thinking skills. Students being able to discuss information contributed to their thinking and learning which helped them make important connections. One clinical instructor expressed, "They [clinical partners] discussed information they received in class and how that correlated to what they observed at bedside." The ability to dialogue is a key element of collaboration and has been shown to contribute to learning (Atkinson & Claxton, 2000; Morris & Stew, 2007; Stanley & Ramage, 2004). This discussion also continued after the clinical day was over and students were able to reflect together. The data showed support for the 2:1 collaborative learning model providing opportunities for reflection and planning. Reflection and planning correspond to the conceptual framework, specifically, Bandura's SCT, and self-reflective and forethought capability (Bandura, 1986). These findings are consistent with other literature which indicated that reflection sharpens clinical skills (Morris & Stew, 2007). One clinical instructor shared, "They [clinical partners] discussed information

they received in class and how that correlated to what they observed at bedside." The clinical partnership offered many opportunities for students to collaborate and think critically.

Self-Efficacy

The findings strongly supported that self-efficacy played a role in the learning outcomes for the students during this semester. Most of the clinical instructors agreed that having a clinical partner influenced a student's confidence in their success in the beginning of the semester and a majority of clinical instructors felt the clinical partnership influenced a student's confidence in their success throughout the entire semester. This data is consistent with the substantial literature supporting collaborative learning contributing to the development of self-efficacy along with a reduction of anxiety in students and contributing positively to self-efficacy in a clinical environment (Carey et al., 2018; Markowski et al., 2021; Price & Whiteside, 2016; Stenberg & Carlson, 2015; Tai et al., 2015; Tolsgaard et al., 2103, Tolsgaard et al., 2016; Zwedberg et al., 2021). The data from this study demonstrated how impactful the clinical partnership was to the overall self-efficacy of graduate students in the 2:1 collaborative model. One clinical instructor expressed, "I think students feel more confident with a partner rather than experiencing the clinical setting alone." Overall, the examples were positive, there were instances where one student's confidence seemed to overshadow their partner and the clinical instructor had to alter her approach. She shared, "But they [clinical partners] were more confident, so they were more willing to kind of put themselves out there and guess. Um, and so that was something that I had to adjust throughout the semester in kind of just my approach."

Clinical partnerships provided a source of support as partners were instrumental in pushing each other outside of their comfort zone as far as trying hard things in clinic. The clinical instructors never used the words, "self-efficacy," but regarding how an overall increase

in self-efficacy in this group of students affected learning, one clinical instructor in response to her answer regarding confidence at the beginning of the semester provided this explanation, “I think student's feel more confidence with a partner rather than experiencing the clinical setting alone.”

The survey data also revealed that all of the clinical instructors felt that students expressed excitement about their clinical placement which in turn influenced self-efficacy. Thrill of learning (excitement) and self-efficacy are critical in a student’s learning journey and are reciprocal as motivation can strengthen self-efficacy and vice versa and the literature shows that the 2:1 collaborative learning model in and of itself contributes to an increase in self-efficacy which can then continue to drive thrill and motivation (Tolsgaard et al., 2103, Tolsgaard et al., 2016; Zwedberg et al., 2021). Excitement is an individual emotion; therefore, it is not expected to be influenced overall by the clinical partnership, but the excitement can influence a student’s overall feelings of self-efficacy, which is also individualistic, but necessary excitement or thrill along with self-efficacy, interact reciprocally and encase every aspect of the conceptual framework. The data support that self-efficacy contributes to clinical instructor’s positive perceptions of the impact a 2:1 collaborative learning model has on the learning outcomes of first year, first semester SLP graduate students as self-efficacy can be considered foundational when it comes to the student’s underlying beliefs about their education in general (van Dinther, et al., 2011). One clinician shared:

> I think there's a definite relationship there, absolutely. I – you know, just kind of thinking logically about that, you know, the more interested and excitement I think the student shows, I feel like they were able to really engage themselves in what they were learning, um, be kind of as involved as they possibly could because they were so interested in the

> material. And I think that just, you know, would increase their success throughout the semester.

Additionally, relating thrill back to the conceptual framework, the overall excitement of this clinical rotation has an output component as well, and upon completion, the thrill of this placement, and its successful completion, may serve to further a student's self-efficacy in their future clinical rotations (Hattie & Donoghue, 2016). Although the data showed that most students were excited, the clinical instructors discussed a few students who did not demonstrate that. One clinical instructor shared:

> One student I had in particular was not interested really in working in the adult or acute care setting, and it, kind of, um, showed throughout the semester in her, like, eagerness and confidence and kind of wanting to get hands-on with the patients.

Another clinical instructor had this example with one of her students as well, "I think I had one student that really, like, vocally did not want to work in acute care. And she participated much better as the semester went on, but definitely less confident than the other students."

In these few cases, the students did not demonstrate thrill in learning, or demonstrate a positive attitude toward learning in this environment as the clinical instructors were aware of them not wanting to be there. The few cases of students who did not behave professionally or did not choose to participate demonstrated an oddity when compared to the entire group of participants. This is important information, as the literature demonstrates that student attitudes and behaviors are in fact barriers contributing to the shortage of clinical placements, (Eta et al., 2011; Mupawose et al., 2021; Rodríguez et al., 2019; Wisener et al., 2020). Not all students entered the program with the goal of becoming acute care clinicians or have ever even observed in this setting (or stepped foot in a hospital), yet they benefitted from the learning opportunity and

completed the rotation successfully. This can happen in any practice setting that the student is not interested in. It is always important for all educators to remember that the field of SLP is quite broad, and upon completion of an academic program in SLP, students must demonstrate knowledge and skills in all of SLPs "big nine" areas. Clinical rotation serves its most important role in contributing to a student's overall learning and connecting all of the pieces both theoretical and clinical application.

Social and Emotional Support

The data corresponding to the theme of social and emotional support provides support to the learning outcomes for students in the 2:1 collaborative learning model and also contributed to clinical instructor's positive perceptions of the impact that a 2:1 collaborative learning model has on the learning outcomes of first year, first semester SLP graduate students. This theme ties in well to the overall conceptual framework as its overarching design models social constructivism. It also relates to the positive interdependence component of the framework as social and emotional support is an aspect of promotive interaction within groups where encouragement between group members helps other members to accomplish the goals of the group (Johnson & Johnson, 2009).

The data from the study supporting the influence that social and emotional support have on confidence and learning are well supported in the literature as a new clinical environment can be intimidating and cause students to feel pressure (Stenberg & Carlson, 2015; Tolsgaard et al., 2016), but a collaborative learning model in nursing has been shown to be a stress reliever and safety net for students (Stenberg & Carlson, 2015; Stone et al., 2013; Zwedberg et al., 2021). The survey data revealed the clinical instructors indicated that the clinical partnership in the 2:1 collaborative learning model increased a student's comfort level in the beginning as well as

throughout the semester. Although there were not an overwhelming number of references to the benefits of social and emotional support in the clinical instructor data set, it was clear that it was played an important role. One clinical instructor shared, “I enjoyed the dynamic and watching the students support each other.” Another clinical instructor expressed, “Overall interactions [between clinical partners] were positive.”

After analyzing the data and reading through it, I saw a huge connection between social and emotional support influencing self-efficacy. The theme of emotional support was created from the data regarding how the students supported each other emotionally throughout the clinical rotation, which contributed to an additional avenue for increased self-efficacy in individual students. This also relates back to SCT in the conceptual model, as SCT has three reciprocal components, the individual, the environmental influences, and the individual behavior as well as the reciprocal nature of the components and how they are interdependent with each other (Bandura, 1986). Social and emotional support corresponds, although somewhat abstractly, to the element of self-efficacy in the conceptual framework as emotional support, which is clearly social in nature, can represent the environmental influences on individual behaviors which can help increase feelings of and plays a role in self-efficacy (Bandura, 1986; Wang et al., 2015). For example, one clinical instructor noted, “Seeing their clinical partner complete tasks potentially gave them comfort/confidence in also completing tasks.”

Social and emotional support, by means of improving overall feelings of comfort created by the support of a peer promoting self-efficacy, is thought to correspond to improved academic outcomes in students (Li et al., 2018). Both exemplars correspond nicely to the conceptual framework as it demonstrates how an aspect of social constructivism which involves more than one student can influence an individualistic characteristic such as self-efficacy. In addition to the

aspects of social constructivism in learning, they can influence a student's self-efficacy and also, can relate back to self-reflective capability as observing a clinical partner perform a clinical duty can stimulate a means of self-reflection for the other partner comparing themselves and making decisions based on that reflection and comparison. Pedagogic support was another theme that provided support for the 2:1 collaborative learning model as a sound exemplar for clinical education in SLP in an adult acute care setting.

Pedagogic Support

The data supported that the 2:1 collaborative learning model contributed to the graduate students providing a great deal of pedagogic support to one another throughout the semester. Pedagogic support has a strong connection to the conceptual framework, especially to sociocultural theory's MKO, SCT's vicarious learning, modeling, self-reflective, and self-regulatory capability, and social interdependent theory's promotive interaction. One example is how the students split up tasks to make things a little less daunting for one another. One clinical instructor shared:

> So, it would be a little overwhelming for them [clinical partners] to say, 'I'm gonna give the entire Cognistat or I'm gonna do the oral motor.' And so, you know, one person would take one section, one take – one person would take the other section so that they could kind of share the responsibility, and I think that took some nerves away.

This level of support between students, working together to complete a clinical task, demonstrated promotive interaction which corresponds to the conceptual framework. Promotive interaction happens when students encourage each other to accomplish the goals of the team (Johnson & Johnson, 2009). It also supports self-regulatory capability from the conceptual framework as humans use self-regulation to shape their actions to be able to be comfortable with

themselves (Bandura, 1986) and come up with an internal check and balance system and incentivize themselves so that they can keep going to achieve a particular objective (Bandura, 1988). The clinical partners supported each other academically in other ways as well. For example, because they could not always have the opportunity to be hands on with patients, because graduate students did share clinical tasks with their partner, they were able to benefit from the modeling of another students.

Modeling relates back to the conceptual framework and the benefits of SCT's vicarious learning capability and modeling. The literature also shows that modeling promotes learning for the inactive student even if they were not actively involved (Zwedberg et al., 2021). This is important data, as because there were double the students, there was less opportunity for hands on experiences, and this is significantly different from typical clinical education experiences that most clinical instructors may have personally experienced, which can be argued as a detriment to the model. However, students may not have to learn from their own mistakes as learning from another's errors can be just as influential without the individual having to make the mistakes themselves (Bandura, 1986). An important observation expressed by a clinical instructor after pointing out that students do not have an immediate opportunity to try a clinical skill again directly after feedback, but how, in her own graduate school experience she benefitted and learned from video modeling made this connection to the 2:1 collaborative learning model:

> I think that this at least gave them [clinical partners] an opportunity to see – you know, watching someone else give a cognitive evaluation and maybe not prompting the right way or giving the right feedback or, you know, managing the situation very well would give them an op – gave them an opportunity to kind of say, "Oh, maybe we should try

> this next time or – or try this a little bit differently. So, it would give them the chance to get that observation of another person who was learning.

Modeling played a significant role in the student's learning this semester. Because of the nature of the 2:1 or even more so with the 3:1 model there were less opportunities for students to get hands on experience. Modeling in general is beneficial when developing competencies, and peer modeling is thought to be even more effective when the mentee recognizes a likeness to the models and can relate to them on a more personal level (Bandura, 1988). Per the survey data, the clinical instructors also did not feel there was a difference between the 1:1 and 2:1 group as far as their ability to actively participate in any clinical skill application and that it was largely student dependent.

Also, partners shared the load of academic requirements related to the clinical placement. One clinical instructor shared this, "[Clinical partners] split patients to chart review which may have helped students focus on particular patients." This level of support is consistent with the conceptual model and with Vygotsky's MKO and can also tie into SCT's symbolizing capabilities as it afforded students in the partnership the benefit of their partners past experiences and knowledge base during academic tasks. An excellent example of this, regarding one student having more knowledge because of her background, and how it benefitted her partner was shared by a clinical instructor:

> One of the students was actually a CNA before, um, coming to school, and so I think her – she would talk about some of the patients she would see and some of the things that – you know, she would talk about general things like transfers and how to get a patient cleaned up and – and – and I think it definitely helped the other student kind of see whole

picture and how things in a hospital work. Um, so I thought that was kind of interesting and unique.

Interpersonal skills also contributed to the learning outcomes of graduate students in the collaborative learning model.

Interpersonal Skills

There was evidence in the data that interpersonal skills provided support to the learning outcomes of students. This level of support between students, corresponds to the conceptual framework and specifically to social interdependence theory's positive interdependence which is thought to develop responsibility forces and promotive interaction. Responsibility forces relate to group members doing their fair share in in order to contribute fairly to the group's outcomes and promotive interaction occurs when the group members help each other to accomplish group goals (Deutsch, 1949, 1962; Johnson & Johnson, 1989, 2009).

There were a few clinical instructors who commented on how the clinical partnership influenced a student's sense of accountability to complete tasks. One clinical instructor shared this about her students, "[clinical partners] consistently reminded each other to complete tasks" and another who relayed, "[clinical partners] reminded each other to complete assignments." The survey data revealed that many clinical instructors indicated that they felt the clinical partnership enhanced encouragement between students. One clinical instructor shared "They [clinical partners] would encourage each other when trying something new for the first time." In addition to the themes developed, some interesting and I think important data that did not necessarily fit into any pattern or theme per se or relate to the specific aims of the research question, are shared below.

Extraneous Data

Some additional important information brought to light that was outside of the specific purpose of research question one, determining clinical instructor's perceptions regarding the learning outcomes of first year, first semester, SLP graduate students in an adult acute care practicum. This information related to some potential barriers that administrative staff may have concerns with; the effect on patient care and the effect on the patient and patient's family's comfort with having multiple students in the hospital room at once which may be used as a justification to not utilize this type of model for SLP in acute care settings.

One clinician shared this about patient's or their family's responses to having multiple students with her in patient rooms, "I think they're so used to that. Like, I never got any negative response. I think they're used to sometimes ten people being in the room at once." Another clinician shared this about the number of students affecting her clinical care, "So I don't feel like I made any changes in that sense between the – the two semesters." Although the sample size of this study is small, I find the positive responses to be beneficial, at least to universities associated with academic medical centers much like the location of this study. In academic medical centers, it is almost the norm for multiple medical and nursing students to be involved simultaneously in the treatment of a patient, however, for fields like SLP, where it is not the norm, I think there is potential for administration to use patient care and patient and family comfort as an excuse to not allow this model.

Conclusion Research Question One

The overall findings of this study supported that the clinical instructors' perception regarding the learning outcomes of first year, first semester graduate students in an acute care medical setting compared to a 1:1 model, revealed that the 2:1 collaborative learning model is

not inferior to the 1:1 model and also demonstrated that one model was not necessarily better over the other. However, a major added benefit, from an administrative standpoint, is that the 2:1 Collaborative Learning Model does provide the added benefit of effective resource utilization (more placements). There were a number of perceived advantages which, according to the data, far outweighed the disadvantages, discussed in this section, shared by the clinical instructors. Because we do not have a means to standardize the measures of non-inferiority between the 1:1 and 2:1 clinical education models, these results are overall positive and give creditability to the 2:1 model as being an efficacious means of providing clinical education for SLP graduate students in an adult acute care practice setting.

Research Question Two

How does a 2:1 collaborative learning model influence a student's confidence level in an adult acute medical setting practicum during the first year, first semester practicum? This question pertained to the overall data set as it was not limited to a student's perception, but the overall influence on the 2:1 collaborative learning model on student confidence comes from the data from Subunit Two (students). The open-ended survey as well as the focus group data from both subunits (students and clinical instructors) was used to answer this question.

The themes self-efficacy and social and emotional support were the predominant themes and provided the needed information to answer the research question of how a 2:1 collaborative learning model influenced a student's confidence level in an adult acute medical setting practicum during the first year and first semester of graduate school. These themes align with the conceptual framework's foundational theories; Hattie and Donoghue's model of learning input component of thrill, sociocultural theory, social cognitive theory, and social interdependence

theory and their critical components, Hattie and Donoghue's input component of thrill in learning, Vygotsky's MKO, Bandura's SCT's five capabilities, and positive interdependence. The findings provided overwhelming support regarding the 2:1 Collaborative Learning positively influencing a student's confidence levels.

Self-Efficacy

The data strongly supported that the 2:1 collaborative learning model influenced student's confidence during the adult acute medical setting practicum during the first year, first semester. Self-efficacy is a cornerstone of the conceptual framework and encases every facet of the model along with the thrill or motivation to learn and holds the theoretical key to a student's overall success. Most of the clinical instructors agreed that having a clinical partner influenced a student's confidence in the beginning of the semester and a majority of clinical instructors felt the clinical partnership influenced a student's confidence throughout the entire semester. For students, most felt that having a clinical partner increased their confidence in their success at the beginning of the semester as well as throughout the entire semester. This data is also consistent with the substantial literature supporting collaborative learning as being instrumental to the development of self-efficacy, self-reliance, and proficiency in skills while reducing anxiety in in a clinical environment which contribute to clinical expertise (Carey et al., 2018; Markowski et al., 2021; Price & Whiteside, 2016; Stenberg & Carlson, 2015; Tai et al., 2015; Tolsgaard et al., 2103, Tolsgaard et al., 2016; Zwedberg et al., 2021).

The data from this study demonstrated how impactful the clinical partnership was to the overall confidence of graduate students in the 2:1 collaborative model. An excellent example provided from a student demonstrates how the clinical partnership helped with confidence by reducing anxiety, "It definitely made me feel less nervous having someone to go through the

experience with me especially starting out. I tend to be very anxious, so having someone to talk about experiences with was very helpful." Another student shared, "It was very nice to have someone to start a new experience with that was on the same level as me. I was able to express my concerns and excitement with" Clinical instructors noticed how students contributed to each other's confidence. One clinical instructor relayed, "students seemed more confident with a partner to try new things." The student data revealed overwhelming support that the 2:1 collaborative learning model and clinical partnerships contributed to their overall feelings of confidence throughout the entire semester which contributed to them trying new things.

The students provided many references to how their clinical partnerships helped motivate them to try challenging or intimidating skills in clinic. There were references in how clinical partners provided some support to help push each other outside of their comfort zone in the clinical instructor data, however, the student group provided many examples of this. One student shared, "We both were able to say 'Yeah, let's go for it!' When our clinical instructor asked if we'd like to try a new challenge. It was another layer of "safety net" -and also, I felt very comfortable and trusted our clinical instructor." Another example from a student included:

> And my partner would be – always be like, well, _____, do you want to do it? I don't know if I'm comfortable. And like for the first couple of times that was okay, um, but like I love her, I care about her, I wanted her to learn just as much as I was learning, so I'd be like, okay, I would love to help you out, but you need to, like, get out of your comfort zone. You need to learn how to do this. So, it was like, yeah, I'm great, I can do it all day long, but you need to do this as well. So, I felt like I kind of helped push her out of her comfort zone a little bit more as well.

Although most of the students agreed that the 2:1 collaborative learning model contributed to their feelings of confidence in their success in the clinical rotation, some felt that the clinical partnership was not as beneficial as the semester progressed, but they still enjoyed working with a clinical partner. This quote from a student captures this notion perfectly:

> I think as I started feeling more confident having a partner was more neutral versus in the beginning, it increased as I got more confident, I felt more neutral because I felt like I didn't need to rely on a partner to feel confident anymore, but she was still nice to have around.

The survey data also revealed that all of the clinical instructors felt that students expressed excitement about their clinical placement and the vast majority of students indicated that they felt excited about going into their first medical placement.

Excitement corresponds to another foundational layer of the conceptual framework, Hattie and Donoghue's model of learning's input of thrill (Hattie & Donoghue, 2016). One student shared this regarding her excitement about the clinical placement:

> I was really excited because I felt as though I would enjoy the adult population and I wanted to see the medical side of our field. I ended up really loving it and seeing myself heading in that direction as well!
>
> Another student shared, "I have wanted to get a view in to the hospital setting for a long time and was excited about the opportunity."

Confidence and excitement can also correspond to motivation. This influence contributes to an individual working towards their goal (Bandura, 1988). Thrill is thought to be a source of motivation which corresponds to self-efficacy.

Excitement and self-efficacy are individualistic emotions, but the data shows that the clinical partnership itself influences self-efficacy, and then self-efficacy can stimulate more feelings of excitement. This is how the aspect of social constructivism in the framework and sociocultural theory comes into play and the social nature of the collaborative learning model drives self-efficacy and that stimulates the thrill or motivation and then the thrill and motivation of learning continues to drive self-efficacy and since self-efficacy is stimulated by the collaboration between partners the cycle continues (Tolsgaard et al., 2016; Zwedberg et al., 2021). A student shared this about encouragement, "I encouraged my clinical partners to jump in and be hands-on and consoled them when they had moments that were too overwhelming for them." Another student shared this about her experience with her clinical partner, "we had like a friendly competition and that made me learn even more by doing it." These examples from the data paint a clear picture of the how the 2:1 collaborative learning model promotes self-efficacy in students. Another contributor to student's self-efficacy involves social and emotional support.

Social and Emotional Support

Research question two specifically probes into how the 2:1 model influences a student's confidence level in a 2:1 model, which there is ample support for in the literature, but along with the more obvious components of self-efficacy, such as thrill and motivation, social and emotional support is also well connected to a student's overall emotional wellbeing and comfort, which can also significantly influence their confidence. The theme of emotional support was created from the data regarding how the students supported each other emotionally throughout the clinical rotation, which contributed to an additional avenue for increased self-efficacy in individual students as well as how the clinical partnerships provided a level of support in the novice stages of clinical experiences where a student may feel somewhat inadequate.

I mentioned this when discussing research question one, but it also appropriate to discuss here when thinking about the how the 2:1 collaborative learning model supports confidence in students. The influence that social and emotional learning have on self-efficacy supports SCTs key role in the conceptual framework, relating to its three reciprocal components, the individual, the environmental influences, and the individual behavior along with the reciprocal nature between the components and how they are symbiotic with each other (Bandura, 1986). Additionally, social and emotional support connects loosely to the element of self-efficacy in the conceptual framework as the social nature of emotional support is representative of the environmental influences on individual behaviors which increases self-efficacy (Bandura, 1986; Wang et al., 2015). Most importantly, social and emotional learning also corresponds to the overarching facet of the conceptual framework which is social constructivism. It also relates to the positive interdependence component of the framework as social and emotional support is an aspect of promotive interaction within groups where encouragement between group members helps other members to accomplish the goals of the group (Johnson & Johnson, 2009).

To reiterate the information provided in research question one, the data from the study supports the influence that social and emotional support have on confidence and learning are well supported in the literature. New clinical environments can cause stress and intimidation for students (Ehrgott & Silberer, 2014; Stenberg & Carlson, 2015), however, a collaborative learning model has been shown to relieve stress and act as a safety net for students (Stenberg & Carlson, 2015; Stone et al., 2013; Zwedberg et al., 2021). The findings in this study correspond to this literature as the vast majority of students and clinical instructors felt the 2:1 collaborative learning model increased a student's comfort level in the beginning as well as throughout the semester.

The clinical instructor data did not provide many specific examples; however, the student data has numerous examples regarding the influence comfort had on their confidence. One student shared, “Acute care can be very challenging and devastating from an emotional perspective, so it was valuable to have someone going through the same thing.” Another great example from the student data set demonstrates how the levels of comfort translate to confidence, “As the semester went on, my partner and I, and along with our SLP, became very comfortable with each other and knew what our strengths and weaknesses were. It made it easier being more confident with our skill sets.” Another key component of the social and emotional support theme is the concept of in-it-togetherness. In-it-togetherness is a type of emotional support, not related to feelings of emotion that are commonly thought of, but instead a type of support that may help lessen the feelings of inadequacy that are associated with being new at something that can fuel self-efficacy in students. One student shared this:

> As mentioned earlier it was nice to have someone else to be the new kid with and find the hospital together, find the SLP office, figuring out where to stand, it was nice to not feel like you were the only one lost.

A student expressed, “I felt like there was less pressure than if it were a 1-1 relationship.” Another student shared, “As the semester when on, my partner and I, and along with our SLP, became very comfortable with each other and knew what our strengths and weaknesses were. It made it easier being more confident with our skill sets.” One clinical instructor expressed, “Seeing their clinical partner complete tasks potentially gave them [students] comfort/confidence in also completing tasks” Another supporting quote from a student participant highlighting, “My goal for this semester, that my clinical partner influenced me to do, is to not hesitate and to be the first person to say that I will do it.” Finally, one student shared,

> I think having a clinical partner for me made me be a lot more hands on, um, because I was really nervous going in but getting to watch my partner like do certain things, I felt more confident, and I learned from doing. So, it kind of gave me the opportunity, um, to do more because I like felt more comfortable, I guess and like I felt like I got to see it more and see it from someone who might not have been as experienced as the clinician. So yeah, I think just like it helped with overall comfort and because of that I was able to learn more by being more hands on.

The influence that a clinical partnership had on a student's overall self-efficacy in an adult acute medical setting practicum during the first year, first semester practicum is substantial.

Conclusion Research Question Two

The findings in this study supported that the 2:1 collaborative learning model significantly influenced a student's confidence in an adult acute care practice setting during the first year, first semester clinical practicum. There were numerous examples from the data showing how clinical partners influenced confidence which contributed positively to students' learning experiences.

Research Question Three

How does having a clinical partner influence students' perceptions of their learning experience and learning outcomes in a 2:1 collaborative learning mode? The 2:1 collaborative learning model, and clinical partners positively influenced student's perceptions of their learning experiences and outcomes throughout the 2:1 collaborative learning model. The overall data set from both subunits, offer insight into this question, however, this particular question focuses on student perception, so for the sake of this discussion, I focused solely on the findings from the student group including the open-ended survey and the focus groups. Most students agreed that

having a clinical partner contributed to their overall learning this semester. The themes used to provide the descriptive analysis include critical thinking, self-efficacy, pedagogic support, social and emotional support, interpersonal skills and diversity. The findings relating to this question align with the conceptual framework's foundational theories; Hattie and Donoghue's model of learning, Vygotsky's sociocultural theory, Bandura's social cognitive theory, and Johnson & Johnson's social interdependence theory.

Pedagogic Support

The theme of pedagogic support was the most frequently occurring theme in the student group. Aspects of the data from this theme include how the clinical partners supported each other with academic tasks and how that contributed to their overall learning. All aspects from the conceptual framework were well developed in the data. For example, sociocultural theory's MKO was well represented. Vygotsky believed that learning could not really be detached from the social aspect and that learning was a shared endeavor constructed through social endeavors (Vygotsky, 1978). Students shared how they their learning overall benefitted from having a clinical partner, "Having a clinical partner definitely, definitely helped." Another student shared, ""We helped each other out in every class." There is evidence in the literature that showed students felt their own learning was heightened when they were able to teach their partner as it created in them a sense of duty to make sure their own knowledge and skills were adequate (Stenberg & Carlson, 2015). Additionally, this is not to say that clinical instructors do not act as MKOs, but having an additional support in clinic and outside of the time in clinic can be very useful. The findings in this study supported this concept with examples of when clinical partners realized they were the partner with most knowledge and vice versa. One student, who was the MKO in her group captured this concept well; she explained:

> I had a background working in the rehab hospital, so I felt comfortable being around like different medical professionals or healthcare professionals and like medical equipment. Um, and I think that better prepared me to go into the acute care setting. And I don't think my clinical partner had any medical background so, like, if she did have a question, like something simple, like – like she had asked me, and like if I didn't know it, then we both asked clinical instructor, but it was kind of just like we just bounced questions off of each other.

The overall role of the MKO is to help the "learner" move from what they can only do with help to what they can do independently which is called the zone of proximal development (ZPD) (Vygotsky, 1978). Having the clinical partner in addition to the clinical instructor is very beneficial as when instruction occurs during this time it is thought to be very beneficial as the MKO may use scaffolding strategies associated with the ZPD (Wass & Golding, 2014). The literature also showed that students in collaborative learning models who have stronger clinical skills can provide support for weaker students (Ladyshewsky, 1993). The previous example demonstrated how the clinical partner acted as the MKO when she could, but also had the support of the clinical instructor. Even when the students leaned on each other for academic support, many mention how helpful each clinical instructor was. One student shared how the clinical partners would confer first before they went to their clinical instructor, "My clinical partner and I did that a lot, um, asked each other, and then if neither of us knew, we would ask, um, our SLP." Another student, who had a family member who had received treatment and recovered from head and neck cancer, acting as an MKO shared this:

> I'd like to say, like, she learned a little bit more. I think I asked the more acute care questions out of the two of us because that's what I want to do, so I feel like she asked

> more of like the general, like, questions for all, like more therapy and not like just diagnosis and treatment within the acute care where you see them for, like, three days maybe. Uh, more of like the long term. So, I feel like it influenced our questions and, like, what she got to learn 'cause I don't think she would've thought to ask them.

Another student shared this about her partner who was the MKO:

> Um, for me, I know my clinical partner, she had a, uh, background of being a CNA and working in a hospital setting. So, I thought it was cool that I got – like I was able to learn from her, like even outside of clinical like when we did small, in class group activities, I really learned a lot in addition to my clinical supervisor.

This comment from a student also captures how she was able to benefit from her partner's knowledge, "Partner understood concepts that I may have had trouble understanding. It was great to have her there and even if she didn't know we could talk things out." The MKO also came into play during clinic, or other clinical activities, as students were able to help each other recall certain important details. "She remembered something that we did that I didn't." Another student shared, "Were able to remind each other of things we had learned outside of clinical." The students also reported how they benefitted from their peer modeling clinical activities.

The data revealed the benefits of modeling related to the student's overall learning experience. Because there was more than one student with a clinical instructor at any given time, and hands-on experiences decreased because of this, learning from modeling is very important in collaborative learning models. The findings revealed that modeling was instrumental and well evidenced to influence learning during this study. Modeling was represented in the conceptual framework and specifically aligns with Bandura's SCT, vicarious learning capabilities which theorizes that individuals can benefit and learn through watching another (Bandura, 1986).

Modeling itself can increase learning objectives and using modeling is an excellent way for a student to develop new skills and is most beneficial when there is a likeness between models (Bandura, 1988). One student shared this:

> Um, and we're all – we're learning the same exact thing and doing the same – eventually getting the end result, the same end result; but we would just do it a different way. So I think to learn from her in even learning like, oh, she did it a better way than I did and like that seems like an easier way or, oh, I think I'm going to stick with my way because it's easier for me. So just that kind of stuff, like learning what you, what you like about their practice and what you don't like, too.

Another student shared this example which relates to how she learned from a different style that her partner modeled:

> Yeah, I was just going to add also with the different styles in thinking came about like my partner would come up with different questions than I would've ever thought about it. And so that also helped a ton because I would have never been thinking the same ways. So, some of the questions she asked really helped during clinical. Um, so that kind of tied in the different styles because we were always thinking differently and kind of taking it all in differently, too.

The clinical partnership also afforded the students a familiar partner, who was learning alongside them opportunities to practice. One student shared:

> I think I kind of touched on this earlier but a lot of times I would feel more comfortable either having watched my clinical partner or knowing that she was there. Um, and a lot of times before the day we would like practice on each other. So, then I would feel more confident going in before that. So, and she was always – literally we would step out and

> I'd be like, "I need to do an oral mech exam on you because I cannot go in there without doing this." And she would let me every single time which was awesome.

The findings also provided evidence that learning experiences were enhanced by the clinical partnership as students also benefitted from having an extra person available during clinical activities and that completing tasks were better when completed together.

This is a level of pedagogic support that was shown in this study also relates back to the social interdependence theory's responsibility forces and promotive interaction. Social interdependence theory's states that individual outcomes are not only affected by their individual actions, but also by others in the group (Johnson & Johnson, 2009). Responsibility forces relate to group members feelings about what they need to do to contribute fairly to the group and promotive interaction is when there is encouragement between group members helping other members to accomplish the goals of the group (Deutsch, 1949, 1962; Johnson & Johnson, 1989, 2009). The clinical teams were required to complete a chart review in Epic (an electronic medical records system) on their clinical instructor's patients before each clinical day and submit a deidentified report for class credit.

Most of the students reported that having a clinical partner helped them to identify the risk factors for dysphagia, language disorders, and cognitive communication disorders. Relating to this, one student shared the following examples of how promotive interaction and responsibility forces were in play between the partners during this particular clinical activity. "As we went through the chart, my partner would often see something that I didn't. We both tried going through it so we could see through different lenses and gather the most information we could." Another student expressed, "It was helpful to be able to discuss chart reviews and point out things that we might not have found on our own." Another student expressed this:

> Yeah, I think, um, chart reviewing with another person, or I was in the 3-to-1 model, so we had two other people like always looking over stuff, and I definitely woulda been missing like important information if I didn't have one or two other people also looking through the chart and finding stuff. Um, so I think that was very helpful.

Another student relayed, "My partner and I were efficient getting our materials ready for clinic. It made me more accountable to get to clinic early to have enough time to get everything done with clinic." Another student shared this about feeling responsible because someone else was relying on her, "When someone is relying on you, it makes you much more motivated to turn things in on time and know as much information as you can so that you can help each other in the setting." The pedagogic support between clinical partners played an important role in how clinical partners were an asset to the learning experiences and learning outcomes during this clinical placement.

Self-Efficacy

The findings support that having a clinical partner positively influence student's perception of their learning outcomes and experience are supported by the theme of self-efficacy. Briefly reiterating the information provided in the discussion for research questions one and two, this is consistent with the conceptual framework as self-efficacy is a foundational aspect of the conceptual framework and is individualistic in nature. Thrill and motivation (also individualistic) for the learning experience are thought to stimulate self-efficacy, and in turn this self-efficacy helps a student become confident enough to participate and learn, and the social aspect of the 2:1 collaborative model in turn stimulates more self-efficacy and confidence which in turn drives more thrill and motivation. It is an excellent symbiotic relationship between the three aspects and corresponds well to the three reciprocal components, individual, environmental influences,

individual's behavior, and how these separate components are also interdependent and are all influential in the individual's cognitive growth (Bandura, 1986). Again, the findings are consistent with the substantial literature supporting how collaborative learning models support the development of self-efficacy, self-reliance, and proficiency in student's skills while reducing anxiety in in a clinical environment and contribute to clinical expertise (Carey et al., 2018; Markowski et al., 2021; Price & Whiteside, 2016; Stenberg & Carlson, 2015; Tai et al., 2015; Tolsgaard et al., 2016; Zwedberg et al., 2021).

The thrill component of thrill from Hattie and Donoghue (2016) is a cornerstone of the conceptual framework and indicates that it is a key aspect of self-efficacy as thrill or excitement influences confidence. Excitement (thrill) was shown to play a role in invigorating a student's self-efficacy in the findings. The vast majority of students indicated that they were excited about going into their clinical placement. One student shared how she was excited to learn about a side of SLP she has not seen:

> I had never seen swallowing or the acute side of SLP, so I was really excited (though very nervous) to see that side of SLP. Then I was also very excited to be in clinic rotations during the first semester of grad school.

That excitement and thrill drive a students' motivation. One aspect where the learning benefits of the clinical partnership played a role in the 2:1 collaborative learning model involved the other student providing motivation and confidence to try a new skill. One student shared this about her clinical partner:

> "She would also do things of like she would like motivate me of like 'cause I was a little faint-y. So she would be like, "Come on, ____, you've got it. You can come in here. You

> don't have to be scared of this room." And stuff like that. So, it was just nice to have someone like confident in the medical stuff that wanted the medical stuff. “

This confidence, excitement, and motivation which was supported by the clinical partners, played a role with students participating in activities that are common in an acute care environment. Based on survey data, a majority of students felt that having a clinical partner contributed to their ability to complete an oral mechanism exam, present PO trial(s) during a clinical bedside swallow assessment, present PO trial(s) during an instrumental swallow assessment (MBSS or FEES), participate in the administration of a speech and language assessment, participate in the administration of a cognitive communication assessment, participate in the administration of a clinical bedside swallow assessment, participate in the administration of an instrumental swallow assessment (MBSS or FEES), participate in treatment of speech, language, or cognitive communication disorders, participate in treatment of swallowing disorders, participate in documentation of patient treatment or evaluation (in a medical record or draft to turn in to class), interact with caregivers, interact with patient and/or caregivers (family members) regarding the evaluation and/or treatment plan, and complete oral care. A majority of students felt that having a clinical partner contributed to their ability to participate in the creation of a treatment plan and having the ability to interact with other healthcare professionals regarding the evaluation and/or treatment plan. One student shared this about how her clinical partner influenced her confidence:

> Yeah, so I think, um, I'm not interested in working in a medical acute but like seeing how much like ____ was interested in it like helped me find the parts that were interesting which it was also – I don't know if that makes sense, but like kind of having like her

> passion kind of helped keyhole like some for me. And then it also like – so she was like more confident going in. It helps me feel less scared.

The above examples from the findings provide support for how the theme of self-efficacy play a role in a student's positive perception regarding how a clinical partner influenced their learning experiences and learning outcomes. Another important theme that provides support to the clinical partners having a positive influence on learning is critical thinking.

Critical Thinking

Critical thinking skills are critical for all professionals, but they are especially crucial in healthcare environments where the well-being and sometimes life or death of someone depend upon sound clinical decision-making skills. This is especially true regarding the aspect of dysphagia and swallowing assessments where a medical error could cause someone's untimely death. Regardless of a student's future plans to practice in an acute care setting, valuable skills that are crucial to the development of critical thinking can be attributed to aspects associated with a 2:1 collaborative learning model.

The data supported that clinical partners in the 2:1 collaborative learning model increased opportunities for critical thinking which had a positive effect on students 'perceptions of their learning experiences and learning outcomes as a part of this model which was consistent with past literature that showed how collaboration increased critical thinking in clinical scenarios (Abercrombie, 1964; Ladyshewsky, 1993). The aspects of the influence of the model on the development of critical thinking skills are consistent with the literature previously shared as benefits of social constructivism in learning have been positive (Black & Allen, 2018; Mann, 2011; Vygotsky, 1978), the social context of learning through collaboration and observation has

been common practice in the medical field for many years (Shimizu et al., 2020; Torre et al., 2006).

The survey data indicated that most of the students felt that the 2:1 collaborative learning model contributed to their ability to make academic to clinical connections. This also is supported by the literature which indicates that collaborative learning models provide benefits in facilitating critical thinking (Johnson & Johnson, 1975; Ladyshewsky, 1993). The theme of critical thinking corresponds to the conceptual framework and specifically to Bandura's self-regulatory, self-reflection, and forethought capability.

Academic to clinical connections are an important aspect of critical thinking as the importance of taking the theoretical constructs learned in the classroom and making the connections to the clinical application is imperative. The findings in this study correspond to the literature that demonstrates how clinical partners can help students make connections between the clinic and classroom (Zwedberg et al., 2021). One student shared this example of how her and her partner made academic to clinical connections:

> I liked about it like whenever me and my partner would chart review in the morning and stuff, like kinda like what ____ was saying, like it helped kinda answer some questions, like if we were looking through the chart and I was like, oh, like what does this mean? And she's like, oh yeah, I already know what that is. I already wrote it down type of thing so we could talk about it. And then also like in class too, like we could talk about similar stuff, like whether it was in dysphagia or like your class or something, we were able to like come together and like critically think through it, I guess.

One student relayed this:

> Since we were both learning the same material in class, it was very easy to make connections together in clinic. Sometimes one of us would make a connection and the other would not, so it was very helpful to have a partner to bridge the gap in some instances.

Another student shared this about academic to clinical connections, “We often could see different and similar perspectives connecting classroom material which facilitated valuable learning. inside and outside the classroom.” Clinical partners also contributed to questions in the clinical environment.

Questions are an important aspect when it comes to critical thinking. Most students reported that their clinical partner impacted their comfort level when interacting and asking questions to their clinical instructor. Anecdotally, from my own graduate education in SLP, I remember times, especially in clinical situations, where I was lost, but did not even have enough of an understanding to formulate a question. Questions as a form of critical thinking development date back to the times of Socrates and are associated with critical thinking development. There is an entire pedagogical approach called Paideia Seminars that utilize the benefits of Socratic questioning and discussion to influence critical thinking (Adler, 1982; Roberts & Billings, 2013). One student shared this about how her clinical partner’s questions contributed to her learning:

> I still, not that we rely on each other at all, but we still help. Like she thinks of questions I wouldn't think of or, um, just like we were talking about before, I can ask her a question without having to bother my instructor because she's so busy. And yeah, I don't think we're like a crutch at all for each other. We just help one another if, you know, if someone has a question or I can learn from her and vice versa.

Another student relayed this about their clinical partners influence regarding questions:

> I think that, um, like ____ said, it was easy to, um, like ask my partner questions rather than our clinical instructor. Like if she was doing something that like we really just didn't have any business doing as first semester students, we would kind of stand back and let my instructor do it. And, um, we – I would just be like, you know, whispering in the corner with her, like oh, you know, talking through the steps and stuff that she was doing and like asking questions. And then like after we would debrief with our instructor.

The capability to articulate meaningful questions is paramount to critical thinking (Coleman, 2022). Along with questions, discussion was also greatly influenced by clinical partners.

Discussion also relates to critical thinking and is very important in the clinical environment (Adler, 1982; Roberts & Billings, 2013). While discussion can be attributed to collaboration and soft skills, in the context of this study, the data made it clear that the increase in discussion due to the clinical partnership belonged in the critical thinking theme as it contributed to a student's learning experience and outcomes by brainstorming specific information related to the classroom and clinical environment. When I was analyzing the data, I also thought of how this level of discussion between students is an early manifestation of rounding which is prevalent in all medical settings and is used as a means of the interprofessional team to think critically about patients. Past literature also supports this as an increase in critical thinking skills associated with collaborative models can be the collective sharing of experiences (Abercrombie, 1964; Ladyshewsky, 1993). Additionally, dialogue is thought to be very important in clinical education as it is thought to contribute to the overall education of students (Atkinson & Claxton, 2000; Morris & Stew, 2007; Stanley & Ramage, 2004). Most students reported that there were times when they had general, unprompted conversations with their

clinical partner about clinical skills that helped them to learn. One student provided this example regarding how unprompted discussion helped her to improve clinical skills:

> When we were learning how to complete the oral mech exam we were able to converse by ourselves about what one of us missed and the other one did not miss. After these conversations it helped solidify the procedure for it in my mind.

Another student shared this about how discussions with her partner helped develop her clinical skills, "My partner and I would talk before and after every clinic about the different skills and would even practice on each other when we needed help." This particular example brings about another skill that clinical partners had a positive influence on, reflection and planning. Reflection and planning correspond to the conceptual framework and specifically to Bandura's SCT and self-reflective capability, self-regulatory capability, and forethought capability. Self-reflective capability is tied to self-appraisal which can help with the establishment of self-efficacy, but it can also lead to changes in behavior by means of setting goals (forethought capability) and the desire individual success (Bandura, 1986). Self-reflection, being a meta cognitive skill, can also help with decision making (Bandura, 2001). While reflection and planning are often considered soft skills, they are also imperative in critical thinking which can transcend into clinical competencies. The students were required to reflect each week in their clinical didactic class by responding to a prompt and additionally, were required to create a daily clinical goal to share with their clinical instructor before each clinical day. There were many references to these assignments in both the survey and focus group data, but the students also shared examples of how they spontaneously reflected and created goals for themselves outside of any required assignments. One student shared this example, "We would talk about things that went well for us during each session and things that we noticed when we were watching the

other person that we were going to try." Another student expressed this, "We drove together so we both would talk about it on the way there and back." The student's familiarity with one another seemed to translate for many into a friendship and an avenue of not only social and emotional support, but pedagogic support as well. The data supported that clinical partners had a positive influence regarding critical thinking skills in the 2:1 collaborative learning model which influenced students' perceptions regarding their learning experience and learning outcomes.

Social and Emotional Support

The findings from the student subunit showed that clinical partners in the 2:1 collaborative learning model contributed positively to social and emotional support which contributed to students' perception of how their clinical partners influenced their learning experiences and learning outcomes. Social and emotional support ties in well to the overall conceptual framework as social constructivism is the overarching notion. Social and emotional support also relates to promotive interaction as encouragement within groups contributes to group goals being met (Johnson & Johnson, 2009).

The data from the study supported the influence that social and emotional support had on confidence and learning and are well supported in the literature as a new clinical environment can be intimidating and cause students to feel pressure (Ehrgott & Silberer, 2014; Stenberg & Carlson, 2015), but a collaborative learning model has been shown to be a stress reliever and safety net for students (Stenberg & Carlson, 2015; Stone et al., 2013; Zwedberg et al., 2021). The survey data revealed the vast majority of students indicated that the clinical partnership in the 2:1 collaborative learning model increased their comfort level in the beginning of the semester and most students indicated that the 2:1 collaborative learning model increased their comfort levels throughout the semester. The students provided many examples of how the social

and emotional support of their clinical partner positively influenced their perception of their learning experience and learning outcomes.

Previously, in research questions one and two, I made the connection between social and emotional support and self-efficacy. There is a loose connection between social and emotional support and self-efficacy in the conceptual framework, first because the conceptual framework is related to social constructivism, and second, the social nature of emotional support is representative of the environmental influences on individual behaviors which increases self-efficacy (Bandura, 1986; Wang et al., 2015). This then corresponds to social and emotional support, by increasing levels of comfort between clinical partners, promotes self-efficacy which can transcend to improved academic outcomes in students (Li et al., 2018). There were two types of emotional support that clinical partners contributed to found in the data. First, there was the traditional support that most attribute to social and emotional support, talking about and expressing feelings. Second, clinical partners also provide each other with levels of comfort to stabilize feelings of inadequacy when doing something new. This student shared how having a clinical partner helped her process some heavy and sad emotions:

> I would constantly talk to her about the, you know, really sad things that we saw. Um, I think it just kind of helped me to like vent about it afterwards. Um, otherwise if you don't have someone to talk about it to, you just kind of go home and like stew in your thoughts and that can be really sad. Um, so I think just having her to talk to was just really nice. Um, and she talked to me. I kind of served the same role as well.

One student expressed this regarding being able to talk to her clinical partner without violating HIPPA laws:

> So, it was something that we would kind of after clinic we would kind of just, like, go back to her house, debrief, 'cause we'd be by ourselves. Just like something that was good, like, emotionally so we weren't, like, emotionally draining ourselves to keep it all in because they were like, don't talk to anyone. Um, or I know like my clinical partner, like she would kind of be like, okay, like after we talk, I'm gonna go on a run or like a walk if you want to, like, go with me, kind of that just – and I liked that because I think we were both scared. We were like what if we get caught with, like, HIPAA?

Clinical partners made this level of emotional support possible which was contributory to their comfort which translated to student's learning experiences and outcomes as emotional support is an important facet in learning that can often be an afterthought in higher education. Clinical partners also supported each other in ways that helped them work through feelings of ineptitude. One student said, "I felt like I was not the only one in the room who was not sure of everything." Another student expressed:

> Having a partner increased my confidence a lot because it made the whole situation less intimidating by knowing the person with you was in the same boat as you and more than likely had all the same thoughts and questions you did.

The clinical partner's influence on social and emotional support was well evidenced in the findings and it clearly influenced a student's perception of their learning experience and learning outcomes with this model.

Interpersonal Skills

The data supported that clinical partners in the 2:1 collaborative learning model contributed positively to interpersonal skills which contributed to students' perception of clinical instructor's perceptions of the influence the 2:1 collaborative learning model had on their

learning experiences and learning outcomes. The findings correspond to the conceptual framework and specifically to social interdependence theory's positive interdependence which is thought to develop responsibility forces and promotive interaction in groups. Responsibility forces relate to group members doing their fair share in in order to contribute evenly to the group's outcomes and promotive interaction occurs when the group members help each other to accomplish group goals (Deutsch, 1949, 1962; Johnson & Johnson, 1989, 2009).

Also, the findings correspond to the literature that supports collaborative learning models being instrumental in developing interpersonal skills. Interpersonal skills or soft skills are types of skills are really required of individuals in the workplace, and in addition to the traditional knowledge and skill competencies included in academic programs, it is important to specifically train interpersonal skills as well (National Association of Colleges and Employers, 2019; Shollenbarger, 2019; Volkers, 2019); the findings from this study corroborate with this literature.

The data revealed that students benefitted from the feedback from their clinical partners. This example from a student demonstrates how she was able to use feedback to further develop her skills:

> So, like for the oral mech, like my partner like did it first, and then like seeing her do it, I was like, okay, like now I – like not that I felt like I had to do it, but I was like, okay, like she did it, like it's not that bad, like I can do it too. And then like we kinda just like if one of us would do somethin' first, like before we'd ever done anything, the other person would do it the next time just so we could kinda, I guess, stay even in a way. Um, but it was just nice to hear like the feedback that we both got from our clinical instructor and just like used that the next time we do it.

Another student expressed this, “Having a clinical partner was helpful because we gave each other constructive feedback and learned from each other’s example.” Additionally, this student said, “During discussion before and after each of these situations, my partner was able to remind me of things I may have forgotten, give me feedback, and ask questions about the things that I did” Feedback is such an important skill to learn how to give and take. In my personal experience, I have received many complaints about students having difficulty with feedback and conversely, clinical instructors not being at ease when providing feedback.

Along with feedback, students were also very encouraging. Being able to give genuine encouragement to members of your team is related to the conceptual framework and promotive interaction. One student shared, “We both wanted to be hands on and had to be prepared so we encouraged each other and worked together.” One student expressed this regarding encouragement, “I hope I did! We all hyped each other up when one of us did something new that day in clinical and it was a very friendly atmosphere.” This example from a student demonstrates how feedback and encouragement are intertwined, but both help to develop clinical skills:

> We were like each other's like little cheerleaders in the corner. We were like, yes, check that jawline. Um. [laughs] But like otherwise we kind of divid-, developed like our own little language. Um, so like when someone was doing like their oral mech, I would like flag her and be like, "You forget the tongue." Um, so it was just like a very supportive – like we would cheer each other on but also like if she forgot something or if I forgot something, she would let me know in like the most loving way possible. Like, "That guy's got facial droop. You need to check those cheeks." Sort of thing.

Along with encouraging each other, students had a sense of accountability to their clinical partner.

Most students felt that having a clinical partner impacted their sense of responsibility to get things completed for their clinical rotation. One student said this, “I didn't want to come unprepared because I didn't want my lack of responsibility to reflect on my partner as well.” Another student expressed, “I felt like not just me was relying on doing the work which made me complete it better and earlier.” These examples relate well to social interdependence theory’s aspect of positive interdependence, responsibility forces. This level of collaboration really showed in the data as it also related to examples of teamwork.

Clinical partners really learned to work together as a team. Almost all of the data connects to some level of teamwork, but the following examples demonstrate how students worked together making sure their clinical partner had equal opportunities for hands on opportunities. An excellent example of how students compromised regarding hands on with clinical skills is found in this example shared by a student:

> But, um, it kind of felt like we would butt a little bit just because we really wanted to do it so bad and this was like the last opportunity, like especially towards the end when we didn't know if we were going to get another laryngectomy patient in the next week that we had left so we like both wanted to work with them. So, we tried to have like – we just had to sit down and be like, okay, if we're like really wanting to do it, we're going to have to do it together.

Another student expressed, “We both wanted to be hands on and had to be prepared so we encouraged each other and worked together.” The clinical partner’s influence on interpersonal skills was well evidenced in the data and provided a means to show how it influenced a student’s

perception of their learning experience and learning outcomes with this model. The diverse life experiences of clinical partners also contributed to learning.

Diversity

The findings of the study supported that different life experiences of clinical partners in the 2:1 collaborative learning model contributed to students' positive perceptions of the influence clinical partners had on their learning experiences and learning outcomes. There were many examples in the data regarding how students benefitted from the diverse backgrounds and life experiences of their clinical partners. These findings relate back to the conceptual framework's symbolizing capabilities which speak to the different experiences we all have as humans and how these experiences can cause them to behave a certain way which is individualistic, but also have the potential to affect the environment because of an individuals' behavior, and these experiences are said to culminate as symbols and express themselves in our everyday reaction to the stimuli we encounter (Bandura, 1986). I find this one of the most fascinating aspects of SCT, because it gives a name and credibility to such an important facet of the human experience that is often overlooked, our stories. We are all walking around with these invisible symbols we have collected through the years, some good, some bad, and at every life juncture, it will be highly unlikely that we meet someone with the exact same symbols even if end up at the same place at the same time, for example, this academic program for SLP, and this clinical rotation that this study focused on. All students were in the same university, had the same major, same classes, same clinical rotation, but no one was exactly the same and came with their own symbolizing capabilities.

When I had originally conceptualized the framework, I had expected to see this as it is something I myself had experienced and witnessed through the years as an educator. Diversity

and complexity are needed, especially within healthcare disciplines, as this complexity may initiate needed change and growth within the field as different perspectives create many ideas (Roberts, 2020). While this study did not have any focus on diversity, I found it important to show how the data supported the benefits of students from different backgrounds working together and learning from each other. I realize and agree fully that the most urgent and important aspect of understanding the lack of diversity in SLP corresponds to the very low numbers of racially diverse and demographically marginalized students represented in the field as there is a definite lack of representation from marginalized groups in speech-language pathology students and in the field in general as practitioners and deserves the highest level of attention from stakeholders. However, I feel that any level of promoting heterogeneity in the profession should be encouraged as the lack of heterogeneity in SLP perpetuates isomorphism in academic SLP programs as well as in the field and has the potential to prolong a troubling homogeneity within SLP as the perspective of non-acceptance outside of the prototype or the norm continues to be accepted and permeated into SLP. The findings include so many examples of students regarding the benefits of their differences. One student said in response to the survey question regarding personality differences:

> I don't think so, I think we were kinda different people, but we got along well so we didn't face any issues building a relationship or working together during class or clinic even if we didn't develop a relationship outside of school. Meaning we don't hang out outside of school often, but we have a good professional relationship.

Another student expressed this: “While my partner and I are different in a lot of ways personally (not in bad ways), we really complimented each other as partners.” Another student shared

regarding having personality differences with her partner, “I think it made us stronger because we learn and deal with things differently. It helped us learn more from each other.”

There were many excellent examples in the data, besides personality, of how different backgrounds and perspectives of clinical partners positively influenced a student’s learning experience and learning outcomes. One student expressed:

> Yes, I de-, I definitely learned from her style and approach. I think one of my takeaways is that you can get – you get your clinical skills, but then I'm not sure how to put it into words. But, you know, we have the same toolkit and we learn the same skills; but then what you bring to your practice from your background and your perspective is – shapes what you do; and that was really interesting to see. It really was. I, I, I sincerely, just watching her practice like whether it was cranial nerve exams or swallow studies or modified barium swallow studies, you could see her personality and her, um, way of working with people come out. And she and I are very different, um, and that was really, um, cool to see.

One student shared this family experience which I would imagine influenced her clinical partner’s perception of patient’s experiences:

> Yeah, going off of that, I – sorry, um, my brother was in acute care for months a couple years ago; and so I feel like I was extra emotional. Like I had to step out and cry a few times which was like embarrassing but like I was definitely feeling for the families a lot because I remember what it was like being there for my family. So that was helpful and, um, also inhibiting a little bit because I was having a hard time with like administering cognitive tasks and stuff when I really just wanted to like do the nurses' job in some ways. Like I wanted to brush their hair and like, like make sure they're comfortable

> before I felt like I was giving them tasks to do because I know how like hard it is mentally to be in their position, not personally but like from a family member's perspective. So that made me wonder a little bit. I'm like, am I doing the right thing? But I think I am. It was just a matter of, um, it allowed me to be more introspective in like how they must be feeling.

Another student shared this about her former career as a teacher:

> Hey, yes. I want to add to that, um, so I come from a career, a long career as a teacher and I've had a lot of experience counseling, especially with parents that are concerned about their children or, um, lot of, a lot of families. So I felt like I was bringing that counseling experience into the clinical setting, and it felt like I was just kind of like changing jackets a little bit. Like a metaphor. Like I had like a jacket, and I just kind of like adapted, and changed it and it was really interesting for me to apply the same skill but in a completely different setting and then I realized I had to unlearn some things. Like it was really – it was a great experience to be able to reflect and think about things that are not relevant. I think, for example, I can't think of it. I feel like I've got a specific example on the tip of my tongue. Um, but like in – when you're a teacher, you're an instructor, you do have an outcome in mind, and it is data based. It's data driven. It's assessment driven. You have an outcome that's very specific. And then in an acute care setting, you have to give the patient autonomy. That's what I was thinking about. You have to give the family and the patient autonomy because you're not directive. It's like that patient, that model where you're leading your patient somewhere to a specific outcome. I had to unlearn that and like become, like realize that as a clinician you can give information, you can educate but then you – the patient is going to make their – they

> may have a goal that's completely different than what you have in mind. Does that make sense?

One student spoke about her clinical partner's past experience in the medical field:

> I'll add, um, my partner had, like – she had worked in a hospital before so she had, like, that medical background and experience, and I had never really shadowed anyone. And when we were told that we were gonna be working with people in the ICU, I kind of freaked out. But I mean so having her being like, look, it's not that bad, like you're – you may see this, you may see that, it helped me a lot. But once I got in there and saw that the ICU wasn't as scary as I thought it was, it was good, but having my partner, like, explain things to me I think helped a lot from her having that m-medical background, if that makes sense.

When I placed the students with their clinical partners, I did so randomly, with the only criteria being that they were both first year, first semester SLP graduate students. When I received the survey I was pleased that a majority of students reported that personality differences did not impact their relationship with their clinical partners and there were so many positive comments about how differences between partners enhanced the experience. There were a few students who did have negative experiences that were expressed on the survey. One student wrote, "At first, it was fine, but our personalities clashed too much and eventually, I did not want to go to the clinic because of my experiences with her."

Another student, after I started advertising for participants contacted me saying she wanted to participate, but had a negative experience (which I learned for the first time) and asked if she should still participate (which I replied was completely up to her and she was not obligated to, but a negative experience should not stop her).

These examples were rare, and collegiality between students was strongly demonstrated in a vast majority of the data, but I feel important to share as I believe this provides insight and knowledge for future cohorts and can provide some awareness to other administrators establishing 2:1 collaborative models in their programs. I feel that There were a few groups who became very derailed during the focus groups with the topic of partner matching.

> I think like I do mean like introvert and extrovert. Like I don't consider myself like a very extroverted person, so like – but I'm also not like super introverted. So literally like a scale because I don't think I would've done well with somebody that like would've marked themselves like a ten extrovert because then that would make me feel uncomfortable. Like I don't, I don't do well in that situation. Um, but then not maybe like a personality but I do really like that me and ____ came from the same school and program because I mean like some of y'all were saying like you have different strengths and weaknesses, but I appreciated that we both had like – it's like if I knew it, ____ knew it. And if she – if we didn't know it, we didn't know it. And like we learned it together.

I pressed on and redirected the students from this side conversation as I was running out of time and needed to get the rest of the questions answered. When I was reading through the transcripts for a second time, this comment really stood out to me as I believe this thinking is common in many college students, and humans, but also acts as a barrier to collegiality, teamwork, interpersonal skills, and so forth and so on. The fact that like begets like and as humans, we are drawn to those who are similar to us is well established in the social psychological literature (Seidman, 2018). However, getting along with everyone, regardless of their differences is the cornerstone of professionalism and so needed in healthcare. In my opinion, the previous comment represents how this student's sentiment, which is a common facet of being human, and

not “bad” of her to think, but in a professional setting, it can serve as an issue propagating a continuous loop of homogeneity in the profession, even potentially when students begin to interview for jobs. With this data, I feel that more information can be shared with students initially so they understand how differences can contribute to their learning. For me and any other administrators implementing a collaborative model to their clinical education program to be more aware of potential problems with personalities and unprofessional behavior between students and create check points in the semester to specifically check on this. One student shared this about how she benefitted from her partner being different:

> I kind of feel like having somebody that is different than you does benefit because that was also hard for me to find patience within myself, and the reality is we're going to be working in healthcare situations with people that are so different from us, and we don't – you don't just quit a job because, you know, you don't have patience for this individual. And so that's why I do think working with somebody that is so different from you benefits you in the long run because you have to learn how to adapt to their work style and how they take things real life. So overall, I think, like, either way you roll it, it still is a good experience regardless.

These data all contribute to how the diversity of the clinical partner influenced a student’s perceptions of their learning experiences and learning outcomes in a 2:1 model.

Conclusion Research Question Three

The findings demonstrated having a clinical partner positively influence a student’s perceptions of their learning experiences and learning outcomes in a 2:1 collaborative learning model. All of the themes established critical thinking, self-efficacy, pedagogic support, social

and emotional support, interpersonal skills and diversity were used to demonstrate a clinical partner's influence on student's perceptions of their learning experiences and outcomes.

Summary

The findings presented in this chapter provided insight into how the 2:1 collaborative learning model during an adult acute medical setting practicum during the first year, first semester practicum for first year, first semester SLP graduate students can contribute positively to the learning experiences and learning outcomes of students. All three research questions were answered using data from both subunits that was developed into themes from the open-ended surveys and focus groups for both students and clinical instructors.

For research question one, the findings demonstrated that clinical instructors' perceptions regarding the impact on learning outcomes of first year, first semester graduate students in a 2:1 collaborative learning model acute care medical setting compared to a 1:1 model, show that the 2:1 collaborative learning model is not inferior to the 1:1 model and that one model was not necessarily better over the other. However, a major added benefit, from an administrative standpoint, is that the 2:1 collaborative learning model does provide the added benefit of effective resource utilization (more placements). It is important to add that there were a number of perceived advantages shown in the findings that far outweighed some of the disadvantages shared by the clinical instructors. Because we do not have a means to standardize the measures of non-inferiority between the 1:1 and 2:1 clinical education models, these results are overall positive and give creditability to the 2:1 model as being an efficacious means of providing clinical education for SLP graduate students in an adult acute care practice setting.

For research question two, the findings supported that the 2:1 collaborative learning model considerably influenced a student's confidence in an adult acute care practice setting during the first year, first semester clinical practicum. There were numerous examples from the data demonstrating how clinical partners influenced each other's confidence which contributed positively to students' learning experiences.

For research question three, the findings in this study demonstrated the positive effect that a clinical partner in a 2:1 collaborative model had on students' perception of their learning experience and outcomes. The findings, demonstrated by the following themes, pedagogic support, self-efficacy, critical thinking, social and emotional support, interpersonal skills, and diversity provided many examples of the benefits of learning with a clinical partner.

Because of the findings, in the future, I would make a few changes to the conceptual framework. The first would be to add complexity theory in addition to symbolizing capabilities which would add another element of importance regarding the diversity and different life experiences of the clinical partner's contributions to the overall learning. Also, I would add one more concept from Hattie and Donoghue's model of learning (2016) to the conceptual framework, knowing success. This would allow me to provide the students with explicit information regarding expectations and in turn may lead to the students demonstrating behaviors that are driven by the overarching goals of the conceptual framework (Hattie & Donoghue, 2016).

The findings of this study generated new knowledge in the field of SLP regarding alternative clinical education models, specifically the 2:1 collaborative learning model, in an adult acute care setting with first year, first semester graduate students. The findings have led to

implications that utilizing the 2:1 collaborative learning model in clinical education programs can be efficacious, and as far as learning outcomes, is not inferior to a 1:1 model. It also has implications on the pedagogical influences a clinical partner has on student's confidence in clinical settings and learning outcomes and experiences which plays a very important role in the adequate preparation of well-prepared entry level clinicians.

Program Objectives

The purpose of this embedded descriptive case study was to describe the experiences of clinical instructors and first year, first semester graduate students after a clinical rotation utilizing a 2:1 collaborative learning model in an adult acute care setting to determine its efficacy as it has the potential to increase clinical placements. The findings in this case involving a clinical rotation for first year, first semester SLP graduate students in an adult acute care setting utilizing a 2:1 collaborative learning model, were described in this chapter and revealed that the experiences of clinical instructors and graduate students demonstrated it holds great promise as a valid clinical education model that can significantly increase placements. Overarching goals of the study sought to describe how the model affects learning experiences, learning outcomes, and confidence in an adult acute care setting with first year, first semester SLP graduate students.

In SLP, rapid changes have occurred in the field, and there is an increasing level of urgency amongst key stakeholders that SLP graduate students may not be able to gain enough competency in graduate programs to enter the field as qualified entry-level clinicians using current educational models (American Speech-Language-Hearing Association, 2020), yet current educational models have not kept pace with these changes and have not had significant changes in almost 70 years (American Speech-Language-Hearing Association, 2020). The Ad Hoc Committee on Graduate Education for Speech-Language Pathologists (AHC-GESLP) identified

areas where the profession is not being served well and areas that need improvement with the current educational model and two of those areas involve a shortage of placements and difficulty with trying to fit the full scope of practice into a two-year master's program (American Speech-Language-Hearing Association, 2020). Two of the three questions the committee was commissioned to explore pertained to the adequate preparation of entry-level clinicians (American Speech-Language-Hearing Association, 2020). This committee has emerged with ideas as to what changes can be made to help in the better preparation of future clinicians, however, all of this information is beyond the scope of this study.

The results of the study were overall positive, and the findings indicate that the 2:1 model is, at least, not inferior to the 1:1 model from the perspective of clinical instructors, that the 2:1 collaborative learning model has a positive influence on a student's confidence, and that having a clinical partner has a positive influence on a student's perception of their learning experiences and learning outcomes which has important implications to academic programs, and the field in general. Interestingly, when considering training a student in clinical competencies, a key component of providing this training is rooted in clinical education which is a required aspect of every academic program in the US (Council for Clinical Certification in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association, 2018), but in my experience, clinical education opportunities are opportunistic at best, and because of the difficulty of finding enough clinical placements, if we cannot come up with a way in the field to significantly increase clinical placement opportunities, it will likely continue to remain stagnant. Without solving this dilemma, regardless of the best efforts, and different models of entry level education, we will not make true progress in improving educational outcomes for SLP graduate students. A frequent comment, in my experience, from clinicians in the field, is to change the

entry level degree to doctoral level degree requiring more coursework and covering more topics to account for all of the changes (which is not the goal of the Ad Hoc Committee), but again, anecdotally frequently discussed amongst speech-language pathologists, clinical education would still play a substantial role, and because of this there would still be difficulties in training future clinicians with competencies unless the shortage of clinical placements is addressed. This study describes the experiences of clinical instructors and graduate students in SLP's during a semester long clinical practicum utilizing a 2:1 collaborative learning model determining if this promising alternative placement can be efficaciously used in the field.

Implication One

This study addressed the need to explore alternative clinical education models and to determine how a 2:1 collaborative learning model impact a clinical instructor's perceptions regarding the learning outcomes of first year, first semester SLP graduate students in an adult acute care medical setting compared to a 1:1 model. The findings of this study demonstrated that the 2:1 model is, at least, not inferior to the 1:1 model from the perspective of clinical instructors but has the added benefit of resource allocation (twice as many placements). These findings contribute to the literature by providing new information regarding clinical instructor's perspectives of the 2:1 collaborative learning model in an adult acute care practice setting with first year, first semester, SLP graduate students.

There is a significant gap in the literature regarding collaborative models of clinical education in SLP, especially in adult acute care settings which may deter administrators from utilizing this model. This study demonstrates that the 2:1 collaborative learning model is an efficacious clinical education method that can help address the shortage of clinical placements in certain settings while also providing positive contributions to learning. This information may

provide a means of buy in for stakeholders in SLP such as program directors, directors of clinical education, and clinical instructors who may be resistant to trying different models of clinical education in general.

Implication Two

This study also addressed the need to determine how a 2:1 collaborative learning model influenced a student's confidence level in an adult acute care medical setting during the first year, first semester practicum. The findings suggest that self-efficacy along with social and emotional support is foundational for confidence in students and that confidence is a key ingredient for success in a clinical rotation. Additionally, it added to the literature by providing new information regarding the effect that a 2:1 collaborative learning model had on the confidence of SLP graduate students during a first year, first semester practicum in an adult acute setting. This implication may help stakeholders in SLP, such as program directors, directors of clinical education, and clinical instructors to develop pedagogic practices in clinical education that take into consideration this important foundational aspect of clinical competency development outside of the "big nine" for students as well as be a source of buy in for the above-named stakeholders.

Implication Three

This study also addressed the need to determine how clinical partners influenced a student's perceptions of their learning experience and learning outcomes in a 2:1 collaborative learning model. The findings demonstrated that clinical partners had a positive influence on a student's perception of their learning experience and learning outcomes in a 2:1 collaborative learning model. These findings also add to the literature by providing new information regarding how clinical partners influence a student's perceptions of their learning outcomes and learning

experiences with a clinical partner in an adult acute care setting for SLP. This information may provide a means of buy in for stakeholders in SLP such as program directors, directors of clinical education, and clinical instructors who may be resistant to trying different models of clinical education in general. This implication also provides insight into important pedagogical components that may lead to improved competency and better preparation of SLP graduate students leading to well-prepared entry level clinicians.

Recommendations for Actions

The findings of the study indicated that the 2:1 model is, at least, not inferior to the 1:1 model from the perspective of clinical instructors, that the 2:1 collaborative learning model has a positive influence on a student's confidence, and that having a clinical partner had a positive influence on a student's perception of their learning experiences and learning outcomes. These findings have important implications to academic programs, clinical instructors, and practice settings such as hospitals, students, and other stakeholders in the field of SLP.

Because the findings of this study generated new knowledge that has not been published, there are no other studies to date involving an entire cohort of first year, first semester SLP graduate students participating in a 2:1 collaborative learning model in an adult acute care setting, and because there are very few studies involving collaborative learning models in clinical education overall, especially in SLP, I believe it will be beneficial for this study to be disseminated in a peer reviewed journal in the field of SLP, allied health, or another journal regarding clinical teaching. Journal publication is an important step as the information can reach stakeholders who are vested in the clinical education practices in the field and those who make administrative decisions. The individuals who will find the most value in this research are all SLP clinicians or clinicians in allied health fields acting as clinical instructors, those in academia

with administrative roles, such as deans, chairs, program directors and directors of clinical education. I believe that clinicians would find it interesting as it is a novel concept and clinicians have the crucial role of clinical instructors and would have the most interface with the model. As far as those in administrative roles, since the study addresses an avenue of increasing clinical placements, the buy in of those making important decisions in academic programs will benefit from this information as it has implications for not only the pedagogical aspect of training future clinicians utilizing collaborative methods, but also on important administrative decisions such as the number of students admitted each year into a program and budgetary choices.

This research would also be beneficial to present at certain conferences, especially national conferences geared toward SLP. Two main conferences are important regarding the results of this study. First, the annual ASHA conference would be an excellent place to present to reach the most clinicians possible as the target audience of this conference is geared toward practicing clinicians. Second, the annual conference for the Council of Academic Programs in Communication Sciences and Disorders (CAPCSD) conference would be the best place to reach administrators in SLP. This conference's target audience are chairs, program directors, and directors of clinical education. Journal publication and conference presentations would disseminate these findings to stakeholders in the field.

Recommendations for Further Study

After conducting this study, analyzing the data, discussing the findings, and referring to my analytic memos, I have four recommendations for areas that I feel would be beneficial to research further.

1. I think it is important to study the 2:1 collaborative learning model in other practice settings. It may not be possible to study an entire cohort of students in the same practice

setting, but working with a smaller number of students may make utilizing more data sources more feasible. For example, in addition to surveys, individual interviews could be conducted instead of focus groups, along with site observations, and students' clinical reflections which would provide a rich description of the experiences of students and clinical instructors. This study can lead to a deeper understanding of the 2:1 collaborative learning model in different clinical practice settings which could potentially lead to an increase of clinical placements available if the findings are positive.

2. I think it is also important to examine the overarching goals of clinical education from the perspective of all stakeholders. There are often differences in opinion between what students should know and what they should know at each level and what the overall purpose each level of clinical education serves and what our overall goals are for any clinical rotation. Exposure? Experience? Mastery? Connection? ASHA provides general competencies required for certification, but does not break down competencies by practice setting, or level of education. This study can ultimately contribute to a level of standardization in clinical education in the profession which would benefit the preparation of future clinicians to use between programs. I believe this study could be accomplished using an exploratory mixed methods design. First, individual clinicians can be interviewed and asked about their opinions, and with enough data from these interviews, a survey can be designed and disseminated to all stakeholders.
3. One project I started during my qualitative methods class involved understanding what new clinicians working in different settings wish they learned in graduate school. I think it is imperative that we spend a great amount of effort understanding what entry level clinicians think as they are the ones in the trenches and can provide considerable insight

into what is helpful and what is missing in academic programs. The field has evolved so much, and many of our new clinicians are being trained by individuals in the academic sector who have not worked clinically in years. An exploratory mixed methods design would be beneficial for this study. First, entry level clinicians in different practice settings can be interviewed and asked about their opinions, and with enough data from these interviews, a survey can be designed and disseminated to all stakeholders.

4. Another recommendation for future research involves investigating what incentivizes clinical instructors and determining what they need and want from key stakeholders such as students, academic programs, and their employers when deciding to work with an SLP graduate students. An exploratory mixed methods design would be beneficial for this study as well. First, speech-language pathologists with experience in clinical instruction, in different practice settings, can be interviewed and asked about their opinions regarding what incentivizes them, and with enough data from these interviews, a survey can be designed and disseminated to all stakeholders.

Limitations

I worked to produce a quality, and trustworthy study and feel I was successful, however, to contribute to trustworthiness, I find it necessary to include the limitations of this study. The main limitation was that I am a faculty member interacting with the students via teaching them in class, and also making their clinical placements. Because of how the study was designed, there were no opportunities for the students to be completely anonymous with their responses. While I did deidentify the data, and over time, did not associate the data with any particular student, I knew, at least initially, what everyone thought. In the future, I would have an unfamiliar person deidentify the survey data, and also conduct focus groups and deidentify the transcripts. With

this said, I do feel that they were objective in their responses and did share honest opinions and negative experiences. Another limitation is that first year, first semester students in an adult acute clinical rotation is a rarity in and of itself, but it is even more rare for this to occur in a 2:1 model. This model is not the way that most clinicians were trained, and there may be some biases amongst clinicians as they may have strong opinions that align with more traditional models. After the clinical rotation, and the IRB, the students were already in their second semester and one student had shared how her current clinical instructor had criticized the model in general. The final limitation is that this experience was the students first clinical rotation, so they do not have another clinical education model to compare this experience against.

Researcher Reflection

This has been one amazing and humbling experience. I have learned so much from this experience, not only about the qualitative research process, but clinical education, and human nature as well. I have processed and analyzed so much information from the participants and have been privy to the participant's thoughts and opinions regarding their experiences with the collaborative learning model, and it has felt overwhelming at times, but definitely very rewarding. I am so thankful for the experience because I learned much more than I bargained for when I began this PhD program. Looking from the distance, I have always appreciated, but never realized the amount of time and effort that goes into a research study or a PhD.

The main preconceived idea that I came into this study with was that I am keenly aware of how difficult it is to find clinical placements and did really want this study to have a positive outcome. Also, I personally am an extrovert and have benefitted and enjoyed collaborating with colleagues throughout my career. Also, I have informally observed many graduate students through the years collaborating spontaneously which aided in their learning. In addition to this, I

identified a few cognitive biases within myself that I had to work through as I collected and analyzed data for this study. One bias that I recognized was regarding my feelings about the placement and that the students didn't know how lucky they were to be stepping foot into an acute care setting during their first semester of graduate school. In my former role, when I arrived on campus after my first class as the director of clinical education, and after initial student meetings, I had created a goal for myself as an administrator, and worked hard to create a fair environment for all students and to place every student who wanted an acute care rotation in that setting at least once. Before I left that university, I was successful with that goal, and was approached by a manager from a nearby hospital saying how impressed she was with one of our student's resumes regarding her clinical placements. I am aware of my bias of wanting students to have an opportunity to get a well-rounded clinical education and to have a glowing resume because of it. At times, in my role as the director of clinical education, I have felt like a cheer mom.

Another aspect regarding my role and effect on the participants, is that I am the person who is responsible for the clinical placements at my university, and I worried that participants would not share negative things with me, or want to upset me or hurt my feelings, however, that turned out to not be true and I have a great deal of gratitude for the open and honest opinions shared with me. In retrospect, I feel that my role actually had the opposite effect and the participants seemed to feel comfortable and share a great deal of information. In fact, one aspect was that during focus groups, I had a hard time of keeping certain groups on track. Thankfully, we had enough time to answer all of the planned questions, but there were definitely a few "rabbit holes" of discussion that were not particularly productive and somewhat difficult to redirect. To give myself grace, it was my first-time conducting focus groups, and true to

everything I know about textbook learning, textbooks cannot fully prepare you for actual real-world scenarios. Again, I am truly humbled by the process, and so very proud of myself to have made it through an entire research study and can say that I am contributing new knowledge to my field.

Conclusion

The predominant purpose of this descriptive case study sought to describe the experiences of clinical instructors and first year, first semester speech-language pathology graduate students during their first clinical rotation utilizing a 2:1 collaborative learning model in an adult acute care setting. This study focused on the perceptions of clinical instructor's and first year, first semester speech-language pathology graduate students regarding learning and confidence in an adult acute care clinical placement utilizing a collaborate learning model. For clinical instructors, the focus was to describe their perception of learning outcomes for first year, first semester speech-language pathology graduate students during a clinical rotation utilizing a collaborative learning model in an acute care setting compared to a traditional 1:1 model. An additional focus related to first year, first semester speech-language pathology graduate students' confidence and perception of their overall learning outcomes in a collaborative learning model during a clinical rotation in an adult acute care setting during their first semester in graduate school. These results had three important implications to the field of SLP.

The first implication is that the 2:1 model as being a valid means of providing clinical education in an adult acute care practice setting. This can open the door to more clinical placements in hard-to-find practice settings. The second, implication of this study demonstrates how the 2:1 collaborative learning model significantly influenced a student's confidence in an adult acute care practice setting during the first year, first semester clinical practicum which

provides information to stakeholders that can inform their clinical education decisions. The third implication demonstrated that having a clinical partner positively influence a student's perceptions of their learning experiences and learning outcomes in a 2:1 collaborative learning model which again provides information to stakeholders that can help inform their clinical education decisions.

Overall, the findings of the study were very positive and have implications that will benefit other stakeholders in the field and may encourage them to utilize the 2:1 collaborative learning model in their own programs. I will close with this sentiment shared from one of the graduate students when responding to the last question of the survey:

> Having a clinical partner was extremely beneficial, especially first starting out. We influenced each other, we grew together, we built skills off of each other. I think it makes the experience more comfortable when it comes to entering a new world and not knowing much about it but also having a friend, having someone to talk to and confide in. Clinical instructors are always different, and some may possibly not be very approachable if you need someone to talk to, and having a clinical partner by your side during that helps as well as having the partner to talk to.

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APPENDICES

Appendix A: Email to Students

Dear Graduate Student,

I hope this email finds you well. My name is Lori-Ann Ferraro. I am the Director of Clinical Education for Speech-Language Pathology (SLP) Division at the Medical University of South Carolina (MUSC) and a doctoral student at Coastal Carolina University.

I am collecting data for my dissertation regarding the 2:1 collaborative learning model in SLP clinical education in an adult acute practice setting. You have been identified as a potential participant as you are a member of the 2022-2024 SLP cohort participating in a 2:1 collaborative clinical education model. The goal of this study aims to develop new knowledge regarding a clinical education model that can be generalized to similar populations and settings.

There are three parts to this study. First, there is a survey for you to complete which should take approximately 30 minutes to complete. Second, there will be a focus group to take place via Microsoft Teams that would take approximately one hour of your time. I will be audio and video recording the focus group. Finally, there will be a short survey to complete regarding the themes developed which should take approximately five minutes to complete. There is a risk of loss of confidentiality as a result of participating in this study, but precautions will be in place to prevent this from happening.

If you are interested in participating, please click the following link that will take you directly to the survey. I will then contact you to organize a date and time for the focus group that will include graduate students only. Clinical instructors will have a separate focus group.

https://redcap.musc.edu/surveys/?s=C4PTENM8P7WRL9YC

I will email you again three additional times after this initial email in five-day increments.

As a student at MUSC, your participation or discontinuance will not constitute an element of your performance, nor will it be a part of your academic/ employment record at this Institution. Your participation is completely voluntary.

Appendix B: Email to Clinical Instructors

Dear Clinical Instructor,

I hope this email finds you well. My name is Lori-Ann Ferraro. I am the Director of Clinical Education for Speech-Language Pathology (SLP) Division at the Medical University of South Carolina (MUSC) and a doctoral student at Coastal Carolina University.

I am collecting data for my dissertation regarding the 2:1 collaborative learning model in SLP clinical education in an adult acute practice setting. You have been identified as a potential participant as you have worked with the previous cohort utilizing a 1:1 model and most recently provided clinical instruction to the SLP cohort utilizing the 2:1 model. The goal of this study aims to develop new knowledge regarding a clinical education model that can be generalized to similar populations and settings.

There are three parts to this study. First, there is a survey for you to complete which should take approximately 30 minutes to complete. Second, there will be a focus group to take place via Microsoft Teams that would take approximately one hour of your time. I will be audio and video recording the focus group. Finally, there will be a short survey to complete regarding the themes developed after data is analyzed which should take approximately five minutes to complete. There is a risk of loss of confidentiality as a result of participating in this study, but precautions will be in place to prevent this from happening.

If you are interested in participating, please click the following link that will take you directly to the survey. I will then contact you to organize a date and time for the focus group that will include clinical instructors only. Graduate students will have a separate focus group.

https://redcap.musc.edu/surveys/?s=37DD3XXTDKK4XDND

I will email you again three additional times after this initial email in five-day increments.

Choosing to not participate, or your responses if you do choose to participate, will not affect your employment or standing in the program. Your participation is completely voluntary.

Appendix C: Class Announcement

Information Statement for Class Announcement:

You are being asked to participate in a research study that is being conducted at MUSC because you are a graduate student in the 2022-2024 MUSC SLP cohort. Your participation in this study is completely voluntary and there will be no compensation for participating in this study.

The purpose of this research is to attempt to describe the experiences of clinical instructors and speech-language pathology graduate students during a first semester, first year clinical rotation utilizing a 2:1 collaborative learning model in an adult acute care setting. The goal of this study aims to develop new knowledge regarding a clinical education model that can be generalized to similar populations and settings.

If you agree to participate you will be asked to do the following: complete an initial survey that asks questions about experiences of first year, first semester speech-language pathology students during their clinical rotation utilizing a 2:1 collaborative learning model in an adult acute care setting. The initial survey should take approximately 30 minutes to complete, and you have already received an email with the link attached to the survey.

In addition to the survey, you will be asked to participate in a focus group. During this focus group, you will be asked to answer questions relating to your experience of participating in a 2:1 collaborative learning model in an adult acute care setting as well as provide any other information you find important.

Finally, after all of the data is analyzed, you will be asked to take a short survey regarding the themes developed. You will receive a link via email. This will take approximately five minutes.

There is a risk of loss of confidentiality as a result of participating in this study, but precautions will be in place to prevent this from happening.

As a student at MUSC, your participation or discontinuance will not constitute an element of your performance, nor will it be a part of your academic/ employment record at this Institution. Your participation is voluntary.

If you have any questions, please ask them now or feel free to contact me via email, ferrarlo@musc.edu

Appendix D: Information Statement Survey

You are being asked to participate in this research study being conducted at MUSC because you are either a graduate student in the 2022-2024 MUSC SLP cohort or a clinical instructor who has supervised an MUSC SLP graduate student during both the fall 2021 and fall 2022 semesters. Your participation in this study is completely voluntary.

The purpose of this research is to attempt to describe the experiences of clinical instructors and speech-language pathology graduate students during a first semester, first year clinical rotation utilizing a 2:1 collaborative learning model in an adult acute care setting.

If you agree to participate you will be asked to do the following: First, complete a survey which should take approximately 30 minutes. Second, there will be a focus group to take place via Microsoft Teams that would take approximately one hour of your time. There will be separate focus groups for clinical instructors and students. I will be audio and video recording the focus group. Finally, there will be a short survey to complete regarding the themes developed after data is analyzed which should take approximately five minutes to complete. There is a risk of loss of confidentiality as a result of participating in this study, but your responses will be coded to help protect your identity.

If you are a student or employee at MUSC, your participation or discontinuance will not constitute an element of your performance, nor will it be a part of your academic/ employment record at this Institution. Your participation is voluntary. By completing the survey, you agree that you understand and are willing to participate.

If you have any questions, please feel free to contact me via email, ferrarlo@musc.edu

Appendix E: Information Statement for Focus Groups

You are being asked to participate in a research study that is being conducted at MUSC because you are either a graduate student in the 2022-2024 MUSC SLP cohort or a clinical instructor who has supervised an MUSC SLP graduate student during both the fall 2021 and fall 2022 semesters. Your participation in this study is completely voluntary and there will be no compensation for participating.

The purpose of this research is to attempt to describe the experiences of clinical instructors and speech-language pathology graduate students during a first semester, first year clinical rotation utilizing a 2:1 collaborative learning model in an adult acute care setting. The goal of this study aims to develop new knowledge regarding a clinical education model that can be generalized to similar populations and settings.

If you agree to participate in this focus group, you will be asked to do the following: answer questions relating to your experience of participating in a 2:1 collaborative learning model in an adult acute care setting. You will also be given an opportunity to provide any other information you find important. This should take approximately one hour.

This focus group will be audio and video recorded. Once the recordings have been transcribed, the recordings will be deleted.

There is a risk of loss of confidentiality as a result of participating in this study, but your responses will be coded to help protect your identity. The risk of loss of confidentiality increases in group discussions and that while focus group participants will be reminded to respect privacy and confidentiality of group members that cannot be guaranteed.

As a student or employee at MUSC, your participation or discontinuance will not constitute an element of your performance, nor will it be a part of your academic/ employment record at this Institution. Your participation is voluntary, and you may leave at any time.

If you have any questions, please ask them now or feel free to contact me via email, ferrarlo@musc.edu

Appendix F: Survey Instrument Clinical Instructors

Confidential

Clinical Instructors: Improving Clinical Educational Outcomes for a Changing Field: Utilizing a 2:1 Collaborative Learning Model in an Acute Care Setting for First Semester Speech-Language Pathology Graduate Students

Information Statement Survey

You are being asked to participate in this research study being conducted at MUSC because you are either a graduate student in the 2022-2024 MUSC SLP cohort or a clinical instructor who has supervised an MUSC SLP graduate student during both the fall 2021 and fall 2022 semesters. Your participation in this study is completely voluntary.

The purpose of this research is to attempt to describe the experiences of clinical instructors and speech-language pathology graduate students during a first semester, first year clinical rotation utilizing a 2:1 collaborative learning model in an adult acute care setting.

If you agree to participate you will be asked to do the following: First, complete a survey which should take approximately 30 minutes. Second, there will be a focus group to take place via Microsoft Teams that would take approximately one hour of your time. There will be separate focus groups for clinical instructors and students. I will be audio and video recording the focus group. Finally, there will be a short survey to complete regarding the themes developed after data is analyzed which should take approximately five minutes to complete. There is a risk of loss of confidentiality as a result of participating in this study, but your responses will be coded to help protect your identity.

If you are a student or employee at MUSC, your participation or discontinuance will not constitute an element of your performance, nor will it be a part of your academic/ employment record at this Institution. Your participation is voluntary. By completing the survey, you agree that you understand and are willing to participate.

If you have any questions, please feel free to contact me via email, ferrarlo@musc.edu

IRB Number: « Pro00125547»

Date Approved «01/19/2023»

1) Name: _____

2) Do you think the students were excited to go into this first clinical placement?
- ◯ Yes
- ◯ Somewhat
- ◯ No

3) Please describe any explanation and/or experiences related to your answer above: _____

Confidential

4)	In the beginning of the semester, do you think having a clinical partner increased student's confidence in their success ?	◯ Yes ◯ Somewhat ◯ No
5)	Please describe any explanation and/or experiences related to your answer above:	_____
6)	During the entire semester, do you think that having a clinical partner increased student's confidence in their success during this clinical rotation?	◯ Yes ◯ Somewhat ◯ No
7)	Please describe any explanation and/or experiences related to your answer above:	_____
8)	In the beginning of the semester, do you think having a clinical partner contributed to student's comfort during their clinical rotation in an acute adult setting?	◯ Yes ◯ Somewhat ◯ No
9)	Please describe any explanation and/or experiences related to your answer above:	_____
10)	During the entire semester, do you think having a clinical partner contributed to student's comfort during their clinical rotation in an acute adult setting?	◯ Yes ◯ Somewhat ◯ No
11)	Please describe any explanation and/or experiences related to your answer above:	_____
12)	Do you think having a clinical partner impacted student's comfort levels when interacting with you and asking questions?	◯ Yes ◯ Somewhat ◯ No
13)	Please describe any explanation and/or experiences related to your answer above:	_____
14)	Do you think having a clinical partner helped students make connections between the classroom content and the clinical application?	◯ Yes ◯ Somewhat ◯ No
15)	Please describe any explanation and/or experiences related to your answer above:	_____
16)	Did you find the clinical partners motivating each other during this clinical rotation to be responsible for getting things completed for their clinical rotation (i.e. chart reviews, other assignments, reading of articles)?	◯ Yes ◯ Somewhat ◯ No

Confidential

17) Please describe any explanation and/or experiences related to your answer above:

18) Did you find that the clinical partners encouraged each other to be successful in this clinical rotation?
- ◯ Yes
- ◯ Somewhat
- ◯ No

19) Please describe any explanation and/or experiences related to your answer above:

Compared to the 1:1 group, do you think students having a clinical partner contributed to their ability to identify risk factors during chart review for:

		Yes	Somewhat	No
20)	Dysphagia?	☐	☐	☐
21)	Language Disorders?	☐	☐	☐
22)	Cognitive Communication Disorders?	☐	☐	☐

23) Please describe any explanation and/or experiences related to your answer above:

Please answer the following questions relating to what student's actively participated in during this clinical rotation.

Do you think having a clinical partner contributed to student's ability to:

		Yes	Somewhat	No
24)	complete an oral mechanism exam?	☐	☐	☐
25)	present PO trial(s) during a clinical bedside swallow assessment?	☐	☐	☐
26)	present PO trial(s) during an instrumental swallow assessment (MBSS or FEES)?	☐	☐	☐
27)	participate in the administration of a speech and language assessment?	☐	☐	☐
28)	participate in the administration of a cognitive communication assessment?	☐	☐	☐

29)

	participate in the administration of a clinical bedside swallow assessment?	☐	☐	☐
30)	participate in the administration of an instrumental swallow assessment (MBSS or FEES)?	☐	☐	☐
31)	participate in treatment of speech, language, or cognitive communication disorders?	☐	☐	☐
32)	participate in treatment of swallowing disorders?	☐	☐	☐
33)	participate in the documentation of patient treatment or evaluation (in a medical record or draft to turn in to class)?	☐	☐	☐
34)	participate in the creation of a treatment plan?	☐	☐	☐
35)	interact with other healthcare professionals regarding the evaluation and/or treatment plan?	☐	☐	☐
36)	interact with patient and/or caregivers (family members) regarding the evaluation and/or treatment plan?	☐	☐	☐
37)	complete oral care?	☐	☐	☐

38) Please describe any explanation and/or experiences related to your answer above:

39) Were there times when you noticed students having general, unprompted conversations with their clinical partner about clinical skills?
- ◯ Yes
- ◯ Somewhat
- ◯ No

40) Please describe any explanation and/or experiences related to your answer above:

41) Was working with students in a 2:1 model a positive experience for you?
- ◯ Yes
- ◯ Somewhat
- ◯ No

42) Please describe any explanation and/or experiences related to your answer above:

43) Did you notice any personality differences in the clinical partners that impacted their relationship with each other?
- ◯ Yes
- ◯ Somewhat
- ◯ No

44)	Please describe any explanation and/or experiences related to your answer above:	_____
45)	Did the 2:1 model impact your ability to form a relationship with your students?	◯ Yes ◯ Somewhat ◯ No
46)	Please describe any explanation and/or experiences related to your answer above:	_____
47)	Do you think that 2:1 model reduced the number of questions students asked you directly?	◯ Yes ◯ Somewhat ◯ No
48)	Please describe any explanation and/or experiences related to your answer above:	_____
49)	Do you think that the 2:1 model with students having clinical partners contribute to their overall learning this semester?	◯ Yes ◯ Somewhat ◯ No
50)	Please describe any explanation and/or experiences related to your answer above:	_____
51)	Is there anything else that you would like me to know about your experiences with teaching graduate students utilizing a 2:1 model?	_____

Appendix G: Focus Group Questions Clinical Instructors

1. Did you notice any differences in eagerness, motivation, confidence, participation, etc. in students who expressed interest in working in acute care versus students that did not express interest working in acute care?
2. How do you feel a student's excitement for their clinical placement relates to their overall learning of skills?
3. Related to the matrix questions in the survey, were there any areas that students did not get active participation in during the rotation?
4. How did active participation by students differ in the 2:1 vs 1:1 models?
5. Related to the matrix questions in the survey, were there any areas where having a clinical partner contributed to the student's ability to participate?
6. When one student seemed to have more knowledge around a particular clinical skill or activity, how do you think it influenced the learning for both partners: the student with more knowledge and the student with less knowledge?
7. How did the individual differences in student's backgrounds (past experiences students had in life prior to starting school) influence the other partner in this clinical rotation?
8. How do you feel the professionalism skills were with the 2:1 model compared to the students last year using the 1:1 model?
9. How did the 2:1 model reduce or increase your time commitment of supervising graduate students compared to the 1:1 model?
10. Compared to last year with the 1:1 model, how do you think your teaching changed with the 2:1 model?

11. Compared to last year with the 1:1 model, how do you feel that student learning differed utilizing the 2:1 model?
12. What differences, if any, did you notice in your clinical care utilizing the 2:1 model compared to the 1:1 model?
13. How did patients and patient's families respond to having two students present during visits?
14. How did you utilize the daily student goals to individualize the instruction?
15. Is there anything else that you would like to share about your experience utilizing the 2:1 collaborative learning model?

Appendix H: Survey Instrument Students

Confidential

Students: Evaluating Clinical Educational Learning Outcomes for a Changing Field: Utilizing a 2:1 Collaborative Learning Model in an Acute Care Setting for First Semester Speech-Language Pathology Graduate Students

Information Statement Survey

You are being asked to participate in this research study being conducted at MUSC because you are either a graduate student in the 2022-2024 MUSC SLP cohort or a clinical instructor who has supervised an MUSC SLP graduate student during both the fall 2021 and fall 2022 semesters. Your participation in this study is completely voluntary.

The purpose of this research is to attempt to describe the experiences of clinical instructors and speech-language pathology graduate students during a first semester, first year clinical rotation utilizing a 2:1 collaborative learning model in an adult acute care setting.

If you agree to participate you will be asked to do the following: First, complete a survey which should take approximately 30 minutes. Second, there will be a focus group to take place via Microsoft Teams that would take approximately one hour of your time. There will be separate focus groups for clinical instructors and students. I will be audio and video recording the focus group. Finally, there will be a short survey to complete regarding the themes developed after data is analyzed which should take approximately five minutes to complete. There is a risk of loss of confidentiality as a result of participating in this study, but your responses will be coded to help protect your identity.

If you are a student or employee at MUSC, your participation or discontinuance will not constitute an element of your performance, nor will it be a part of your academic/ employment record at this Institution. Your participation is voluntary. By completing the survey, you agree that you understand and are willing to participate.

If you have any questions, please feel free to contact me via email, ferrarlo@musc.edu

IRB Number: « Pro00125547»

Date Approved «01/19/2023»

1) Name: _____

2) Were you excited to go into this first clinical placement?
- ◯ Yes
- ◯ Somewhat
- ◯ No

3) Please describe any explanation and/or experiences related to your answer above: _____

Confidential

4) In the beginning of the semester, did having a clinical partner increase your confidence in your success for this clinical placement?
- ◯ Yes
- ◯ Somewhat
- ◯ No

5) Please describe any explanation and/or experiences related to your answer above:

_____

6) During the entire semester, did having a clinical partner increase your confidence in your success during this clinical placement?
- ◯ Yes
- ◯ Somewhat
- ◯ No

7) Please describe any explanation and/or experiences related to your answer above:

_____

8) In the beginning of the semester, did having a clinical partner contribute to your comfort during your clinical rotation in an acute adult setting?
- ◯ Yes
- ◯ Somewhat
- ◯ No

9) Please describe any explanation and/or experiences related to your answer above:

_____

10) During the entire semester, did having a clinical partner contribute to your comfort during your clinical rotation in an acute adult setting?
- ◯ Yes
- ◯ Somewhat
- ◯ No

11) Please describe any explanation and/or experiences related to your answer above:

_____

12) Did having a clinical partner impact your comfort level with interacting and asking questions to your clinical instructor?
- ◯ Yes
- ◯ Somewhat
- ◯ No

13) Please describe any explanation and/or experiences related to your answer above:

_____

14) Did your clinical partner help you to make connections between the classroom content and the clinical application?
- ◯ Yes
- ◯ Somewhat
- ◯ No

15) Please describe any explanation and/or experiences related to your answer above:

_____

Did having a clinical partner contribute to your ability to identify risk factors during chart review for:

		Yes	Somewhat	No
16)	Dysphagia?	☐	☐	☐
17)	Language Disorders?	☐	☐	☐
18)	Cognitive Communication Disorders?	☐	☐	☐

19) Please describe any explanation and/or experiences related to your answer above:

_____

20) Did having a clinical partner impact your sense of responsibility to get things completed for your clinical rotation (i.e. chart reviews, other assignments related to the placement, reading of articles)?

◯ Yes
◯ Somewhat
◯ No

21) Please describe any explanation and/or experiences related to your answer above:

_____

22) Did you find that you encouraged your clinical partner to be successful in this clinical rotation?

◯ Yes
◯ Somewhat
◯ No

23) Please describe any explanation and/or experiences related to your answer above:

_____

The following questions ask about your active participation in different clinical skills that are common to an acute adult practice setting. Please answer the following questions relating to what you actively participated in during your clinical rotation.

Did having a clinical partner contribute to your ability to:

		Yes	Somewhat	No
24)	complete an oral mechanism exam?	☐	☐	☐
25)	present PO trial(s) during a clinical bedside swallow assessment?	☐	☐	☐
26)	present PO trial(s) during an instrumental swallow assessment (MBSS or FEES)?	☐	☐	☐
27)	participate in the administration of a speech and language assessment?	☐	☐	☐

28)

	participate in the administration of a cognitive communication assessment?	☐	☐	☐
29)	participate in the administration of a clinical bedside swallow assessment?	☐	☐	☐
30)	participate in the administration of an instrumental swallow assessment (MBSS or FEES)?	☐	☐	☐
31)	participate in treatment of speech, language, or cognitive communication disorders?	☐	☐	☐
32)	participate in treatment of swallowing disorders?	☐	☐	☐
33)	participate in the documentation of patient treatment or evaluation (in a medical record or draft to turn in to class)?	☐	☐	☐
34)	participate in the creation of a treatment plan?	☐	☐	☐
35)	interact with other healthcare professionals regarding the evaluation and/or treatment plan?	☐	☐	☐
36)	interact with patient and/or caregivers (family members) regarding the evaluation and/or treatment plan?	☐	☐	☐
37)	complete oral care?	☐	☐	☐

38) Please describe any explanation and/or experiences related to your answer above:

_____

39) Were there times when you had general, unprompted conversations with your clinical partner about clinical skills that helped you to learn?
- ◯ Yes
- ◯ Somewhat
- ◯ No

40) Please describe any explanation and/or experiences related to your answer above:

_____

41) Was working with a clinical partner a positive experience for you?
- ◯ Yes
- ◯ Somewhat
- ◯ No

42) Please describe any explanation and/or experiences related to your answer above:

_____

Confidential

43) Did personality differences impact your relationship with your clinical partner?
- ◯ Yes
- ◯ Somewhat
- ◯ No

44) Please describe any explanation and/or experiences related to your answer above:

_____

45) Did having a clinical partner impact your ability to form a relationship with your clinical instructor?
- ◯ Yes
- ◯ Somewhat
- ◯ No

46) Please describe any explanation and/or experiences related to your answer above:

_____

47) Do you think that having a clinical partner reduced the number of questions you had for your clinical instructor?
- ◯ Yes
- ◯ Somewhat
- ◯ No

48) Please describe any explanation and/or experiences related to your answer above:

_____

49) Did having a clinical partner contribute to your overall learning this semester?
- ◯ Yes
- ◯ Somewhat
- ◯ No

50) Please describe any explanation and/or experiences related to your answer above:

_____

51) Is there anything else that you would like me to know about your learning experiences with a clinical partner this past semester?

_____

Appendix I: Focus Group Questions Students

1. How do you perceive the clinical education portion of your graduate school program?
2. How did having a clinical partner contribute to your overall learning?
3. How did your clinical interest in this setting (i.e. interest in working in adult acute care) influence your clinical partnership?
4. How did your clinical partnership's interest in this setting (i.e. interest in working in adult acute care) influence your clinical partnership?
5. How do you feel your past life experiences influenced you during this clinical rotation? For example: family, employment, education, relationships, clinical observations, etc
6. How do you feel your clinical partner's past life experiences influenced you during this clinical rotation? For example: family, employment, education, relationships, clinical observations, etc.
7. How did having a clinical partner impact your ability to develop a relationship with your clinical instructor?
8. How did having a clinical partner help you cope with the emotional issues that arise from seeing patients in an acute care setting?
9. How did having a clinical partner influence you to say "yes" to trying a new skill or activity when you otherwise may not have if in the 1:1 model (without a clinical partner)?
10. How did having a clinical partner influence you when reflecting on your clinical week?
11. If you were able to craft the semester, out of 10 clinical days, how many would you prefer to be 2:1 versus 1:1?
12. How did having a clinical partner influence you when thinking about future clinical experiences and creating goals?

13. Is there anything that I have left out that you would like to share about your experience?

Appendix J: Data Chain of Evidence

1. A study identification document was created and stored separate from any other study data.
    a. Graduate students were given a number starting with 1,000.
    b. Clinical instructors were given a number starting with 2.000.
        i. This distinction was made to easily recall which subunit was being investigated.
2. Survey results were complete, and I removed identifying information from the survey data and replaced names of participants with unique study identification number.
3. Descriptive statistics from the survey were computed and kept in an excel file labeled, either "Deidentified Student Survey Data with Notes," or "Deidentified Clinical Instructor Survey Data with Notes.
4. First round coding on survey data was completed by the primary investigator.
5. Both the primary and co-investigator identified any topics in the survey that needed further questioning and refined the focus group questions for both subunits based on this initial analysis.
6. Focus group questions updated and an amendment was sent to the IRB for approval.
7. IRB approval obtained.
8. Focus groups completed with all participants.
9. After transcriptions were received from Ubiqus on Demand, I listened to the recordings, checking the transcripts for accuracy and making any necessary corrections.
10. Identifying information was removed from the transcripts and replaced with unique study identification number.

11. All recordings were deleted per the IRB protocol.
12. Initial In Vivo Coding completed by the primary investigator in Microsoft Word for all focus group transcripts, and during initial coding, and notes made.
13. Coding was double checked again by the primary researcher. Initial codes transferred into a Microsoft Excel Spreadsheet.
14. Second round coding utilizing pattern coding completed and categories created, and the primary investigator and co-investigator both agreed on categories.
15. Third round coding utilizing pattern coding completed and broader themes were developed from the categories, and the primary investigator and co-investigator agreed on themes.
16. All data combined into a single Microsoft Excel spreadsheet.
17. Data codebook, including all In Vivo Codes, and Pattern Codes (categories and themes), was created in Microsoft Word and can be found in Appendix K.
18. Three separate files for codes were created:
    a. Cross-case which included all data.
    b. Subunit One which included all data from graduate students.
    c. Subunit Three which included all data from clinical instructors.
19. Member check surveys sent out to both subunits.
    a. Member checking survey file created and for graduate students.
    b. Member checking survey file created for clinical instructors.
20. Member check surveys analyzed.

Appendix K: Data Codebook

Study ID	In Vivo Codes	Category	Theme
2006	"...they discussed what they have learned in class…"	Academic to Clinical Connections	Critical Thinking
2006	"...sharing and exchanging information learned in class (with my support) and connecting it to the clinical setting."	Academic to Clinical Connections	Critical Thinking
2006	"…more open-ended discussion early on…"	Discussion	Critical Thinking
2006	"…I felt because there was another person there maybe that it was more of, like, let's have a conversation, let's – let me ask you some questions."	Discussion	Critical Thinking
2006	"…more open to verbal discussion."	Discussion	Critical Thinking
2006	"I enjoyed what felt like a 'discussion' with the students…"	Discussion	Critical Thinking
2006	"They asked tons of questions, and they were just okay with that discussion and collaboration…"	Questions	Critical Thinking
2006	"…more comfortable asking questions with a clinical partner."	Questions	Critical Thinking

2005	"…intentional about how I asked questions…"	Questions	Critical Thinking
2004	"…discussed observations at bedside with information they were receiving in class."	Academic to Clinical Connections	Critical Thinking
2004	"…discussed information they received in class…"	Academic to Clinical Connections	Critical Thinking
2004	"Increased discussion of class content…"	Discussion	Critical Thinking
2004	"Having a partner appeared to contribute to the student's willingness to engage in conversation and ask questions…"	Questions	Critical Thinking
2004	"…more willing to ask questions in a 2:1 model."	Questions	Critical Thinking
2003	"…they would reference, like, a project or a test that they had studied for."	Academic to Clinical Connections	Critical Thinking
2003	"…discuss what they saw with me in clinic along with what they were learning in class."	Academic to Clinical Connections	Critical Thinking
2003	"…having a peer to discuss with."	Discussion	Critical Thinking
2003	"…more apt to respond to questions…"	Questions	Critical Thinking
2003	"…more comfortable asking questions…"	Questions	Critical Thinking

2002	"…would talk about what they had learned…"	Academic to Clinical Connections	Critical Thinking
2002	"…more likely to ask each other instead of me and then decide together whether or not to ask me."	Questions	Critical Thinking
2002	"…they would converse with each other about what they saw."	Reflection/Planning	Critical Thinking
2001	"…reminded each other of class topics…"	Academic to Clinical Connections	Critical Thinking
2001	"…more comfortable to share ideas."	Questions	Critical Thinking
2001	"…if they came to us with their own goals, then that was helpful.'	Reflection/Planning	Critical Thinking
2001	"…they continued to talk about their experiences outside of the practicum…"	Reflection/Planning	Critical Thinking
1033	"…lined up for us doing a dysphasia class."	Academic to Clinical Connections	Critical Thinking
1031	"We would talk about clinical during class."	Academic to Clinical Connections	Critical Thinking
1029	"…relate to things in class and relate them to what we experience clinically…"	Academic to Clinical Connections	Critical Thinking
1028	"We would discuss after the rotation…"	Reflection/Planning	Critical Thinking
1027	"…I was kind of able to answer questions…"	Questions	Critical Thinking

1026	"…helped to talk about topics together…"	Discussion	Critical Thinking
1025	"…asked each other, and then if neither of us knew, we would ask, um, our SLP."	Questions	Critical Thinking
1025	"…if, um, I didn't have a partner, I wouldn't be asking as many questions to my instructor."	Questions	Critical Thinking
1025	"…we would recall what we saw and then like kinda go over what we also debriefed about…"	Reflection/Planning	Critical Thinking
1025	"…having a goal I think was really helpful to push us to do more."	Reflection/Planning	Critical Thinking
1025	"…able to communicate before, during, and after…"	Reflection/Planning	Critical Thinking
1025	"…talked a lot about how we feel about the treatment of patients and how we can support them and their families…"	Reflection/Planning	Critical Thinking
1023	"…ask questions that I would not have thought to ask."	Questions	Critical Thinking
1022	"…we always made our goals together."	Reflection/Planning	Critical Thinking
1022	"…we definitely talked about our goals beforehand and would help each other come up with them."	Reflection/Planning	Critical Thinking

1022	"My partner and I would talk before and after…"	Reflection/Planning	Critical Thinking
1021	"Discuss the connection between classroom content and clinical application."	Academic to Clinical Connections	Critical Thinking
1020	"Applied things we learned in class."	Academic to Clinical Connections	Critical Thinking
1019	"…talk through things…"	Discussion	Critical Thinking
1019	"…I feel like it influenced our questions…"	Questions	Critical Thinking
1019	"…spoke about doing things differently."	Reflection/Planning	Critical Thinking
1018	"…would constantly pull in things that we had learn in class when we saw them in clinic…"	Academic to Clinical Connections	Critical Thinking
1018	"…more comfortable when asking questions…"	Questions	Critical Thinking
1017	"…we talked through them together…"	Discussion	Critical Thinking
1017	"…helped with answering questions on our own and critical thinking."	Questions	Critical Thinking
1016	"…talk things out…"	Discussion	Critical Thinking
1016	"Ask questions together able to talk about what we saw."	Questions	Critical Thinking

1015	“It just helps again tie that information…”	Academic to Clinical Connections	Critical Thinking
1015	“…partner would come up with different questions than I would've ever thought about it.”	Questions	Critical Thinking
1014	“…we talked about our day and things that we did and what we want to do next time…”	Reflection/Planning	Critical Thinking
1014	“During class, walking to clinical etc. [talk about it]”	Reflection/Planning	Critical Thinking
1013	“I did not feel like all the stress was on me to answer…”	Questions	Critical Thinking
1013	“…we did talk about it…”	Reflection/Planning	Critical Thinking
1012	“…allowed me to ask more questions…”	Questions	Critical Thinking
1012	“…we both would talk about it on the way there and back…”	Reflection/Planning	Critical Thinking
1011	“…further understand what I learned and how I applied it.”	Academic to Clinical Connections	Critical Thinking
1010	“Relating content to real life scenarios…”	Academic to Clinical Connections	Critical Thinking
1010	‘…there's also someone else learning and I shouldn't be afraid to ask questions…”	Questions	Critical Thinking
1010	“…we would debrief after clinical.	Reflection/Planning	Critical Thinking

1010	"We would talk on the walk to the bus about clinical that day."	Reflection/Planning	Critical Thinking
1009	"…made it easier to ask questions that I usually might have felt dumb asking!"	Questions	Critical Thinking
1009	"…having somebody to debrief with at the end of the day was very, very helpful…"	Reflection/Planning	Critical Thinking
1009	"…talk about things that went well for us during each session…"	Reflection/Planning	Critical Thinking
1008	"…discuss our experiences with afterward."	Reflection/Planning	Critical Thinking
1007	"You learn everything about it in class and then you actually experience it…"	Academic to Clinical Connections	Critical Thinking
1006	"…we bounced questions off of each other…"	Questions	Critical Thinking
1006	"…we were able to talk about it after and really debrief and like process those emotions…"	Reflection/Planning	Critical Thinking
1005	"…learning about the same like things that we were seeing in class…"	Academic to Clinical Connections	Critical Thinking
1005	"She was able to connect things to class and clinicals that I didn't necessarily think about."	Academic to Clinical Connections	Critical Thinking

1005	"…always have inquisitive conversations about our clinical experiences…"	Discussion	Critical Thinking
1005	"…it just became a conversation when we had questions."	Questions	Critical Thinking
1005	"…to even just talk through the patients to see what SOAP note we wanted to write at the end of the day just helped me…"	Reflection/Planning	Critical Thinking
1004	"…helps like connect the dots of what I'm learning in class."	Academic to Clinical Connections	Critical Thinking
1004	"…talk it through with someone."	Discussion	Critical Thinking
1004	"…talk about experiences with someone who knew about it."	Reflection/Planning	Critical Thinking
1004	"…talking through class content to relate it to a patient."	Reflection/Planning	Critical Thinking
1003	"Having a clinical partner was helpful to make connections from class…"	Academic to Clinical Connections	Critical Thinking
1003	"…helpful to have my partner to talk to as well or in group conversation."	Discussion	Critical Thinking
1003	"…I may not have thought of a question that my partner thought of or vice versa."	Questions	Critical Thinking
1003	"…it was very easy to make connections together in clinic."	Reflection/Planning	Critical Thinking

1002	"…dysphagia class, like correlating to the hospital…"	Academic to Clinical Connections	Critical Thinking
1002	"…similar perspectives connecting classroom material…"	Academic to Clinical Connections	Critical Thinking
1002	"…often have spontaneous conversations connecting it to clinical experiences."	Discussion	Critical Thinking
1002	"…bounce questions off of each other as well as our clinical instructor."	Questions	Critical Thinking
1002	"…bounce questions off of each other which contributed to questions being answered before they reached our clinical instructor."	Questions	Critical Thinking
1001	"…we would discuss what we saw."	Discussion	Critical Thinking
1001	"…talk together about what we saw in clinic and class."	Reflection/Planning	Critical Thinking
1000	"…it was easy to, um, like ask my partner questions…"	Questions	Critical Thinking
1000	"…she asked questions I didn't realized I had…"	Questions	Critical Thinking
1000	"…I can imagine what it looks like in the field..."	Reflection/Planning	Critical Thinking
1000	"…could talk about clinic while we did soap notes and chart reviews…"	Reflection/Planning	Critical Thinking

2006	"…helped the other student kind of see whole picture and how things in a hospital work."	Life experiences/Different Backgrounds	Diversity
2003	"…she was able to give a lot of, like, firsthand account information, y-you know, voluntarily, um, that I feel like helped the other student learn a little bit more about the diagnosis…"	Life experiences/Different Backgrounds	Diversity
2001	"…one of my students had recently had – lost a family member, and so that definitely impacted how she interacted with patients and families, from being on the other side. Um, and it was a good learning opportunity for both of them…"	Life experiences/Different Backgrounds	Diversity
1033	"…super beneficial because you got to learn how to work with people who are different from you…"	Life experiences/Different Backgrounds	Diversity
1033	"…get more involved in that because of her story with her grandmother."	Life experiences/Different Backgrounds	Diversity
1033	"…it made us stronger because we learn and deal with things differently."	Life experiences/Different Backgrounds	Diversity

1029	"…were able to get along well despite having differences in personalities/interests."	Life experiences/Different Backgrounds	Diversity
1023	"…shifting to a like maybe we didn't need the support, but the benefits were still really big because of, um, the other person's perspective and questions."	Life experiences/Different Backgrounds	Diversity
1023	"…still benefiting from another person's perspective."	Life experiences/Different Backgrounds	Diversity
1023	"…talking with my partner about shared experiences."	Life experiences/Different Backgrounds	Diversity
1022	"…personality differences actually helped…"	Life experiences/Different Backgrounds	Diversity
1017	"…good experience with professional relationships."	Life experiences/Different Backgrounds	Diversity
1014	"…I could see how comfortable she was with patients already from having that past experience and that made me feel	Life experiences/Different Backgrounds	Diversity

	ten times more confident and comfortable.”		
1012	“…I was seeing it from her perspective…”	Life experiences/Different Backgrounds	Diversity
1011	“…whenever we are paired with a different person, it helps us broaden our perspective…”	Life experiences/Different Backgrounds	Diversity
1011	“…having another person, um, enabled me to learn from them specifically in acute care because of her past experiences which was great.”	Life experiences/Different Backgrounds	Diversity
1009	“…I thought it was just good practice because we come from such different backgrounds.”	Life experiences/Different Backgrounds	Diversity
1009	“We both brought different characteristics to the table…”	Life experiences/Different Backgrounds	Diversity
1009	“While my partner and I are different in a lot of ways personally (not in bad ways), we really complimented each other as partners.”	Life experiences/Different Backgrounds	Diversity

1005	"…she was telling me just about her experience and it kind of just put into perspective like we're not some of these people's favorite people…"	Life experiences/Different Backgrounds	Diversity
1005	"…difference allowed us to learn from each other…"	Life experiences/Different Backgrounds	Diversity
1002	"…each bring in our own knowledge and backgrounds…"	Life experiences/Different Backgrounds	Diversity
1000	"…I learned a lot from like hearing her experiences…"	Life experiences/Different Backgrounds	Diversity
1000	"…like I learned a lot from like hearing her like testimonies."	Life experiences/Different Backgrounds	Diversity
1000	"It was great to learn about her experience and why she got into speech pathology and learn from her knowledge."	Life experiences/Different Backgrounds	Diversity
1000	"…get a different point of view."	Life experiences/Different Backgrounds	Diversity

2006	"Encouraging, like saying, "Yeah, you can do this"	Encouragement	Interpersonal Skills
2006	"Keeping track of, like, who – who did what." and giving them op – the opportunity	Teamwork	Interpersonal Skills
2005	"…an opportunity for – for feedback…"	Feedback	Interpersonal Skills
2004	"…consistently remind each other to complete tasks…"	Accountability	Interpersonal Skills
2004	"…provided feedback to each other on interactions with patient…"	Feedback	Interpersonal Skills
2002	"…encourage each other…"	Encouragement	Interpersonal Skills
2001	"…reminded each other to complete assignments."	Accountability	Interpersonal Skills
2001	"…one encouraging the other…"	Encouragement	Interpersonal Skills
2001	"…being open to the feedback…"	Feedback	Interpersonal Skills
1033	"She was very encouraging…"	Encouragement	Interpersonal Skills
1031	"…didn't want to let her down."	Accountability	Interpersonal Skills

1029	"…didn't hurt having someone else depending on you to get assignments done."	Accountability	Interpersonal Skills
1029	"…gauge if I am doing well…"	Feedback	Interpersonal Skills
1028	"…needed to do my part."	Accountability	Interpersonal Skills
1028	"…always cheering for her…"	Encouragement	Interpersonal Skills
1026	"…made me more accountable…"	Accountability	Interpersonal Skills
1026	"…I told her that I was proud of her…"	Encouragement	Interpersonal Skills
1026	"…what went good and what didn't go as good."	Feedback	Interpersonal Skills
1026	"…we like worked really good as a team with each other…"	Teamwork	Interpersonal Skills
1026	"We would like kinda switch off…"	Teamwork	Interpersonal Skills
1026	"…we were very quick to help each other out."	Teamwork	Interpersonal Skills
1026	"…we would work together and 'share' the task."	Teamwork	Interpersonal Skills

1025	"…reminded each other…"	Accountability	Interpersonal Skills
1025	"…encourage her to try new things."	Encouragement	Interpersonal Skills
1025	"…there to help me when I needed it."	Teamwork	Interpersonal Skills
1022	"…tell each other what we did well after each task…"	Feedback	Interpersonal Skills
1021	"I would say, 'you got this' and it would be reciprocated back to me. "	Encouragement	Interpersonal Skills
1020	"I would tell her good job and encourage her"	Encouragement	Interpersonal Skills
1020	"My clinical partner was so supportive…"	Encouragement	Interpersonal Skills
1020	"…we gave each other constructive feedback and learned from each other"s example…"	Feedback	Interpersonal Skills
1019	"…another person's grade on my shoulder…"	Accountability	Interpersonal Skills
1019	"…I could cheer her on…"	Encouragement	Interpersonal Skills
1016	"We would make sure that we keep each other on top of things…"	Accountability	Interpersonal Skills

1015	"…didn't want my lack of responsibility to reflect on my partner…"	Accountability	Interpersonal Skills
1015	"…would say encouraging things to each other throughout…"	Encouragement	Interpersonal Skills
1014	"…relied on each other to be prompt and punctual…"	Accountability	Interpersonal Skills
1014	"…we need to work on that more…"	Teamwork	Interpersonal Skills
1012	"…not just me was relying on doing the work which made me complete it better…"	Accountability	Interpersonal Skills
1012	"…we encouraged each other and worked together."	Encouragement	Interpersonal Skills
1011	"…if we're feeling nervous, to talk each other out or talk about it together…"	Encouragement	Interpersonal Skills
1011	"…we both pushed each other to do the stuff that we might have thought would have been hard…"	Encouragement	Interpersonal Skills
1011	"…we collaborated together…"	Teamwork	Interpersonal Skills
1010	"We all hyped each other up…"	Encouragement	Interpersonal Skills

1010	"…we would kinda like switch goals…"	Teamwork	Interpersonal Skills
1009	"Knowing that we were going to go in together made me feel like I really needed to know what we were talking about."	Accountability	Interpersonal Skills
1009	"…we have really like figured out how to work well together as a team in my opinion."	Teamwork	Interpersonal Skills
1009	"…felt like someone had my back…"	Teamwork	Interpersonal Skills
1008	"…someone to hold me accountable helped me to get things done…"	Accountability	Interpersonal Skills
1005	"…I was like, come on, you can do this.'	Encouragement	Interpersonal Skills
1005	"…eventually began pushing each other outside of our comfort zones clinically…"	Encouragement	Interpersonal Skills
1005	"I'd like to think I had a part in that process…"	Encouragement	Interpersonal Skills
1005	"…if she forgot something or if I forgot something, she would let me know…"	Feedback	Interpersonal Skills

1005	"…we were able to like feed off of each other's feedback and create goals in that way."	Feedback	Interpersonal Skills
1005	"…we just tackled everything together."	Teamwork	Interpersonal Skills
1005	"Our trio felt like a power team once we established an efficient system."	Teamwork	Interpersonal Skills
1004	"…if we're like really wanting to do it, we're going to have to do it together."	Teamwork	Interpersonal Skills
1004	"…you kind of have to like compromise…"	Teamwork	Interpersonal Skills
1004	"…this comes with a lot of compromise and just discussing…"	Teamwork	Interpersonal Skills
1003	"…we could remind each other…"	Accountability	Interpersonal Skills
1003	"My clinical partner was encouraging for my success and we were able to help one another a lot…"	Encouragement	Interpersonal Skills
1003	"…converse by ourselves about what one of us missed…"	Feedback	Interpersonal Skills
1002	"…held us accountable to complete it immediately."	Accountability	Interpersonal Skills

1002	“…that all three of us just worked really well together…”	Teamwork	Interpersonal Skills
1001	“…relied on each other and did better work.”	Accountability	Interpersonal Skills
1001	“…we did work well together.”	Teamwork	Interpersonal Skills
1000	“…made me feel more responsible to do good…”	Accountability	Interpersonal Skills
1000	“…partner encouraged me to go out of my comfort zone…”	Encouragement	Interpersonal Skills
1000	‘…my partner helped encourage more conversation with our clinical instructor…”	Encouragement	Interpersonal Skills
1000	“…we wanted to like not be competitive in any way, but we just wanted to like have the same experience.”	Teamwork	Interpersonal Skills
1000	“…we didn't face any issues building a relationship…”	Teamwork	Interpersonal Skills
2003	"Gave them somebody to kind of talk through things with"	Academic Support	Pedagogic Support
2006	"Discussed ways in which to make the process more natural with one another"	Academic Support	Pedagogic Support

2005	"…one student who was more competent and had a – had more knowledge was going to be the one to answer."	Academic Support	Pedagogic Support
2005	"…I think that that likely helped some certain concepts stick for the person who wasn't quite there."	Academic Support	Pedagogic Support
2005	"…split patients to chart review…	Better Together	Pedagogic Support
2004	"…get that observation of another person who was learning."	Modeling	Pedagogic Support
2004	"…'remember we talked about this?' or 'Remember when we tried this?'…"	Recall	Pedagogic Support
2003	"…more efficient instruction…"	Academic Support	Pedagogic Support
2003	"…having a partner helped to improve their chart reviews…"	Better Together	Pedagogic Support
2002	"…they would help each other with tasks and confer…"	Better Together	Pedagogic Support
2001	"…I do think it helped her try to be m-more like that as far as, you know, not hesitating to be hands-on…"	Academic Support	Pedagogic Support

2001	“…they could kind of share the responsibility, and I think that took some nerves away.”	Academic Support	Pedagogic Support
2001	"Learned how to help each other during the session."	Academic Support	Pedagogic Support
2001	“…be each other's, um, you know, helper as far as staying on task.”	Better Together	Pedagogic Support
2001	“They learned more from another – watching another student do something versus me verbally instructing sometimes”	Modeling	Pedagogic Support
2001	"Communication between the two of the students improved their ability to recall important." details	Recall	Pedagogic Support
1033	“…I would find myself learning more in clinic…”	Academic Support	Pedagogic Support
1033	“We learned from each other.”	Academic Support	Pedagogic Support
1033	“…I was able to coach her through things.”	Academic Support	Pedagogic Support
1033	“…I shared ways to remember things…”	Academic Support	Pedagogic Support

1033	"…nice to have a buddy learning…"	Academic Support	Pedagogic Support
1033	"…things that she was better at…"	Modeling	Pedagogic Support
1032	"…lean on and bounce ideas off of."	Academic Support	Pedagogic Support
1031	"We helped each other out in every class."	Academic Support	Pedagogic Support
1031	"…able to check each other…"	Better Together	Pedagogic Support
1030	"…really helpful and like contributed to my learning a lot…"	Academic Support	Pedagogic Support
1030	"…we got to watch each other try something new first before you try to – if you were nervous."	Modeling	Pedagogic Support
1029	"…point out things that we might not have found on our own."	Better Together	Pedagogic Support
1029	"…being able to watch each other helped in learning…"	modeling	Pedagogic Support
1028	"…valuable throughout the rotation."	Academic Support	Pedagogic Support
1028	"Two sets of eyes were helpful…"	Better Together	Pedagogic Support

1026	"…compare notes with each other…"	Better Together	Pedagogic Support
1026	"…we were able to like come together and like critically think through it…"	Better Together	Pedagogic Support
1026	"…a lot of hands-on experience in acute care, so it made me really enjoy it…"	Practice	Pedagogic Support
1025	"…having a clinical partner definitely, definitely helped…"	Academic Support	Pedagogic Support
1025	"…confirmed with each other things we learned…"	Academic Support	Pedagogic Support
1025	"…helped me navigate the clinical experience…"	Academic Support	Pedagogic Support
1024	"…very much helped…"	Academic Support	Pedagogic Support
1024	"…helped if one of us missed an aspect."	Better Together	Pedagogic Support
1023	"I feel like I learned more from 1011 than she did from me."	Academic Support	Pedagogic Support
1023	"She really helped me catch things and learn!"	Better Together	Pedagogic Support
1023	"…see her approach with a patient and see her style…"	Modeling	Pedagogic Support

1023	"…I definitely learned from her style and approach."	Modeling	Pedagogic Support
1023	"I learned so much by watching my clinical partner…"	Modeling	Pedagogic Support
1023	"…we had a really safe space to be able to practice."	Practice	Pedagogic Support
1023	"…really helped as we practiced together…"	Practice	Pedagogic Support
1022	"…when your partner would ask a question, a lot of times it would make you think of something that like you might not have wanted to ask…"	Academic Support	Pedagogic Support
1022	"My partner would see something that I didn't."	Better Together	Pedagogic Support
1022	"…I got to see it more and see it from someone who might not have been as experienced as the clinician."	Modeling	Pedagogic Support
1022	"…feel more comfortable either having watched my clinical partner or knowing that she was there."	Modeling	Pedagogic Support
1022	"Getting to watch my partner interact with patients and perform different tasks	Modeling	Pedagogic Support

	taught me a lot about how I can improve my interactions."		
1022	"The more I got to watch my partner perform different tasks the more comfortable I was."	Modeling	Pedagogic Support
1022	"…we would like practice on each other."	Practice	Pedagogic Support
1022	"…we did practice outside of class."	Practice	Pedagogic Support
1022	"…I probably did it on her like a total of like 20 times (oral mechanism exam)."	Practice	Pedagogic Support
1021	"…allowed me to get the answers to the questions I was too afraid to ask…"	Academic Support	Pedagogic Support
1020	"…we learned from and supported each other."	Academic Support	Pedagogic Support
1020	"…my partner asked something and then I would expand off of that or sh-, or vice versa. So, I think it just helped the learning experience…"	Academic Support	Pedagogic Support
1019	"…helpful having another person to go through charts with…"	Better Together	Pedagogic Support

1018	"…you could bounce them off of each other if you didn't want to ask your person [CI]…"	Academic Support	Pedagogic Support
1018	"…made the workload seem less intimidating…"	Academic Support	Pedagogic Support
1017	"…critically think together…"	Better Together	Pedagogic Support
1016	"…seeing someone who's like kind of at the same level as me doing it…"	Modeling	Pedagogic Support
1016	'… I got the chance to see her perform…'	Modeling	Pedagogic Support
1016	"Partner and I got the chance to work hands on together…	Practice	Pedagogic Support
1015	"…I would have never been thinking the same ways."	Academic Support	Pedagogic Support
1015	"…my partner would find things in the chart review that I would miss…"	Better Together	Pedagogic Support
1015	"…to be able to see her do it…"	Modeling	Pedagogic Support
1015	"…watching her do it, it seemed like, oh, okay, I can so do that."	Modeling	Pedagogic Support
1015	"…my partner would mention wouldn't necessarily be on my mind…"	Recall	Pedagogic Support

1014	"…bounce off of each other…"	Academic Support	Pedagogic Support
1014	"Partner understood concepts that I may have had trouble understanding."	Academic Support	Pedagogic Support
1014	"…I was able to learn from her, like even outside of clinical…"	Academic Support	Pedagogic Support
1013	"…asked my partner first before we asked the instructor."	Academic Support	Pedagogic Support
1013	"We learned from each other."	Academic Support	Pedagogic Support
1013	"…like she did it, like it's not that bad, like I can do it too.'	Modeling	Pedagogic Support
1013	"…I learned from her too, like the way that she like did things…"	Modeling	Pedagogic Support
1013	"…she remembered something that we did that I didn't."	Recall	Pedagogic Support
1012	"…a partner helped me, um, get ready just for the whole program."	Academic Support	Pedagogic Support
1012	"…seeing her and being like, oh, I need to up my game [oral mechanism exam]."	Modeling	Pedagogic Support
1012	"Seeing my partner do these things also gave me ideas how to improve."	modeling	Pedagogic Support

1010	"I definitely would have missed details without my partners."	Better Together	Pedagogic Support
1009	“It was easier to make relationship when there was a third person in the mix to also make conversation.”	Academic Support	Pedagogic Support
1009	“…learned a lot with each other and from each other…”	Academic Support	Pedagogic Support
1009	“It was really helpful to watch her try things…”	Modeling	Pedagogic Support
1009	“…were able to remind each other of things we had learned outside of clinical…”	Recall	Pedagogic Support
1008	“…my partner was able to remind me of things I may have forgotten…”	Recall	Pedagogic Support
1007	“We influenced each other, we grew together, we built skills off of each other”	Academic Support	Pedagogic Support
1006	“It was nice to have an extra set of eyes…”	Better Together	Pedagogic Support
1005	“…we were able to help each other gather information.”	Better Together	Pedagogic Support
1005	“…partner had strengths in areas I had weaknesses…”	Better Together	Pedagogic Support

1004	"…I think to learn from her in even learning like, oh, she did it a better way than I did…"	Modeling	Pedagogic Support
1004	"…learning from each other's mistakes."	Modeling	Pedagogic Support
1004	"…I sometimes learned by watching my partner…"	Modeling	Pedagogic Support
1003	"…did contribute to identify risk factors …"	Better Together	Pedagogic Support
1003	"It really helped solidify whatever we were doing by seeing my clinical partner do it as well."	Modeling	Pedagogic Support
1003	"I was a little bit more, like, reserved and my partner was, like, not as reserved, so, like, seeing my partner, like, do something and, like, mess up or not do it…"	In-it-togetherness	Pedagogic Support
1002	"…support each other in clinic…"	Academic Support	Pedagogic Support
1002	"…comfortability, confidence, and applicable academic growth has been facilitated through my clinical partner…"	Academic Support	Pedagogic Support

1002	"…gather materials for these assessments/evals together…"	Better Together	Pedagogic Support
1002	"…able to like kind of put our heads together."	Better Together	Pedagogic Support
1001	"…we were able to like bounce off of each other kind of stuff before we had to like maybe ask our supervisor."	Academic Support	Pedagogic Support
1001	"…we could clarify among each other.'	Academic Support	Pedagogic Support
1001	"…learned better because of having a partner."	Academic Support	Pedagogic Support
1001	"We were able to help one another and learn together."	Academic Support	Pedagogic Support
1001	"…we had each other to help figure things out with before having to ask our supervisor."	Better Together	Pedagogic Support
1001	"…able to clarify among each other for some question…"	Better Together	Pedagogic Support
1000	"…bounce ideas and, um, kind of like help each other answer questions and let each other go through the motions."	Academic Support	Pedagogic Support
1000	"…she was a little bit like up on the scale than I was…"	Academic Support	Pedagogic Support

1000	"… I could ask my partner first before the supervisor."	Academic Support	Pedagogic Support
1000	"…my partner was able to show me where in the chart she found that."	Better Together	Pedagogic Support
1000	"…having a partner was helpful because we got to practice on each other…"	Practice	Pedagogic Support
2006	"Seeing their clinical partner complete tasks potentially gave them comfort/confidence"	Confidence	Self-Efficacy
2006	"The more interested and excitement I think the student shows, I feel like they were able to really engage themselves in what they were learning"	Excitement	Self-Efficacy
2006	"A glimpse of excitement in everyone"	Excitement	Self-Efficacy
2006	"Excitement about being in the acute care setting	Excitement	Self-Efficacy
2005	"…more confident with a partner to try new things."	Confidence	Self-Efficacy
2005	"…eager to learn."	Excitement	Self-Efficacy
2004	"…more willing to actively engage with patients."	Confidence	Self-Efficacy
2004	"I feel like initially those who had expressed interest, um, in working in	Excitement	Self-Efficacy

	acute care were more willing to try something that was hands-on.'		
2003	"…having the partner was helpful again for, like, maybe some confidence…"	Confidence	Self-Efficacy
2003	"…they were excited…"	Excitement	Self-Efficacy
2003	"…all of them expressed excitement…"	Excitement	Self-Efficacy
2003	"…eagerly asked about patients we'd seen in the past…"	Excitement	Self-Efficacy
2003	"…very willing to be hands-on and motivated."	Motivation	Self-Efficacy
2002	"…feel more confidence with a partner…"	Confidence	Self-Efficacy
2002	"…looking forward to their first day."	Excitement	Self-Efficacy
2001	"…some that were interested, too, would take the initiative to ask…"	Confidence	Self-Efficacy
2001	"…student seemed more confident and other times more nervous…"	Confidence	Self-Efficacy
2001	"Seemed more comfortable with the team approach."	Confidence	Self-Efficacy
2001	'Eager to learn and participate with hands-on experiences"	Excitement	Self-Efficacy
2001	"…motivated each other and could talk further about their experiences…"	Motivation	Self-Efficacy

1032	"…cool to get that experience…"	Excitement	Self-Efficacy
1032	"…nervous but very eager…"	Excitement	Self-Efficacy
1032	"…push each other out of our comfort zones…"	Motivation	Self-Efficacy
1032	"…push me out of my comfort zone or I'm not gonna do it…"	Motivation	Self-Efficacy
1031	"…for her to have that much experience and give me some confidence."	Confidence	Self-Efficacy
1031	"…made me less afraid to ask questions."	Confidence	Self-Efficacy
1031	"…more confident because of my clinical partner."	Confidence	Self-Efficacy
1031	"I was excited to experience a new patient population."	Excitement	Self-Efficacy
1031	"…us together as a team helped with like motivation in general…"	Motivation	Self-Efficacy
1030	"I was very excited to get started with clinical…"	Excitement	Self-Efficacy
1029	"I was excited to gain experience…"	Excitement	Self-Efficacy
1028	"I was really excited to see this setting…"	Excitement	Self-Efficacy
1027	"…was able to tell that it was like a placement that I felt comfortable…"	Confidence	Self-Efficacy

1027	"…really excited…"	Excitement	Self-Efficacy
1026	"…made me feel less anxious about starting a placement."	Confidence	Self-Efficacy
1026	"It made it easier being more confident with our skill set."	Confidence	Self-Efficacy
1026	"I was so excited to go into acute care…"	Excitement	Self-Efficacy
1025	"…prone to open up and ask questions to our clinical instructor."	Confidence	Self-Efficacy
1025	"…week seeing something new and different…"	Excitement	Self-Efficacy
1025	"I was excited to get more hands on experience…"	Excitement	Self-Efficacy
1024	"…lessened like the nervousness…"	Confidence	Self-Efficacy
1023	"…exciting and dynamic…"	Excitement	Self-Efficacy
1023	"I was so excited…"	Excitement	Self-Efficacy
1022	"…getting to watch my partner like do certain things, I felt more confident…"	Confidence	Self-Efficacy
1022	"Working with a partner skyrocketed my confidence and comfort in clinic…'	Confidence	Self-Efficacy
1022	"…it took less pressure off of the 1 on 1 relationship."	Confidence	Self-Efficacy
1022	"I was excited…"	Excitement	Self-Efficacy

1022	"…having a clinical partner for me made me be a lot more hands on…"	Motivation	Self-Efficacy
1022	"When someone is relying on you it makes you much more motivated to turn things in…"	Motivation	Self-Efficacy
1021	"…started clinical placement in first semester…"	Excitement	Self-Efficacy
1021	"…very exciting for me…"	Excitement	Self-Efficacy
1021	"…well, dang, I can't let her show me up, so then I'd be like, I-I'll do it too."	Motivation	Self-Efficacy
1021	"…we had like a friendly competition and that made me learn even more by doing it.'	Motivation	Self-Efficacy
1021	"…my clinical partner influenced me to do is to not hesitate and to be the first person to say that I will do it."	Motivation	Self-Efficacy
1019	"…excited to learn and experience different things…'	Excitement	Self-Efficacy
1018	"…made me more confident…"	Confidence	Self-Efficacy
1018	"…grew a lot more comfortable with having a partner…"	Confidence	Self-Efficacy

1018	"…having a clinical partner made it easier to connect to my clinical instructor…"	Confidence	Self-Efficacy
1018	"…so excited …"	Excitement	Self-Efficacy
1017	"It made acute care less intimidating."	Confidence	Self-Efficacy
1017	"My partner helped me with having the confidence of doing all of these activities during clinicals."	Confidence	Self-Efficacy
1016	"…very interested…"	Excitement	Self-Efficacy
1015	"…able to express my concerns and excitement…"	Excitement	Self-Efficacy
1015	"…very excited to go to clinical…"	Excitement	Self-Efficacy
1014	"…made me feel like 1008 did it, I can do it. So, it made me feel strong."	Confidence	Self-Efficacy
1014	"…excited to see what it would be like in the hospital."	Excitement	Self-Efficacy
1013	"…started clinicals off like right off the bat."	Excitement	Self-Efficacy
1012	"…excited but definitely nervous."	Excitement	Self-Efficacy
1011	"I was excited to be able to have the opportunity to be placed in an acute care clinical setting."	Excitement	Self-Efficacy

1010	"…there were certain things that some of us were more comfortable doing…"	Confidence	Self-Efficacy
1010	"…less pressure…"	Confidence	Self-Efficacy
1010	"…I thought it was cool to start in acute care…"	Excitement	Self-Efficacy
1010	"I was excited and nervous to start clinicals…"	Excitement	Self-Efficacy
1009	"…more confident to step in and try new things after practicing and watching my partner…"	Confidence	Self-Efficacy
1009	"Very beneficial to my confidence and anxiety levels. "	Confidence	Self-Efficacy
1009	"…the most exciting part of what I've done in grad school so far."	Excitement	Self-Efficacy
1009	"I have wanted to get a view in to the hospital setting for a long time and was excited about the opportunity."	Excitement	Self-Efficacy
1008	"…you need to, like, get out of your comfort zone. You need to learn how to do this."	Confidence	Self-Efficacy
1008	"…was very excited to see how my skills would transfer over to the SLP world…"	Excitement	Self-Efficacy

1007	"…having a clinical partner made it easier to want to participate and feel confident to participate…"	Confidence	Self-Efficacy
1007	"…have someone else motivate you through that…"	Motivation	Self-Efficacy
1005	"I think because I had a partner in that exchange, I feel more confident going back by myself.'	Confidence	Self-Efficacy
1005	"…broke down a barrier to inquiry."	Confidence	Self-Efficacy
1005	"…we built each other's excitement up…"	Excitement	Self-Efficacy
1005	"I was excited but nervous…"	Excitement	Self-Efficacy
1005	"We were like each other's like little cheerleaders…"	Motivation	Self-Efficacy
1004	"…once we became familiar with tasks, we developed our own confidence…"	Confidence	Self-Efficacy
1004	"I was excited…"	Excitement	Self-Efficacy
1004	"…I came in willing and liking acute which I think kind of helped my drive."	Motivation	Self-Efficacy
1003	"…like we're both gonna mess up. It made me, like, more willing to speak up and like, try more things."	Confidence	Self-Efficacy
1003	"…made me feel less nervous…"	Confidence	Self-Efficacy

1003	"…helped to get acclimated to the acute care setting."	Confidence	Self-Efficacy
1003	"If I were alone, I am not sure I would have jumped in so quickly…"	Confidence	Self-Efficacy
1003	"…I was so excited to see a different side…"	Excitement	Self-Efficacy
1002	"…confidence and success in our clinical partnership carried over throughout the semester…"	Confidence	Self-Efficacy
1002	"…so much less intimidating because we were together…"	Confidence	Self-Efficacy
1002	"I really liked how we started at acute care"	Excitement	Self-Efficacy
1002	"…I was very excited…"	Excitement	Self-Efficacy
1001	"I was excited…"	Excitement	Self-Efficacy
1000	"…it really helped like kind of build confidence…"	Confidence	Self-Efficacy
1000	"…she was like more confident going in. It helps me feel less scared."	Confidence	Self-Efficacy
1000	"…it was just nice to have someone like confident…"	Confidence	Self-Efficacy
1000	"…helped with the nervousness of being in the hospital."	Confidence	Self-Efficacy

1000	"…going in with a partner helped me feel better…"	Confidence	Self-Efficacy
1000	"…more confident…"	Confidence	Self-Efficacy
1000	"…I was really excited [though very nervous]…"	Excitement	Self-Efficacy
1000	"…she would like motivate me…"	Motivation	Self-Efficacy
2005	"Overall interactions were positive…"	Emotional Support	Social and Emotional Support
2004	"Her partner was able to care for her…"	Emotional Support	Social and Emotional Support
2004	"…supportive of each other…"	Emotional Support	Social and Emotional Support
2004	"I enjoyed the dynamic and watching the students support each other."	Emotional Support	Social and Emotional Support
2003	"My students appeared to be friends…"	Emotional Support	Social and Emotional Support

2002	"…someone they knew instead of alone…"	Emotional Support	Social and Emotional Support
2002	"…interacted well and did not have drastic personality differences."	Emotional Support	Social and Emotional Support
2002	"…help each other when needed."	In-it-togetherness	Social and Emotional Support
2001	"…positive with each other…"	Emotional Support	Social and Emotional Support
1033	"…More comfortable…"	Emotional Support	Social and Emotional Support
1032	"…I think having a partner helped me…"	Emotional Support	Social and Emotional Support
1031	"…we were able to pick up each other's energy."	Emotional Support	Social and Emotional Support

1031	"…lift each other up when we weren't in the mood to go."	Emotional Support	Social and Emotional Support
1030	"…we were both learning and like experiencing new things…"	In-it-togetherness	Social and Emotional Support
1030	"…someone else there going through the same experiences as me…"	In-it-togetherness	Social and Emotional Support
1029	"…helpful to have someone…"	Emotional Support	Social and Emotional Support
1029	"…thankful to have someone enter the hospital with me and not being alone…"	Emotional Support	Social and Emotional Support
1029	"…enjoyed having someone…"	Emotional Support	Social and Emotional Support
1029	"…relate when one of us made a mistake…"	In-it-togetherness	Social and Emotional Support

1028	"…emotionally supportive thing to have a clinical partner."	Emotional Support	Social and Emotional Support
1028	"…if you don't have someone to talk about it to, you just kind of go home and like stew in your thoughts and that can be really sad.:	Emotional Support	Social and Emotional Support
1028	"…nice to have someone to lean on."	Emotional Support	Social and Emotional Support
1028	"Mutual support…"	Emotional Support	Social and Emotional Support
1028	"…it was like an ice breaker, um, just like having her like kind of there with me…"	Emotional Support	Social and Emotional Support
1027	"…consoled them when they had moments that were too overwhelming for them."	Emotional Support	Social and Emotional Support
1026	"It was great having someone…"	Emotional Support	Social and Emotional Support

1025	"…help me when I was down or questioning my abilities."	Emotional Support	Social and Emotional Support
1024	"…felt good to not go into it alone…"	Emotional Support	Social and Emotional Support
1023	"It was another layer of 'safety net'…"	Emotional Support	Social and Emotional Support
1022	"…I like felt more comfortable…"	Emotional Support	Social and Emotional Support
1022	"…helped with overall comfort…"	Emotional Support	Social and Emotional Support
1022	"…made it easier to get to know the clinical instructor just having that comfort blanket…'	Emotional Support	Social and Emotional Support
1022	"…it was really great to have someone to talk to…"	Emotional Support	Social and Emotional Support

1022	"…provided me a safe space to ask questions."	Emotional Support	Social and Emotional Support
1022	"…being an ice breaker…"	Emotional Support	Social and Emotional Support
1021	"Loved having a partner!!!"	Emotional Support	Social and Emotional Support
1021	"…when my partner messed up, it made me feel better when I messed up as well."	In-it-togetherness	Social and Emotional Support
1020	"She was really supportive…"	Emotional Support	Social and Emotional Support
1020	"…lessen my anxiety…"	Emotional Support	Social and Emotional Support
1018	"…made me more comfortable having another person…"	Emotional Support	Social and Emotional Support

1018	"…kind of lean on her in that sense…"	Emotional Support	Social and Emotional Support
1018	"…my partner would ask things and I was like, oh, I was just thinking that."	In-it-togetherness	Social and Emotional Support
1017	"… with intimidation."	Emotional Support	Social and Emotional Support
1016	"…I don't know what I would've done if I was like on my own and then not be able to talk to anyone about it."	Emotional Support	Social and Emotional Support
1016	"…I became very comfortable with her."	Emotional Support	Social and Emotional Support
1016	"…we would kind of after clinic we would kind of just, like, go back to her house, debrief…"	Emotional Support	Social and Emotional Support
1014	"…made me feel comfortable and at ease…"	Emotional Support	Social and Emotional Support

1013	"…nice to have someone to relate to and lean on…"	Emotional Support	Social and Emotional Support
1013	"…work closely with someone else who had the same knowledge…"	In-it-togetherness	Social and Emotional Support
1012	"…helped me with getting socially used to the new program."	Emotional Support	Social and Emotional Support
1012	"…not the only one in the room who was not sure of everything."	In-it-togetherness	Social and Emotional Support
1010	"…nice to have someone learning with me."	In-it-togetherness	Social and Emotional Support
1009	"…I think it was helpful to like keep my emotions in check…"	Emotional Support	Social and Emotional Support
1009	"…nice to have someone…"	Emotional Support	Social and Emotional Support

1009	"…helped to know that I was not the only one who didn't understand certain concepts…"	In-it-togetherness	Social and Emotional Support
1009	"…she had my back as we went into things that we were unsure about."	In-it-togetherness	Social and Emotional Support
1009	"…someone in my corner that was also in a similar position."	In-it-togetherness	Social and Emotional Support
1006	"…support in, um, like the emotional situation that was unfolding…"	Emotional Support	Social and Emotional Support
1006	"…able to support each other…"	Emotional Support	Social and Emotional Support
1006	"…having that support of your partner…"	Emotional Support	Social and Emotional Support
1005	"…I'm really lucky to have like the support of a partner…"	Emotional Support	Social and Emotional Support

1005	"…we were able to provide support for each other…"	Emotional Support	Social and Emotional Support
1005	"It leveled down the intimidation…"	Emotional Support	Social and Emotional Support
1005	"…loved every aspect of having a clinical partner…"	Emotional Support	Social and Emotional Support
1005	"…bonding experience."	In-it-togetherness	Social and Emotional Support
1004	"…to also be able to talk about the good things as well as like that was really sad…"	Emotional Support	Social and Emotional Support
1004	"…going through the emotions with someone helped."	Emotional Support	Social and Emotional Support
1004	"…knowing that I wasn't alone, um, in what we were dealing with…"	Emotional Support	Social and Emotional Support

1004	"…like it just made me feel kind of like less dumb, I guess, like when she was confused, too."	In-it-togetherness	Social and Emotional Support
1003	"…it made me feel a lot more comfortable…"	Emotional Support	Social and Emotional Support
1003	"It was so nice to be able to talk to her about it…"	Emotional Support	Social and Emotional Support
1002	"A very positive experience socially, academically, and academically."	Emotional Support	Social and Emotional Support
1001	"We both felt more comfortable with our supervisor…"	Emotional Support	Social and Emotional Support
1001	"It would have changed my experience for sure not having a "buddy""	Emotional Support	Social and Emotional Support
1001	"…felt comfortable together asking."	Emotional Support	Social and Emotional Support

1001	"I had a great experience with my partner."	Emotional Support	Social and Emotional Support
1001	"…took away that sense of doing it wrong and being the only one who didn't know how to do something."	In-it-togetherness	Social and Emotional Support
1000	"…it was nice to not feel like you were the only one lost."	In-it-togetherness	Social and Emotional Support

Appendix L: Graduate Student Follow Up Survey

Confidential

Graduate Student Follow Up Survey

Thank you so much for participating in the study! This survey is the final step of the study where I check in with those who participated to make sure that I captured the main ideas. Completion of this survey should take about five minutes.

Six themes were derived from a systematic analysis of all of the data including data from the initial survey, and the transcripts from the focus groups for both students and clinical instructors. These six themes capture the main ideas, but not every idea.

Because this is a descriptive study, all topics brought up in the survey and focus group will be included in the final write-up of this study, including specific examples regarding individual behavior and/or group dynamics including negative examples, even if specific examples weren't captured in an overall theme.

Your participation in this study is completely voluntary. If you are a student or employee at MUSC, your participation or discontinuance will not constitute an element of your performance, nor will it be a part of your academic/ employment record at this Institution. Your participation is voluntary. By completing the survey, you agree that you understand and are willing to participate.

If you have any questions, please feel free to contact me via email, ferrarlo@musc.edu

IRB Number: « Pro00125547»
Date Approved «01/19/2023»

Name

_____

The theme of Self-Efficacy was identified after data analysis. The theme of Self-Efficacy was derived from the following categories: confidence, excitement, motivation.

Examples of quotes for each category:

Excitement:
"...really excited I wanted to see the medical side of our field."
"Excited to learn and experience different things."
"I was so excited ."

Confidence:
"Made me feel less anxious about starting a placement."
"Having a clinical partner made it easier to want to participate and feel confident to participate."

Motivation:
"We were like each other's like little cheerleaders."
"Us together as a team helped with like motivation in general."

◯ Yes
◯ No

Do you agree with the theme of Self-Efficacy?

Why not?

_____

The theme of Critical Thinking was identified after data analysis. The theme of Critical Thinking was derived from the following categories: Academic to Clinical Connections, Discussion, Questions.

Examples of quotes for each category:

Academic to Clinical Connection:
"helps like connect the dots of what I'm learning in class."
"Having a clinical partner was helpful to make connections from class."

Discussion:
"We would discuss what we saw."
"Helpful to have my partner to talk to as well or in group conversation."

Questions:
" We just bounced questions off of each other."
"Partner would come up with different questions than I would've ever thought about it."

Do you agree with the theme of Critical Thinking?

◯ Yes
◯ No

Why not?

_____

The theme of Social and Emotional Support was identified after data analysis. The theme of Self-Efficacy was derived from the following categories: in-it-togetherness, and emotional support.

Examples of quotes for each category:

in-it-togetherness:
"When my partner messed up, it made me feel better when I messed up as well."
"Not the only one in the room who was not sure of everything ."

Emotional Support:
"If you don't have someone to talk about it to, you just kind of go home and like stew in your thoughts and that can be really sad."
"To also be able to talk about the good things as well as like that was really sad."

Do you agree with the theme of Social and Emotional Support?

◯ Yes
◯ No

Why not?

_____

The theme of Interpersonal Skills was identified after data analysis. The theme of Interpersonal Skills was derived from the following categories: Feedback, Accountability, Teamwork, and Encouragement.

Examples of quotes for each category:

Feedback:
"What went good and what didn't go as good."
"We gave each other constructive feedback and learned from each others examples."

Accountability:
"Knowing that we were going to go in together made me feel like I really needed to know what we were talking about."
"We could remind each other."

Teamwork:
"If we're like really wanting to do it, we're going to have to do it together."
"We would kinda like switch goals."

Encouragement:
"I would say, "you got this" and it would be reciprocated back to me. "
"Eventually began pushing each other outside of our comfort zones clinically."

Do you agree with the theme of Interpersonal Skills?

- ◯ Yes
- ◯ No

Why not?

The theme of Pedagogic Support was identified after data analysis. The theme of Pedagogic Support was derived from the following categories: Academic Support, Better Together, Modeling, Recall, and Practice. There were no quotes regarding "practice" from the clinical instructor group, only the student group, but it was included in the overall analysis to derive the theme.

Examples of quotes for each category:

Academic Support:
"My partner asked something and then I would expand off of that or sh-, or vice versa. So, I think it just helped the learning experience."
"Bounce ideas and, um, kind of like help each other answer questions and let each other go through the motions."

Better Together:
"Helped if one of us missed an aspect."
"Able to like kind of put our heads together."

Modeling:
"I definitely learned from her style and approach."
"It was really helpful to watch her try things."

Recall:
"She remembered something that we did that I didn't."
"Were able to remind each other of things we had learned outside of clinical."

Practice:
"I probably did it on her like a total of like 20 times (oral mechanism exam)."
"Having a partner was helpful because we got to practice on each other."

Do you agree with the theme of Pedagogic Support?

- ◯ Yes
- ◯ No

Why not?

The theme of Diversity was identified after data analysis. The theme of Diversity was derived from the following category: Life experiences/Different Backgrounds. Examples of quotes for Life experiences/Different Backgrounds: Life experiences/Different Backgrounds: "She was telling me just about her experience and it kind of just put into perspective like we're not some of these people's favorite people." "While my partner and I are different in a lot of ways personally (not in bad ways), we really complimented each other as partners." "Shifting to a like maybe we didn't need the support but the benefits were still really big because of, um, the other person's perspective and questions." "We both brought different characteristics to the table." Do you agree with the theme of Diversity?	◯ Yes ◯ No
Why not?	_____
Optional: Are there other themes that you expected to emerge but didn't AND/OR anything else you want to share pertaining to the accuracy and relevance of the main themes captured?	_____

Appendix M: Clinical Instructors Follow Up Survey

Confidential

Clinical Instructors Follow Up Survey

Thank you so much for participating in the study! This survey is the final step of the study where I check in with those who participated to make sure that I captured the main ideas. Completion of this survey should take about five minutes.

Six themes were derived from a systematic analysis of all of the data including data from the initial survey, and the transcripts from the focus groups for both students and clinical instructors. These six themes capture the main ideas, but not every idea.

Because this is a descriptive study, all topics brought up in the survey and focus group will be included in the final write-up of this study, including specific examples regarding individual behavior and/or group dynamics including negative examples, even if specific examples weren't captured in an overall theme.

Your participation in this study is completely voluntary. If you are a student or employee at MUSC, your participation or discontinuance will not constitute an element of your performance, nor will it be a part of your academic/ employment record at this Institution. Your participation is voluntary. By completing the survey, you agree that you understand and are willing to participate.

If you have any questions, please feel free to contact me via email, ferrarlo@musc.edu

IRB Number: « Pro00125547»
Date Approved «01/19/2023»

Name

_____

The theme of Self-Efficacy was identified after data analysis. The theme of Self-Efficacy was derived from the following categories: confidence, excitement, motivation.

Examples of quotes for each category:

Excitement:
"The more interested and excitement I think the student shows, I feel like they were able to really engage themselves in what they were learning."

Confidence:
"Seeing their clinical partner complete tasks potentially gave them comfort/confidence."

Motivation:
" Motivated each other and could talk further about their experiences."

Do you agree with the theme of Self-Efficacy?

◯ Yes
◯ No

Why not?

_____

The theme of Critical Thinking was identified after data analysis. The theme of Critical Thinking was derived from the following categories: Academic to Clinical Connections, Discussion, Questions. Examples of quotes for each category: Academic to Clinical Connection: "Sharing and exchanging information learned in class (with my support) and connecting it to the clinical setting." Discussion: "Gave them somebody to kind of talk through things with, so I think they learned from that." Questions: " They asked tons of questions and they were just okay with that discussion and collaboration...that was a very positive change" Do you agree with the theme of Critical Thinking?	◯ Yes ◯ No
Why not?	
The theme of Social and Emotional Support was identified after data analysis. The theme of Self-Efficacy was derived from the following categories: in-it-togetherness, and emotional support. Examples of quotes for each category: in-it-togetherness: "Help each other when needed." Emotional Support: "Her partner was able to care for her." Do you agree with the theme of Social and Emotional Support?	◯ Yes ◯ No
Why not?	

The theme of Interpersonal Skills was identified after data analysis. The theme of Interpersonal Skills was derived from the following categories: Feedback, Accountability, Teamwork, and Encouragement.

Examples of quotes for each category:

Feedback:
"I think being open to the feedback and - and not necessarily that it's criticism but it's feedback of what to do next time."

Accountability:
"Reminded each other to complete assignments."

Teamwork:
"Keeping track of, like, who - who did what and giving them op - the opportunity."

Encouragement:
"I do think it helped that there was one encouraging the other of, like, you know, "You've got this. You can do this. We - you know, we practice this," or that kind of thing."

◯ Yes
◯ No

Do you agree with the theme of Interpersonal Skills?

Why not?

The theme of Pedagogic Support was identified after data analysis. The theme of Pedagogic Support was derived from the following categories: Academic Support, Better Together, Modeling, Recall, and Practice. There were no quotes regarding "practice" from the clinical instructor group, only the student group, but it was included in the overall analysis to derive the theme.

Examples of quotes for each category:

Academic Support:
"They could kind of share the responsibility, and I think that took some nerves away."

Better Together:
"Did - you know, did I get everything in the oral motor?" um, so that they could again just kind of be each other's, um, you know, helper as far as staying on task."

Modeling:
"They learned more from another - watching another student do something versus me verbally instructing sometimes."

Recall:
"Remember we talked about this?" or "Remember when we tried this?"

Practice (student group):
"I probably did it on her like a total of like 20 times (oral mechanism exam)."

Do you agree with the theme of Pedagogic Support?

- ◯ Yes
- ◯ No

Why not?

The theme of Diversity was identified after data analysis. The theme of Diversity was derived from the following category: Life experiences/Different Backgrounds. Examples of quotes for Life experiences/Different Backgrounds: Life experiences/Different Backgrounds: "One of my students had recently had - lost a family member, and so that definitely impacted how she interacted with patients and families, from being on the other side. Um, and it was a good learning opportunity for both of them." "One of them had a family member that, um, had a neurological disorder, so she had some baseline knowledge of, like, that particular disease and it's something that we see relatively often. And so she was able to give a lot of, like, firsthand account information, y-you know, voluntarily, um, that I feel like helped the other student learn a little bit more about the diagnosis, even more than - in a different way than, like, I could describe it or explain." Do you agree with the theme of Diversity?	◯ Yes ◯ No
Why not?	_____
Optional: Are there other themes that you expected to emerge but didn't AND/OR anything else you want to share pertaining to the accuracy and relevance of the main themes captured?	_____